

# **CHILD SEXUAL ABUSE: EMPIRICAL RESEARCH ON UNDERSTANDING AND HELPING VICTIMS AND OFFENDERS**

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# CHILD SEXUAL ABUSE: EMPIRICAL RESEARCH ON UNDERSTANDING AND HELPING VICTIMS AND OFFENDERS

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# Editorial: Child Sexual Abuse: Empirical Research on Understanding and Helping Victims and Offenders

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**Keywords:** child sexual abuse, editorial, prevention, victimization, offending, violence - prevention and control

## Editorial on the Research Topic

### Child Sexual Abuse: Empirical Research on Understanding and Helping Victims and Offenders

Child sexual abuse (CSA) is a global problem with multiple long-term adverse effects and public health consequences. In a recent umbrella review, CSA was associated with elevated risks of various negative long-term psychosocial, psychiatric, and physical health outcomes, and the population attributable risk fractions for several common mental health problems were considerable (Hailes et al., 2019). Early findings from the COVID-19 era are causing growing concerns about elevated risks and rates of CSA (Fore, 2021). Therefore, the subject of this Research Topic is ever so important. The aim was to create a multidisciplinary compilation of latest research findings on issues directly or indirectly related to CSA. This aim was achieved: a total of 13 articles from several disciplines address CSA from multiple theoretical and methodological viewpoints. Prevention of CSA and its consequences demands taking into consideration the perspectives and needs of victims and potential victims, perpetrators and potential perpetrators, criminal justice system, social and health care services as well as the context, culture, and society as a whole. The importance of this comprehensive outlook is highlighted by the articles in this issue.

In this issue, three articles (Erens et al.; Goodman-Delahunty et al.; Magnusson et al.) bring forward important topics related to criminal justice system. These are essential in getting CSA cases investigated, prosecuted and convicted, simultaneously securing the rights of the victims as well as the defendants. First, Erens et al. show how many professionals conducting CSA assessments within the child protective services still endorse beliefs not in line with scientific evidence, and often do not use interviewing methods with empirical support. Magnusson et al. find associations between Nordic police interviewers' self-reported goals, tactics, and emotions during CSA suspect interviews. For example, interviewers experiencing more negative emotions, such as anger, were more likely to employ confrontational tactics, such as focusing on obtaining a confession or utilizing aggressive tactics like raising one's voice. Further, Goodman-Delahunty et al. show that educating jurors in the form of judicial direction and expert evidence from a psychologist significantly increases jurors' CSA knowledge, which in turn enhances the credibility of the complainant and increases the conviction rate. As a whole, these articles underline the importance of training various officials working within the CPS and the justice system, and how these efforts may aid in securing access to justice for all parties. Further, educating needs to extend to potential victims too: May et al. show how attending a theater-in-education program on

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CSA helped participants gain new awareness and understanding of aspects related to child sexual exploitation and abuse. Results from a total of four focus groups tentatively indicate an increase in young people's awareness and knowledge around CSA, including victims, perpetrators and abusive relationships, as well as how to avoid harm and maintain safety. Future research is needed to see whether training will translate into actual behavioral change, such as increases in reporting and disclosures of CSA.

The focus of public policies and interventions on CSA perpetrators is still mostly on measures that take effect after the offense has taken place. As an example, risk assessment measures have been developed for correctional settings, limiting their utility with non-offending, at-risk individuals. An important prevention strategy would be the utilization of validated risk assessment tools, addressing especially dynamic, potentially changeable risk factors among potential perpetrators. To this end, Wittström et al. address the risk of CSA among 55 non-correctional patients with pedophilic disorder, which thus far is largely unknown. Measuring research-based dynamic risk factors and self-rated risk of CSA among self-referred, help-seeking men, they found that these participants scored higher than controls (age-matched non-clinical control group) on all these domains. In addition, Lampalzer et al. assess how the acceptance and integration of the sexual preference into the individual self-concept is associated with pedophilia associated urges and behaviors among help-seeking individuals. Findings suggest that more acceptance of ones' sexual preference might lead to both negative behaviors (the frequency of sexual activities with minors) and positive behaviors (the frequency of use of legal imagery of children) in relation to treatment goals, highlighting the need for further research and individualized treatment plans. Finally, an article by Ferretti et al. compares sexual offenders (76% of whom were child molesters) to other offenders with heterogeneous criminal histories, but without sex offenses, utilizing validated risk assessment measures (HCR-20 V3). They show the role of deficient non-intimate relationships as a risk factor for criminal careers of sex offenders. Sexual offenders had a smaller likelihood of history of problems with violence and antisocial behavior than other offenders, but were more likely to have problems in non-intimate relationships with family and friends. In addition, interpersonal and affective deficits measured on the Psychopathy Checklist-Revised (PCL-R) boosted this association: when problems with non-intimate relationships were possibly or certainly present, these psychopathic traits increased the likelihood of being a sex offender as compared with other offenders. Although questions of causality remain, these findings is important in terms of developing and tailoring treatment.

Regarding victims and potential victims, the heterogeneity of individuals and their experiences must be acknowledged. Jones highlights the contextual specificities in child sexual abuse regarding Caribbean women and their CSA experiences, and also addresses the links between intimate partner violence and violence against girls. Further, in vulnerable circumstances where patriarchal values, structural disadvantage and interpersonal violence are commonplace, interconnected contextual risks

of CSA can be identified. These include the prevalence of early sexualization of children and the social acceptance and attitudes contributing to sexual violence. Heino et al. show that transgender identity and non-binary identity are associated with both being bullied and bullying others even when controlling for a range of variables. As the authors note, it is known that a large proportion of bullying among adolescents is of a sexual nature, and thus these findings are relevant to the prevention of CSA experiences. Schoon and Briken point out survivors' obstacles in dealing with CSA, utilizing data from Independent Inquiry Into Child Sexual Abuse in Germany. Many of the experienced obstacles were linked to the criminal justice system and mental health services, such as the duration of judicial proceedings or lack of access to psychotherapy, providing guidance on how our service system can avoid re-traumatizing the victim and instead aid the victim in regaining control.

Digital development and internet communication have fundamentally changed the field of CSA. Battling technological-assisted CSA requires better understanding of this evolving phenomenon. In their systematic review and economic approach, Giles and Alison underscore the large scale of the problem and its huge economic burden, which amounts to billions in the UK alone. This translates to requirements of research-informed prioritization by the police, where the offenders of highest risk downloading and sharing incident images of children should be identified and targeted first. Further, Woodhams et al. posit how the use of the Dark Web for purposes related to CSA is growing and analyze data from 53 anonymous suspected abusers. They described the suspects' characteristics, and their motivations for using the Dark Web, knowledge that may be of use when targeting offenders. Finally, Joleby et al. bring into attention the victims of technology-assisted CSA. Based on in-depth interviews of seven young women they show how victimization has influenced their well-being profoundly, both immediately and in the long term and how it has changed how they perceive themselves and their relations to other people.

The road to evidence-based responses to CSA is not an easy one. The breadth of the Research Topics in this special issue tell of the complexity surrounding CSA. The only way to effectively prevent sexual violence is to adopt a comprehensive strategy consisting of primary, secondary and tertiary preventive measures. This is also required by international treaties and agreements such as the Council of Europe Convention on Protection of Children against Sexual Exploitation and Sexual Abuse. We hope that this special issue will contribute to the development and implementation of evidence-based prevention strategies and will encourage both researchers and practitioners to continue their efforts to eradicate CSA.

## AUTHOR CONTRIBUTIONS

TL and NE wrote the editorial. TL, NE, RH, CI, and NW contributed to conception of the editorial and approved the submission. All authors contributed to the article and approved the submitted version.



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# Beliefs About Children's Memory and Child Investigative Interviewing Practices: A Survey in Dutch Child Protection Professionals from 'Safe Home'

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Knowledge of children's memory and forensic interviewing skills are crucial in child abuse investigations. Safe Home is the Dutch hotline where both professionals and citizens can report concerns about child abuse or domestic violence. Professionals at Safe Home often serve as first responders to determine the need for a child abuse investigation, protective measures and/or further police investigation. In this study, child protection professionals ( $N = 158$ ) employed at Safe Home (i.e., behavioral scientists, medical doctors, and social workers) completed an online survey on beliefs about memory functioning and forensic interviewing. In line with earlier studies, we expected to find a lack of knowledge about memory functioning among Safe Home workers. Furthermore, we expected limited use of forensic interviewing methods that have received empirical support. Indeed, we found many professionals endorsed beliefs not in line with current memory research, especially beliefs about repressed and recovered memories. Still, high percentages of professionals also reported memory beliefs related to false memory formation and suggestion that were in line with scientific evidence. Some professionals reported using interviewing methods for which there is no empirical validation. Because child protection professionals are often the first to interview children about allegations of abuse, the current findings identify a need for training in child forensic interviewing, including knowledge of human memory.

**Keywords:** memory beliefs, child abuse investigation, child forensic interviewing, child protection, forensic interviewing

## INTRODUCTION

Child protection workers deal with complex cases of alleged child abuse on a daily basis. As part of their work, they interview children about alleged experiences of abuse. There are potential pitfalls in interviewing children as previous research has documented children's susceptibility to suggestive interviewing techniques (e.g., Ceci et al., 2002). There are cases in which questionable interviewing techniques appear to have led to false memories of abuse in children (e.g., the McMartin case; Garven et al., 1998; see Otgaar et al., 2017, for a Dutch case). Use of evidence-informed child forensic interviewing methods, based on knowledge about children's memory functioning (Cross and Hershkowitz, 2017) are therefore crucial. Professionals tasked with child abuse investigation need to know which types of interview questions are best at minimizing inaccurate memories of events, as well as producing detailed recall (Lamb et al., 2007).

Within the Dutch child protection system, the use of child interviewing protocols that are empirically validated is limited (Kinderombudsman, 2013). Articles that criticize the decision making process in the child protection system regularly appear in Dutch media (Huijer, 2014). For example, in their 2014 annual report, the Dutch Youth Inspectorate expressed concern regarding the lack of objectivity and fact finding within the child protection system (Inspectie Jeugdzorg, 2014). Recently, the Dutch Minister for Legal Protection announced a plan of improvement regarding fact finding in the child protection system (Dekker, 2018). The plan includes up to 20 strategies to improve child abuse investigations performed by different organizations.

## Child Protection Work at Safe Home

“Safe Home” (in Dutch: *Veilig Thuis*) is the Dutch hotline to be called in case of concerns regarding a possible case of child abuse or domestic violence. It was founded on January 1st, 2015. Safe Home employs social workers, behavioral scientists, and medical doctors. Currently, there are 26 regional Safe Home organizations in the Netherlands. These organizations provide advice on child abuse to professionals who work with children (e.g., school teachers, sports coaches) and to citizens, and they investigate allegations of child abuse and domestic violence. A citizen can file a report of possible abuse at Safe Home. During the first 6 months of 2017, Safe Home received 42,090 reports of alleged child abuse or domestic violence (Central Bureau of Statistics, 2017). In a child abuse investigation, Safe Home gathers information from a child interview and from collateral informants (mostly professionals, such as medical doctors, police, and school staff). This information is used to conduct a so-called safety assessment to determine if follow-up action is needed to ensure the child's safety, both in the short and longer term. In case the investigation reveals serious abuse that could lead to criminal prosecution, Safe Home refers the case to the police as per government policy (Kwakman, 2017).

## Child Protection Work in Other Countries

It is important to realize that child protection services, such as Safe Home in the Netherlands, shares similarities with child protection systems in other countries. In the Netherlands, Safe Home often collaborates with the police and with local municipalities when investigating a report of alleged child abuse or domestic violence. The police are responsible for the criminal investigation, while the municipalities provide the necessary help or treatment to the families, provided by different mental health organizations. Safe Home consults with its relevant partners in the process of investigating and referring the case. This resembles, for example, the child protection system in England (led by the Department of Education), where local authorities, clinical commission groups and the police have a joint responsibility in protecting child welfare (Child protection system in England, 2019). They work together with other relevant agencies to ensure the effectiveness of work to protect and promote child welfare, such as making arrangements to identify and support children at risk of harm. Although Safe Home collaborates with its partners, it is the only organization in the Netherlands that provides advice

in alleged child abuse cases and can start an investigation into the child's welfare. For a comparison between Safe Home and child protective services in countries with similar economic and cultural characteristics (see **Table 1**).

Because many child abuse allegations do not include physical evidence (Euser et al., 2010), child investigative interviewing is a crucial element in child abuse investigations. However, child forensic interviewing is challenging and suggestive questioning could result in inaccurate statements (Ceci and Bruck, 1993; Lamb et al., 2011; Otgaar et al., 2018). In addition, several factors can make children reluctant to disclose abuse, such as feelings of shame and fear of the consequences after disclosure (McElvaney, 2015). When professionals interview children about events they have experienced, they need to tap into episodic memory of the child, i.e., memory for events/episodes. In the past few decades, a large body of research has uncovered ways in which interviewers can help or hinder episodic memory retrieval (e.g., Lindsay, 1990; Melinder, 2002; Goodman and Melinder, 2007), and professionals' beliefs about memory functioning play a role in this (Melinder et al., 2004).

## Memory Beliefs of Professionals

Holding inaccurate beliefs regarding the functioning of memory could impact behavior of a Safe Home professional. For example, a professional who believes that certain psychological problems of a child (e.g., sleep problems) are linked to repressed memories of child sexual abuse, could become confident that a child is abused, even if the interview with the child uncovered limited factual evidence to support that conclusion. Previous research has examined memory beliefs among various professions and demonstrated a lack of knowledge concerning memory functioning among mental health clinicians (Gore-Felton et al., 2000), psychotherapists (Merckelbach and Wessel, 1998), and doctorate level clinical psychologists (Dammeyer et al., 1997). Recent studies revealed that many professionals hold beliefs that do not match current findings from memory research. For example, Ost et al. (2017) surveyed memory beliefs in Chartered Clinical Psychologists, unchartered therapists (hypnotherapists), and undergraduate psychology students from the United Kingdom. Participants had to fill in the Memory Beliefs Questionnaire (MBQ; Ost et al., 2017) containing 11 memory statements that have broad scientific consensus [e.g., “It is possible for an individual to develop false memories for a non-traumatic event” (true statement)]. Chartered Clinical Psychologists scored significantly more accurately on the memory statements than the hypnotherapists and the undergraduate psychology students. Among the hypnotherapists the authors found evidence for incorrect beliefs, such as the belief that memories from the first year of life can be retrieved accurately in adulthood. Some erroneous beliefs about memory appear to exist even among well-trained and experienced clinical psychologists. For example, 75% ( $n = 253$ ) of the entire sample “strongly agreed” with the belief that “The mind is capable of unconsciously blocking out memories of traumatic events.” The findings of Ost et al. (2017) parallel the results of Patihis et al. (2013) who found that a large percentage of alternative therapists (including

**TABLE 1** | Comparison of child protection services in several countries.

Country	Organization(s)	Tasks	Collaborations
Netherlands	Safe Home (National hotline for child abuse and domestic violence) and the Council for Child Protection (can petition a supervision order at Court)	Give advice and investigate reports of alleged child abuse	Council for Child Protection, police, Public Prosecutor's Office, municipalities
England	Local authorities work together with clinical commission groups and the police <sup>a</sup>	Investigating concerns and taking the necessary steps to protect the child	National Society for the Prevention of Cruelty to Children (NSPCC)
United States	The National Children's Alliance (NCA) is the national association and accrediting body for a network of more than 850 Child Advocacy Centre's (CACs) represented in different states <sup>b</sup>	CACs provide a coordinated, evidence-based response to children who have been abused in all 50 states	Law enforcement, prosecution, Child Protective Services, (mental) health institutions
Scotland	Child Protection Committees (CPCs) are responsible for multi-agency child protection policy, procedure, guidance and practice <sup>c</sup>	Investigating concerns and taking the necessary steps to protect the child	Within each local authority, CPCs work with local agencies, such as children's social work, health services and the police
Sweden	Barnahus (children's house) <sup>d</sup>	Derived from the CACs in the USA: represents a multi-professional approach to child victims of abuse with the double aim of facilitating the legal process and ensuring that the child receives necessary support and treatment.	Law enforcement, prosecution, Child Protective Services, (mental) health institutions

<sup>a</sup>Child protection system in England. (2019, November). Retrieved from: <https://learning.nspcc.org.uk/child-protection-system/england/> <sup>b</sup>Child protection system in Scotland. (2019, July). Retrieved from: <https://learning.nspcc.org.uk/child-protection-system/scotland/> <sup>c</sup>How the CAC model works. (2019). Retrieved from: <https://www.nationalchildrensalliance.org/cac-model/> <sup>d</sup>Johansson, S., Stefansen, K., Bakketeig, E., and Kaldal, A. (2017). Implementing the Nordic Barnahus model: Characteristics and local adaptations. *Collaborating Against Child Abuse*, 1–31.

hypnotherapists) strongly agreed with false statements about memory (for example, 82% of hypnotherapists ( $n = 50$ ) agreed that repressed and recovered memories can surface in therapy).

The above-mentioned studies indicate that different professional groups demonstrate a lack of accurate knowledge about memory in areas such as recovered memories. We searched the PsychInfo database using combinations of the following keywords: child protection workers, (memory) beliefs, (memory) knowledge and child interviewing, which yielded no results. To our knowledge, this is the first study of its kind conducted with child protection workers.

## The Present Study

The current study investigates memory beliefs in professionals from 26 Safe Home organizations in The Netherlands: social workers, behavioral scientists, and medical doctors. We also asked these professionals which child investigative interviewing method they are currently using and whether there is consensus within their organization about its application. Based on the literature described earlier, several hypotheses were formulated. First, we expect professionals to show inaccurate knowledge regarding memory functioning. Second, we expected a lack of use of child interviewing methods that have empirical support across all Safe Home organizations. Finally, we hypothesized that there also would be little consensus on child interviewing methods within each separate Safe Home organization.

## MATERIALS AND METHODS

### Participants

Professionals ( $N = 154$ ) from 26 Safe Home organizations in The Netherlands completed an online survey via Qualtrics. Our

sample consisted of social workers ( $n = 100$ ), behavioral scientists ( $n = 43$ ) and medical doctors ( $n = 11$ ).

Social workers who work at Safe Home have an educational background in social welfare or a Bachelor-level psychology degree. At Safe Home, their task is to investigate reports of alleged child abuse and domestic violence. Behavioral scientists are Master-level psychologists. Behavioral scientists supervise the social workers during their investigations. Also, behavioral scientists provide support during interviews with parents, informants, and victims. To be eligible to work as a behavioral scientist at Safe Home, licensing by the youth quality register (in Dutch: *Stichting Kwaliteits Register Jeugd*) is mandatory. Although social workers also need to be licensed, the criteria are different and educational background is less important. Medical doctors perform medical examinations in cases of child abuse reports, if deemed necessary. Medical doctors are required to have completed specialized training in investigating child abuse cases.

### Materials

In line with previous studies, we provided professionals with memory statements, selected or slightly adapted (e.g., “Memory is not influenced by suggestion” was adapted to “Memories cannot be influenced by suggestion”) from studies by Patihis et al. (2013) and Ost et al. (2017). We provided professionals with nine statements about memory and added one statement on the nature of questions during child investigative interviews. We selected these statements because they cover important topics for professionals working with child abuse cases (e.g., statements on suggestion and memory) and having wrong beliefs could have implications for their (field) work (e.g., suggestive interviewing techniques). The selected statements have been used in several earlier studies (e.g., Patihis et al., 2013; Ost et al., 2017; Houben

et al., 2019). The statements were translated into Dutch by three independent individuals: one Master student in forensic psychology, one Ph.D. student, and a professor of Forensic Psychology chose the translation that fit best.

Participants had the option to either agree or disagree with the 10 statements. All participants viewed the questions and statements in the same order. We did not provide an intermediate option (*I don't know* or *Neither agree nor disagree*), to prevent participants from answering neutrally. We asked participants which method(s) their Safe Home organization used for conducting child investigative interviews. This was a multiple choice question (four answer options) with an open comment area, in case the method the participant used was not listed among the four. Furthermore, we asked if consensus existed within their organization on applying a certain child interviewing method. We also asked whether they made use of additional tools ("props") during their child interviews, such as anatomically correct dolls or drawings. This was also a multiple choice question with an open comment section. Finally, we asked participants whether they used a different interviewing method in cases of alleged child sexual abuse compared to other types of child abuse (and if so, which method they employed). The statements and response alternatives for memory knowledge are shown in **Table 2**, the answer choices consistent with current memory science are marked with an asterisk.

## Procedure

A link to the survey in Qualtrics was distributed by e-mail. We e-mailed all 72 behavioral scientists from the 26 Safe Home organizations in The Netherlands and used the snowball sampling method, asking them to distribute the survey among the other professionals (social workers, medical doctors or behavioral scientists) at their organization. A reminder was sent 2 weeks after the first e-mail. For the medical doctors, we made a request to the national forum (an online communication platform) for physicians at Safe Home. This request contained the same information as the e-mails sent to behavioral scientists as well as the link to the Qualtrics survey. No reminder was sent. The survey could be completed anonymously with the option of leaving an e-mail address to participate in a raffle for a 15 euro gift voucher. A completed questionnaire was obtained from 158 professionals. These professionals consisted of 43 behavioral scientists (27% of the total sample), 100 social workers (63%), and 11 medical doctors (7%). Approval for this study was received from the Ethical Review Committee of the Faculty of Psychology and Neuroscience at Maastricht University (ERCPN- 181\_01\_07\_2017). Data from the current study are accessible via the Open Science Framework: <https://osf.io/rjnz7/>.

## RESULTS

### Memory Beliefs

**Table 3** shows the percentage of science-consistent answers to the memory statements. This is shown for the total sample and for the behavioral scientists, medical doctors and social

workers, separately. The highest percentage of erroneous beliefs, that is beliefs that run counter to current memory research, were observed for statements regarding repressed and recovered memories. Seventy-four percent ( $n = 117$ ) of the total sample agreed with the statement "Repressed memories can be retrieved accurately by certain therapeutic techniques." The statement "Traumatic memories are often repressed because of their painful content" received 84% ( $n = 133$ ) endorsement. Also, 64% ( $n = 101$ ) of the total sample disagreed with the last statement "During a child forensic interview, directive questions should only be used when open questions have been exhausted." High percentages of answers in line with current memory research were found for statement 6: "It is possible for an individual to develop false memories for non-traumatic events" (94.9%;  $n = 150$ ) and statement 9: "Memories cannot be influenced by suggestion" (95%;  $n = 150$ ).

We also compared answers of the different professional groups on the memory statements by means of Chi Square analyses (Pearson  $\chi^2$ -test). **Table 3** provides a comparison of Group 1 (behavioral scientists) and Group 2 (social workers). In The Netherlands, social workers do not have a Master's degree, as opposed to behavioral scientists. Group 1 had more accurate knowledge on memory than Group 2. Specifically, there was a statistically significant difference ( $\chi^2 = 10.57$ ,  $p = 0.001$ , *Cramer's V* = 0.274) for the statement "Traumatic memories are often repressed because of their painful content".

Additionally, **Table 5** shows a bivariate correlational analysis of the 10 memory statements, which was added to investigate whether the questionnaire items are correlated with each other. As can be seen from the log odds ratios, not all items are positively related to each other. This finding was not expected (nine statements are supposedly related to each other, because they cover the topic of memory beliefs; only item 10 covered child interviewing).

### Use of Interviewing Methods and Additional Tools

Our study shows that more than four out of 10 professionals (44.2%;  $n = 68$ ) indicated they use the so-called Three Houses method from "Signs of Safety" (Turnell and Edwards, 1997) for interviewing children. Twenty-three percent ( $n = 35$ ) of all professionals indicated they do not use a standardized method for conducting child investigative interviews. Twenty-eight percent ( $n = 43$ ) responded they used another method than the options posed (Three Houses Method, self-developed questionnaire or no standardized method). In the open comment section, 21.5% ( $n = 34$ ) of these professionals indicated they used a variety of interviewing methods at their organization, dependent on the child's age and the nature and/or complexity of the reported child abuse. Furthermore, 86.4% ( $n = 133$ ) answered that there are differences between professionals in the use of interviewing method(s) at their Safe Home organization, reflecting a lack of consensus and/or standardization.

Furthermore, about one in five professionals reported they used human figure drawings (18.9%;  $n = 29$ ) or Duplo dolls (19.5%,  $n = 30$ ) during child investigative interviews.



**TABLE 2 |** Memory statements – the response alternative believed to be the most correct according to current memory science is indicated by an asterisk.

Statements	Response alternatives
1. Our memories are permanently stored in our brain, even though we can't retrieve all of it.	Agree – Disagree*
2. Early memories, from the first year of life, are accurately stored and retrievable.	Agree – Disagree*
3. Repressed memories can be retrieved accurately by certain therapeutic techniques.	Agree – Disagree*
4. The more emotion with which a memory is reported, the more likely it is to be accurate.	Agree – Disagree*
5. Traumatic memories are often repressed because of their painful content.	Agree – Disagree*
6. It is possible for an individual to develop false memories for non-traumatic events.	Agree* – Disagree
7. Vivid memories are more likely to be accurate than vague memories.	Agree – Disagree*
8. A negative memory for a childhood event is indicative of a traumatic childhood.	Agree – Disagree*
9. Memories cannot be influenced by suggestion.	Agree – Disagree*
10. During a child forensic interview, directive questions should only be used when open questions have been exhausted.	Agree* – Disagree

Statements reproduced/adapted from Patihis et al. (2013) and Ost et al. (2017).

**TABLE 3 |** Percentage of behavioral scientists, medical doctors, social workers who responded correctly to 10 statements about memory.

Statements	Behavioral scientists (n = 43)	Medical doctor (n = 11)	Social workers (n = 100)	Total (N = 154)
1. Our memories are permanently stored in our brain, even though we can't retrieve all of it.	44 (n = 19)	73 (n = 8)	30 (n = 30)	37 (n = 57)
2. Early memories, from the first year of life, are accurately stored and retrievable.	93 (n = 40)	100 (n = 11)	89 (n = 89)	91 (n = 140)
3. Repressed memories can be retrieved accurately by certain therapeutic techniques.	23 (n = 10)	46 (n = 5)	24 (n = 24)	25 (n = 39)
4. The more emotion with which a memory is reported, the more likely it is to be accurate.	98 (n = 42)	82 (n = 9)	90 (n = 90)	92 (n = 141)
5. Traumatic memories are often repressed because of their painful content.	33 (n = 14)	9 (n = 1)	10 (n = 10)	16 (n = 25)
6. It is possible for an individual to develop false memories for non-traumatic events.	95 (n = 41)	100 (n = 11)	92 (n = 92)	94 (n = 144)
7. Vivid memories are more likely to be accurate than vague memories.	65 (n = 28)	73 (n = 8)	57 (n = 57)	60 (n = 93)
8. A negative memory for a childhood event is indicative of a traumatic childhood.	88 (n = 38)	73 (n = 8)	85 (n = 85)	85 (n = 131)
9. Memories cannot be influenced by suggestion.	98 (n = 42)	100 (n = 11)	92 (n = 92)	94 (n = 145)
10. During a child forensic interview, directive questions should only be used when open questions have been exhausted.	33 (n = 14)	64 (n = 7)	33 (n = 33)	35 (n = 54)

Interviewing with Duplo dolls, which are similar to Playmobil dolls, was developed by Dutch therapist Marleen Diekmann Schoenmaker, who used Duplo dolls during her work with child victims of war in foreign countries (Diekmann Schoenmaker and Van der Veer, 2003). Because she did not speak the children's mother language, Diekmann used Duplo dolls to facilitate communication with the children. Furthermore, 31.2% (n = 48) of the professionals reported using additional tools other than those listed in the web survey. In the open comment section, over 28 different tools were mentioned, such as smiley lists (a set of smileys that depict different emotions children can use to indicate how they feel), socio cards (cards with pictures of people or objects children can use to indicate which people or objects play an important role in their life), family compositions and the child's own toys. Furthermore, 22.8% (n = 36) of the professionals indicated using multiple tools.

Forty-five percent of the professionals indicated they use a different interview method in cases of alleged child sexual abuse compared to other types of child abuse. Methods mentioned were: psycho-sexual screening (17%; a diagnostic tool to investigate the psychological and sexual development of the child) and a specific examination method for sexual abuse (9%). The latter method is intended to investigate "vague" signs of possible statutory sexual offending. Training in the examination method is offered by several private institutes in the Netherlands (e.g., Landelijk Opleidingscentrum Kindermishandeling; LOCK). An example of a "vague" sign is a child who says "I have secrets with my Dad and I am not allowed to tell." Examination methods are designed to interview children in case there is not enough evidence for the police to start an investigation. In the open comment section, several social workers indicated that interviews in cases of alleged sexual abuse are only conducted by behavioral scientists or medical doctors at their Safe Home organization.

**TABLE 4 |** Chi square analysis of behavioral scientists vs. social workers who responded inaccurately (%) on 10 statements about memory.

Statement	Behavioral scientists (n = 43)	Social workers (n = 100)	$\chi^2$	p-value (two-tailed)
1. Our memories are permanently stored in our brain, even though we can't retrieve all of it.	24 (56)	70 (70)	2.69	0.101
2. Early memories, from the first year of life, are accurately stored and retrievable.	3 (7)	11 (11)	0.551	0.458
3. Repressed memories can be retrieved accurately by certain therapeutic techniques.	33 (77)	75 (75)	0.02	0.899
4. The more emotion with which a memory is reported, the more likely it is to be accurate.	1 (2)	9 (9)	2.10	0.148
5. Traumatic memories are often repressed because of their painful content.	29 (67)	88 (88)	10.57	<b>0.001</b>
6. It is possible for an individual to develop false memories for non-traumatic events.	2 (5)	6 (6)	0.12	0.728
7. Vivid memories are more likely to be accurate than vague memories.	15 (35)	41 (41)	0.603	0.437
8. A negative memory for a childhood event is indicative of a traumatic childhood.	5 (12)	13 (13)	0.072	0.789
9. Memories cannot be influenced by suggestion.	1 (2)	6 (6)	0.913	0.339
10. During a child forensic interview, directive questions should only be used when open questions have been exhausted.	29 (67)	65 (65)	0.017	0.897

The bold value means the p value was considered significant.

**TABLE 5 |** Log odds ratios for the bivariate comparisons of the 10 statements about memory.

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9
Item 2	4.58								
Item 3	0.72	4.01							
Item 4	-0.26	-2.74	-0.54						
Item 5	0.73	-0.42	0.15	0.11					
Item 6	0.57	0.47	-0.60	0.47	0.23				
Item 7	0.84	0.14	-0.02	0.46	0.39	0.44			
Item 8	0.44	1.09	0.10	0.65	0.13	-2.60	1.04		
Item 9	-0.03	0.47	0.84	2.62	-1.24	-1.54	-0.68	-2.60	
Item 10	-0.10	-0.95	0.09	-1.28	-0.20	0.51	0.15	-0.34	-1.14

## DISCUSSION

Consistent with our expectations, many professionals endorsed beliefs that are not in line with current scientific research on memory, especially controversial beliefs on the existence of repressed and recovered memories (see also Otgaar et al., 2019). Other memory beliefs of the professionals were largely in keeping with scientific consensus. Most professionals held accurate beliefs regarding the formation of false memories and the influence of suggestion on memory. However, the majority of professionals disagreed with the fact that directive questions should only be used in a child investigative interview when open prompt questions have been exhausted. This runs counter to current scientific literature, which emphasizes the importance of open prompts (also called “invitations”) to encourage children to provide a narrative of what they have experienced (Lamb et al., 2007). Since bivariate comparisons of the 10 memory statements showed that although expected, not all items were positively correlated to each other. Future research should therefore

include more detailed analysis of underlying traits to explain these correlations.

We found that for questions on how memory works (e.g., “Our memories are permanently stored in our brain, even though we can't retrieve all of it”), behavioral scientists responded more in line with memory science than social workers. Statistically significant differences were found for one of the 10 statements. This finding is in line with previous research that compared different professional groups on memory beliefs. For example, Patihis et al. (2013) found that psychology researchers were more accurate about the non-existence of repressed memories and agreed more often that memory can be unreliable compared to some psychology practitioner groups. Furthermore, in a recent study, Akhtar et al. (2018) found that police officers and the general public endorsed more erroneous memory beliefs, as opposed to memory experts who endorsed more scientifically supported memory beliefs.

Our results suggest that for some, but not all memory beliefs, there is a gap between beliefs held by professionals working at Safe Home in the Netherlands and the current scientific literature

on memory. In line with earlier studies on memory beliefs (e.g., Patihis et al., 2013; Melinder and Magnussen, 2015; Ost et al., 2017) many professionals endorsed beliefs regarding repressed and recovered memories. The fact that the majority of our sample agreed that repressed memories can be retrieved accurately by certain therapeutic techniques raises concern. Empirical support for repression in adults who were abused as children is lacking (Corelli et al., 1997; Piper et al., 2008). One potential concern is that beliefs in repressed memories of child (sexual) abuse could bias professionals at Safe Home during the investigative process, affecting their interpretation of children's behaviors or statements, and affecting their choice of questions during interviews with children.

As for child investigative interviewing, the majority of professionals disagreed with the statement "During a child forensic interview, directive questions should only be used when open questions have been exhausted." Valuable and accurate information can be obtained by using open prompts (e.g., "Tell me what happened;" Lamb et al., 2018). Directive questions are focused prompts which, according to several empirical studies, actually elicit less relevant information from alleged child abuse victims than open prompts (Cyr and Lamb, 2009; Lamb et al., 2009). The fact that only a minority of the responding professionals were aware of this, raises concern that they will use directive questions too early in their child investigative interviews. Such early directive questions could in some cases become suggestive or leading.

As hypothesized, we found that interviewing methods that received empirical support are not being used in the majority of interviews with alleged victims of child abuse at Safe Home. The method reported most frequently (44.3%;  $n = 70$ ) was the Three Houses method, which to our knowledge, lacks scientific support as a child investigative interviewing method. The Three Houses method is part of "Signs of Safety" (Turnell and Edwards, 1997). Signs of Safety was developed in Australia as a method for developing a constructive relationship between child protection workers and family members of (substantiated) abused children that re under child protection authority. Its purpose is to bring the child's voice into the supervision and monitoring by child protective services. The child is instructed to draw three houses according to different themes: the house of worries (danger), the house of good things (safety) and the house of dreams (change). How the houses are drawn depends on the child's characteristics (e.g., age, cognitive abilities, creativity). There are no predefined rules as to how every house should be drawn. Typically, the interviewer asks the child to draw and tell everything that is well and fine at home (safety), things that are not well at home (danger) and which things the child would like to be improved (change). Previous research on the Three Houses method has focused primarily on the reported experiences of professionals, parents, and children with the method (for an overview, see Wheeler and Hogg, 2012). Research has shown that the Three Houses method stimulates open communication with families and it provides abusive parents more insight into the experiences of their children (Westbrook, 2006). The Three Houses method is, however, not designed to assist in fact-finding in cases of child abuse allegations, nor does it

have supportive evidence that it helps optimize the retrieval of accurate and detailed memories. On the contrary, at face value, the instruction to draw a "dream house" could obviously elicit fantasies instead of memories.

Furthermore, 21% of the professionals reported that they did not use a standardized method for conducting child investigative interviews, 22% reported using multiple methods, and 87% indicated different professionals apply different methods at their Safe Home organization. This lack of a standardized child forensic interviewing method concurs with recent research among child protection professionals in the USA (Rivard and Compo, 2017). Rivard and Compo (2017) created an online survey which was distributed among Child Advocacy Centres and other child sexual abuse investigative agencies throughout the United States. This study also showed a diversity of interviewing protocols across agencies and professionals were trained in different methods. In most cases, Safe Home professionals interview children before the police become involved in a case, and the threshold for criminal investigation is not reached in every reported case. However, if such initial interviews are done incorrectly this could contaminate children's memory, with obvious repercussions if the case is subsequently referred for further police investigation. Because child interviewing methods which have received empirical support are lacking, current practices raise doubts regarding the quality of statements collected from children by Safe Home.

Moreover, professionals indicated that additional tools, such as human figure drawings, anatomically correct dolls and Duplo dolls, are used during child investigative interviews. The use of such tools is highly controversial. To our knowledge, the use of Duplo dolls for child abuse investigative purposes has not been empirically investigated. Besides, several studies have demonstrated the harmful effects of anatomically correct dolls on children's memory (e.g., Bruck et al., 2000) and the suggestive nature of these dolls can lead to false reports about sexual abuse. For example, Bruck et al. (2000) found that under certain conditions, the use of dolls increased incorrect reports of inappropriate behavior, such as touching body parts that were not actually touched. Also, studies have found that use of human figure drawings decreased the accuracy of children's reports of events (Brown et al., 2007; Otgaar et al., 2012).

## Limitations

Before we draw our final conclusions, a number of limitations of the present study should be acknowledged. The current data were gathered by means of a snowball method: behavioral scientists working at Safe Home were asked to distribute the online survey among colleagues at their organization. This snowball method may have resulted in selection bias, in that especially professionals interested in memory and child investigative interviewing filled in the questionnaire. As a consequence of the snowball method we also do not know the exact response rate, because it is unclear how many colleagues of the behavioral scientists received the survey. Furthermore, the sample size of the medical doctors



( $n = 11$ ) was quite small compared to the behavioral scientists and social workers. This could be due to the fact that for technical reasons no reminder e-mails could be sent to the medical doctors. In addition, our survey data on child investigative interviewing at Safe Home represent professionals' self-report about their child interviewing practice. We do not know to what extent these data reflect actual practice. More specifically, these findings do not inform us about the frequency with which certain interview methods and/or additional tools are used. However, the finding that most surveyed professionals reported using non-scientifically supported child interviewing methods, is highly relevant.

## CONCLUSION

Taken together, our study suggests a need for training of Safe Home professionals in both memory functioning and the practice of evidence-based child investigative interviewing. In line with previous research (Patihis et al., 2013; Ost et al., 2017; Patihis and Pendergrast, 2019), incorrect knowledge, on issues such as repressed memories for trauma, are common among professionals working in child protection. Furthermore, professionals do not use a child interviewing method which has received empirical support and they use additional tools, such as human figure drawings, that increase the risk of false memory reports (Otgaar et al., 2012). Because Safe Home is the Dutch "first responder" organization that deals with reports of alleged child abuse by both citizens and professionals, its professionals should be appropriately trained in the relevant knowledge and skills. Most of the required knowledge and skills are not taught in these professionals' primary educational programs (e.g., social work, child psychology).

We recommend implementing evidence-based child interviewing methods, for example, the National Institute of Child Health and Development (NICHD) interview protocol, developed by Lamb et al. (2007). This interview-protocol was developed to obtain reliable and detailed accounts from children by the use of open prompts ("Tell me what happened") that facilitate free recall from episodic memory (Olafson, 2012; La Rooy et al., 2015). Only when these open prompts do not elicit relevant material any longer, the interviewer can use directive

questions (e.g., "Where did he touch you?" - when the child has already disclosed being touched) or option-posing questions, where the child can choose between two different answers (e.g., "Did he touch you above or beneath your clothes?"). The protocol consists of different phases, including rapport building, explaining ground rules (for example, what it means to tell the truth), training in episodic memory, substantive phase (asking about the alleged events), and closing with a neutral topic. Interviewers trained in the NICHD protocol tend to use more open prompts and fewer suggestive questions than they did before training (e.g., Yi et al., 2016).

Our findings are worrisome because workers at Safe Home are the first line of professionals who interview children about an alleged experience of abuse. Incorrect memory beliefs and deficient child interviewing methods could result in false positives (concluding a child was abused, while actually the child was not) or false negatives (concluding the child was not abused, when the child in fact was abused). Hence, it is vital that professionals at Safe Home adopt empirically-based methods for interviewing children, and that they are educated on the science of memory relevant to applied settings.

## DATA AVAILABILITY STATEMENT

The datasets generated for this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found at: <https://osf.io/rjnz7/>.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Ethical Review Committee Psychology and Neuroscience. The patients/participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

All authors have contributed to the manuscript and provided approval for the publication.

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**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Risk Factors for Sexual Offending in Self-Referred Men With Pedophilic Disorder: A Swedish Case-Control Study

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**Background:** The risk of child sexual abuse among non-forensic, non-correctional patients with Pedophilic Disorder (PD) is largely unknown.

**Methods:** We recruited a consecutive sample of 55 help-seeking, non-correctional adult men diagnosed with DSM-5 PD at a university-affiliated sexual medicine outpatient unit in Sweden. PD participants were compared with 57 age-matched, non-clinical control men on four literature-based dynamic risk domains and self-rated child sexual abuse risk.

**Results:** PD participants scored higher than controls on all tested domains (0–3 points); expectedly so for pedophilic attraction (2.5 vs. 0.0, Cohen's  $d = 2.40$ , 95% confidence interval (CI): [1.91–2.89]), but also for sexual preoccupation (1.6 vs. 1.0,  $d = 1.11$ , 95% CI: [0.71–1.51]), impaired self-regulation (1.4 vs. 1.0,  $d = 0.44$ , 95% CI: [0.06 to 0.81]), impaired cognitive empathy and antisocial traits (0.9 vs. 0.1,  $d = 1.18$ , 95% CI: [0.78–1.59]), and self-rated child sexual abuse risk (1.0 vs. 0.0,  $d = 1.56$ , 95% CI: [1.13–1.98]). When summarizing all five domains into a pre-specified composite score (0–15 points), PD subjects scored substantially higher than matched control men (7.5 vs. 2.1,  $d = 2.12$ , 95% CI: [1.65–2.59]). Five (9%) PD participants self-reported any previous conviction for a contact child sexual offense and eight (15%) for possession of child sexual abuse material or non-contact sexual offending (adult or child victim). Eighteen subjects (34%) acknowledged past week, child-related sexual behaviors.

**Conclusion:** Self-referred, help-seeking men with PD scored higher (small to very large effect sizes) than non-clinical control men on psychiatric measures of dynamic risk of child sexual abuse suggested in prior research with correctional samples diagnosed with PD. Our findings, including the composite risk measure, might inform clinical practice, but needs validation against actual sexual offending behavior.

**Keywords:** pedophilic disorder, dynamic risk, child sexual abuse, case-control study, risk assessment

## INTRODUCTION

Pedophilic Disorder (PD) is defined as intense and persistent sexual attraction to prepubescent children associated with negative consequences for the individual or others (American Psychiatric Association, 2013). Although many individuals with PD do not sexually abuse children (Martijn et al., 2020), PD remains an important risk factor and treatment target in child sexual abuse prevention (Jordan et al., 2011; Association for the Treatment of Sexual Abusers [ATSA], 2014; Baur et al., 2016) and an estimated 50% of convicted child sexual offenders may meet PD diagnostic criteria (Seto, 2018).

A methodological problem with prior PD research is that most studies concern individuals involved with the criminal justice system. This entails substantial risks that findings secondary to selection biases following subject status as an identified and convicted child sexual offender diagnosed with PD may be over-interpreted as causal for the pedophilic attraction as such.

Individuals are increasingly seeking help for PD in sexual medicine contexts and general psychiatry settings, such as the German prevention project Dunkelfeld (Schaefer et al., 2010; Knack et al., 2019). Treatment decisions are partly based on clinically perceived risk of child sexual abuse, and current guidelines suggest SSRI medication or psychotherapy for low risk and antiandrogen medication for high risk individuals (Thibaut et al., 2010). However, validated measures of reoffending risk such as the Static-99R and STABLE-2007 (Hanson et al., 2016; Brankley et al., 2019) were developed in correctional settings and have limited utility with non-offender, at-risk individuals. Hence, risk assessment tools, addressing particularly dynamic, potentially changeable risk factors, are needed also for general psychiatry and sexual medicine. Improved knowledge about sexual offending risk among self-referred individuals with PD could advance treatment tailoring and the prevention of child sexual offending (Laws, 2000; Långström et al., 2013; Khan et al., 2015; Knack et al., 2019).

Assessing risk of sexual offending is important but complex and ethically challenging (Craig et al., 2005; Khan et al., 2015). Dynamic and static recidivism risk factors, although not necessarily causal, have indeed been identified among *convicted sexual offenders*. A classic systematic review (Hanson and Morton-Bourgon, 2005) found deviant sexual interest (e.g., pedophilia), sexual preoccupation, impaired self-regulation and antisocial traits among the most prominent dynamic or potentially changeable risk factors (Cohen's  $d = 0.2$ – $0.4$ ) for sexual offense recidivism in known sexual offenders. Further, cognitive empathy has been linked theoretically to antisocial behavior and a recent meta-analysis suggested that it is moderately lower (Hedges'  $g = -0.58$ ) among child sexual offenders compared to the general population, but not compared to sexual offenders of adults (Morrow, 2019). The *motivation-facilitation* model for sexual offending (Seto, 2019) suggests that pedophilic interest and hypersexuality are *motivational* factors, antisocial behavior *trait factors*, and impaired self-control a *state factor*. However, sexual offending risk and actual offending behavior is mostly unknown among individuals *who voluntarily*

*seek treatment for PD* without prior identified child sexual offending (Schaefer et al., 2010; Dombert et al., 2016).

We assessed the prevalence of dynamic risk factors for sexual offending in self-referred, non-correctional adult men diagnosed with PD and age-matched control men. We also asked for self-reported sexual offending behaviors against minors. Finally, to synthesize the empirical and theoretical literature, we constructed a pre-specified composite risk score. We hypothesized that PD participants would score substantially higher than controls on all five risk domains and the composite score.

## METHODS

### Setting

This case-control study was part of the research project Pedophilia at Risk—Investigations of Treatment and Biomarkers (PRIOTAB), conducted from March 2016 to April 2019 at the Karolinska University Hospital in Stockholm, Sweden. PRIOTAB included clinical interviews, psychological testing and self-reports, neuroimaging, blood sampling and enrollment in a double-blind, randomized controlled efficacy trial (RCT) of the testosterone-suppressing medication degarelix (Landgren et al., 2020). Individuals calling PrevenTell<sup>1</sup>, a national telephone helpline addressing *unwanted sexuality* were screened for PD and invited to participate. PrevenTell is a low-threshold service providing counseling and treatment for sexual risk behaviors. The target group is people with self-experienced risky behavior, compulsive preoccupation with sexual thoughts or actions, sexual interest in children or impulses to force someone into sex. PrevenTell has been providing services since 2011, financed through the tax-funded health care system and targeted support from the Swedish Government. PrevenTell has received public visibility through repeated media coverage and increasing exposure in online search engines, and receives an average of four calls per day.

### Participants

Men aged 18–66 years with DSM-5 PD ascertained by telephone interview prior to intake and confirmed on site by a board-certified general psychiatrist were eligible for study inclusion. Psychiatric exclusion criteria included severe psychosis, severe and acutely increased substance misuse, or suicide risk, respectively. Medical exclusion criteria included contraindications to magnetic resonance imaging (MRI) and drug trial inclusion; previously known or newly ascertained severe osteoporosis, electrocardiogram-verified prolonged QT/QT interval ( $> 450$  ms), kidney or liver insufficiency, severe asthma, hypersensitivity to study drug or participation in another drug study during the previous 3 months. Karolinska Trial Alliance assists Karolinska University Hospital in recruiting participants for clinical trials and, along with independent study monitoring, helped the PRIOTAB project by disseminating information about the opportunity to participate as a non-patient control in the study. Healthy controls were recruited

<sup>1</sup>www.preventell.se



primarily through adverts on Karolinska Institutet's homepage, and through Karolinska Trial Alliance. Exclusion criteria were the same for PD participants and controls. Finally, 55 PD participants and 57 age-matched controls were included in data analyses (Figure 1).

## Procedure

PD men and age-matched control men were all examined by a psychiatrist, completed self-rating questionnaires, provided blood samples, and underwent neuropsychological testing by a clinical psychologist. Self-report measures were filled out in privacy on site and participants were instructed to ask study staff for assistance if they had questions or difficulty answering the questionnaires. All participants underwent assessments during the same time of the day starting in the morning. Approximately 6 h were required for the assessments, the first two provided data presented in this case-control study.

## Ethical Considerations

A designated research nurse oversaw procedures where patient identification was necessary for clinical safety and insurance reasons; research subjects were otherwise only known to researchers by their initials. Participants were initially informed about health professionals' obligation according to the Swedish Social Services Act to immediately notify the social services when a named child is at imminent risk of abuse or maltreatment. Subjects were asked at every visit to inform about such children in their vicinity. According to Swedish law, professionals are also allowed, but not obliged, to supersede confidentiality and tell the police any potential crime against children admitted by a patient. If a study participant reported any such actions, the choice to report or not to the police was discussed with an external ethico-legal advisory board linked to the Karolinska University Hospital. The study was approved by the Swedish Central Ethical Review Board (no: Ö 26-2014). Participants were offered reimbursement for transports to study visits and a financial compensation of SEK 1000 (the equivalent of 94 Euros before taxation) upon study completion. All subjects provided oral and signed informed consent and were offered treatment as usual after the study.

## Instruments

We compared PD and control participants on three self-reports, the Sexual Desire Inventory (SDI) (Spector et al., 1996) measuring sexual interest; the Hypersexual Behavior Inventory (HBI) (Reid et al., 2011) assessing hypersexuality; and the Ritvo Autism and Asperger Diagnostic Scale—Screening Tool (RAADS-14) (Eriksson et al., 2013) mentalizing subscale. We complemented this with three expert-administered measures; Conners' Continuous Performance Test—2nd edition (CCPT-II) (Conners, 2000) tapping impulsivity; the Reading the Mind in the Eyes Test (RMET) (Baron-Cohen et al., 2001) addressing the understanding of others' emotions; and Antisocial Personality Disorder (ASPD) symptoms according to the MINI Neuropsychiatric Interview 6.0 (Sheehan et al., 1998).

Additionally, participants completed measures addressing pedophilic attraction and related behavior and self-rated risk. We evaluated PD symptoms based on DSM-5 criteria and used a

prespecified composite measure (SChiMRA, see **Supplementary Material**) developed by us to quantify self-rated risk of sexual offending against children and past week sexually abusive behavior toward children.

The five putative dynamic risk domains for child sexual abuse; pedophilic attraction (DSM-5 diagnostic criteria), sexual preoccupation (SDI, HBI and ongoing offensive behavior according to SChiMRA-B), impaired self-regulation (CCPT-II), impaired cognitive empathy and antisocial traits (RAADS-14, RMET and ASPD symptoms according to MINI 6.0), and self-rated child sexual abuse risk (SChiMRA-A), were assessed and compared between PD participants and control men. We predefined the composite score as described in **Supplementary Table 1** by assigning 0–3 points to each of the five domains and summing them with equal weights to a total score ranging from 0 to 15. Hence, the composite risk score is based on self-, expert-completed and behavioral measures and potentially treatment sensitive since all five included domains could capture change over time. The five-domain score was used as the primary outcome measure in the PRIOTAB RCT (Landgren et al., 2020). Here we report both the five-domain score and a four-domain score (range 0–12) excluding pedophilic attraction; part of the inclusion criteria for PRIOTAB but also the grouping criterion for the present case-control study. A detailed description of the instruments is provided in **Supplementary Material**.

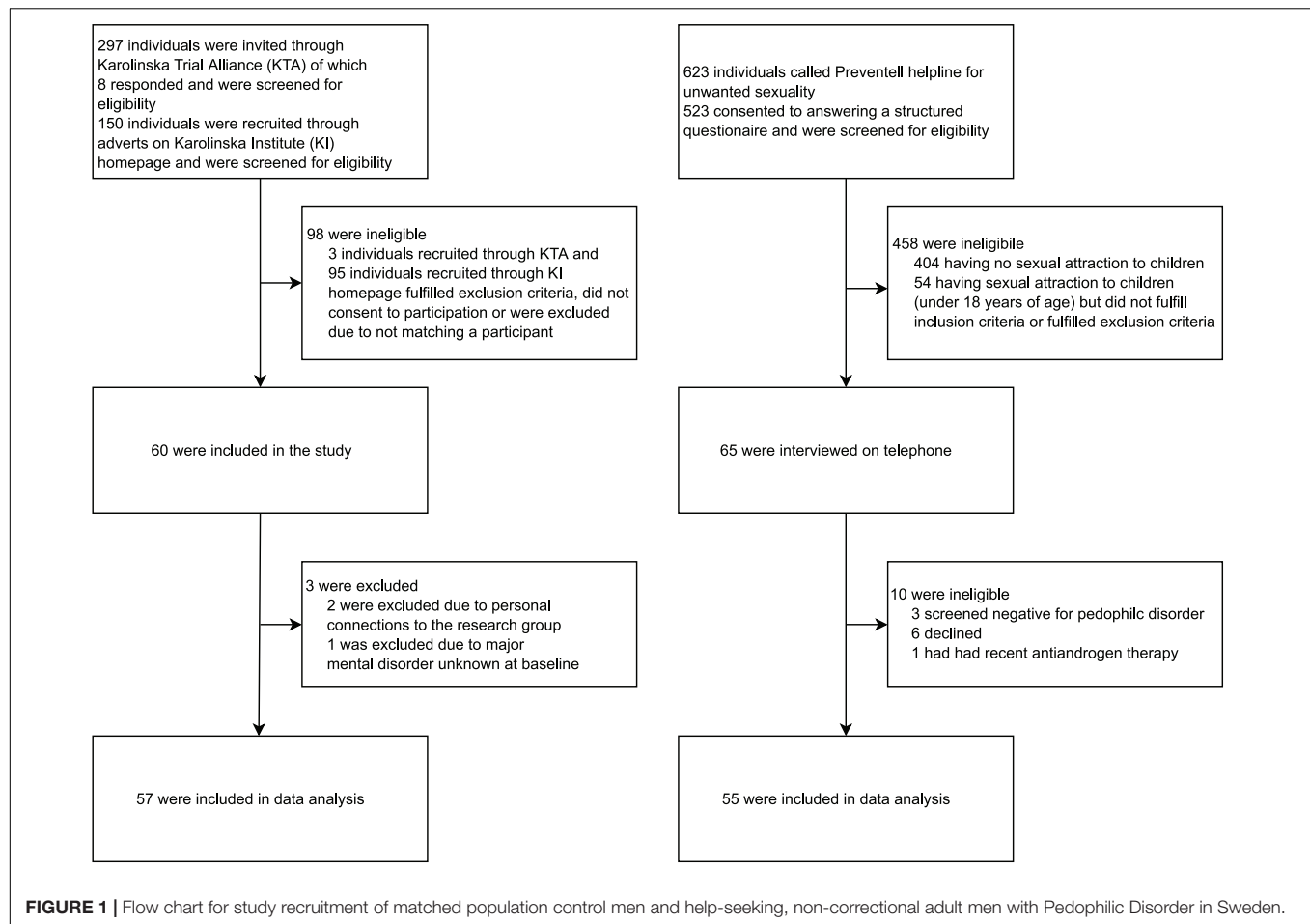
## Statistical Analyses

We computed Cohen's *ds* with 95% confidence intervals to express effect sizes of potential differences between cases and controls. Using the freely available Practical Meta-Analysis Effect Size Calculator (Effect Size Calculator, 2020) provided by the Campbell Collaboration and based on Lipsey and Wilson (2001), Cohen's *ds* were calculated from 2 by 2 (occasionally 3 by 2) tables for binary (frequency) data, from standardized mean differences for parametric test results and based on *p*-values and sample sizes for non-parametric test results. Following Cohen (Cohen, 1988), Cohen's *ds* were interpreted as small (0.20–0.49), medium (0.50–0.79) or large (0.80+) effects.

Some data are missing since study participants occasionally did not complete self-rating questionnaires and no imputation procedures were employed. The number of individuals with complete data for each variable is reported in table footnotes. Data were analyzed using SPSS Version 24 for Windows.

## RESULTS

**Table 1** suggests that PD participants and control men were similar regarding education level, non-sexual offenses and being a parent, whereas PD participants were less often employed (Cohen's  $d = -0.90$ ), more often single ( $d = 0.58$ ), had less frequently lived with an intimate partner for 2+ years ( $d = -0.63$ ), had lower IQ ( $d = -0.79$ )—although on average within the normal range (95–105), and more often self-reported convictions for any sexual offense ( $d = 1.52$ ) or non-contact sexual offenses ( $d = 1.25$ ). Further, PD participants scored higher compared to



controls on all dynamic sexual offending risk domains and the predefined composite risk score (Table 2). Effect sizes for risk domains were significant and small (impaired self-regulation,  $d = 0.44$ ), large (sexual preoccupation  $d = 1.11$ , impaired cognitive empathy and antisocial traits,  $d = 1.18$ , self-rated risk,  $d = 1.56$ ) and, following inclusion criteria for PD subjects, extremely large (pedophilic attraction,  $d = 2.40$ ). Individual items pertaining to pedophilic attraction and self-rated risk (such as past week watching, socializing with, or sexually interacting with children) were not directly compared across groups, only as part of domain and composite scores. Most notably, however, 12 (22%) PD participants reported prior convictions for sexuality-related crimes; five (9%) stated a contact sex offense against a child (<15 years of age) and eight (15%) any non-contact sexual offense; mostly illegal possession of child sexual abuse material (CSAM), legally referred to as “child pornography”. Eighteen PD subjects (34%) acknowledged *past week*, child-related sexual at-risk behavior, one of them reported actual child sexual interaction during the past week. 66% estimated having a 40% or higher risk of future child-related sexual at-risk behavior; if there existed an easy way to escape detection. Finally, we conducted two *post hoc* sensitivity analyses. First, as IQ is empirically linked to measures of self-regulation and empathy (Vellante et al., 2013; Chien et al., 2017), we correlated group status (PD or control participant) to

domain scores with and without adjustment for IQ. Naturally, group status was moderately to strongly significantly correlated with risk scores before adjustment (impaired self-regulation, Spearman's  $r = -0.22$ ,  $p < 0.05$ ; low empathy and antisocial traits,  $r = -0.55$ ,  $p < 0.01$ ; four-domain risk score,  $r = -0.71$ ,  $p < 0.01$ ). Adjusting for IQ in partial correlation analyses decreased associations somewhat (impaired self-regulation,  $r = -0.13$ ,  $p = 0.19$ ; low empathy and antisocial traits,  $r = -0.48$ ,  $p < 0.01$ ; four-domain risk score,  $r = -0.66$ ,  $p < 0.01$ ). The second *post hoc* sensitivity analysis examined the robustness of the composite score difference by excluding the 12 PD participants with a history of sexuality-related offending. The latter had a composite score  $Mdn = 8$  ( $n = 12$ , IQR 6.0–9.5) compared to  $Mdn = 8$  in those without ( $n = 41$ , IQR 6.0–9.0). Exclusion reduced the composite score difference compared to controls from  $d = 2.12$  (95% CI: 1.65 to 2.59) to  $d = 2.11$  (1.61 to 2.61).

## DISCUSSION

We compared non-correctional, self-referred adult men diagnosed with DSM-5 Pedophilic Disorder (PD) to age-matched non-clinical control men to elucidate dynamic sexual offending risk factors in a non-forensic clinical context. There were four

**TABLE 1 |** Socio-demographic, criminological and sexuality baseline characteristics among help-seeking, non-correctional adult men with Pedophilic Disorder and matched non-clinical control men in Sweden.

Characteristic	Pedophilic Disorder men ( <i>n</i> = 55)	Non-clinical control men ( <i>n</i> = 57)	Cohen's <i>d</i> (95% CI)
Age, range, <i>M</i> ( <i>SD</i> )	18–66, 36 (12)	18–64, 36 (12)	–0.05 (–0.42 to 0.32)
Full scale IQ (WAIS-IV), <i>Mdn</i> (IQR)	101 (23)	115 (15) <sup>a</sup>	<b>–0.79 (–1.17 to –0.40)</b>
Education, highest level, <i>n</i> (%)			
Primary school ≤ 9 years	6 (11)	2 (4)	
Secondary school 1–3 years	26 (47)	23 (40)	–0.36 (–0.73 to 0.02)
Postsecondary education	23 (42)	32 (56)	
Employed, <i>n</i> (%)	32 (58)	50 (88)	<b>–0.90 (–1.43 to –0.38)</b>
Parent/guardian, <i>n</i> (%)	20 (36)	26 (46)	–0.21 (–0.63 to 0.21)
Currently lives as single, <i>n</i> (%)	35 (64)	21 (37)	<b>0.58 (0.16 to 0.99)</b>
Ever lived with partner for more than 2 years, <i>n</i> (%)	26 (47)	42 (74)	<b>–0.63 (–1.06 to –0.05)</b>
Pedophilic sexual attraction			
Age of discovery of pedophilic sexual attraction, range, <i>M</i> ( <i>SD</i> ), <i>Mdn</i> (IQR) <sup>b</sup>	6–39, 18 (7), 16 (13–23)	–	NA
Attraction primarily to boys, <i>n</i> (%)	8 (15)	–	NA
Attraction primarily to girls, <i>n</i> (%)	43 (78)	–	NA
Attraction to boys and girls, <i>n</i> (%)	4 (7)	–	NA
Exclusive attraction to prepubescent children, <i>n</i> (%)	12 (22)	–	NA
Self-reported convictions, <i>n</i> (%) <sup>c</sup>			
Any sex offense	12 (22)	1 (2)	<b>1.52 (0.37 to 2.66)</b>
Contact sex offense (child) <sup>c</sup>	5 (9)	0 (0)	0.96 (–0.24 to 2.16)
Non-contact sex offense (child or adult) or CSAM offense <sup>c,d</sup>	8 (15)	0 (0)	<b>1.25 (0.09 to 2.42)</b>
Any non-sexual offense	8 (15)	13 (23)	–0.30 (–0.84 to 0.23)

Bolded figures are significant at  $p < 0.05$ .

NA, not applicable.

For reasons of completeness regarding Cohen's *d* estimates, we exchanged frequencies of "0" to "1" in effect size calculations.

<sup>a</sup>Missing data for 1 control.

<sup>b</sup>Excluded 4 participants reporting that they "had always known" about their pedophilic sexual attraction and did not provide a specified age.

<sup>c</sup>One PD patient reported both contact and non-contact sexual offenses.

<sup>d</sup>CSAM offense = possession of child sexual abuse material.

main findings. First, HBI-assessed hypersexual behavior, lower RAADS-14 mentalizing-based cognitive empathy, and DSM-5 Antisocial Personality Disorder symptoms were much more pronounced among PD cases than controls; effect sizes were large. Second, and contrarily, SDI hyposexuality, ADHD-like self-regulation measured with the CCPT-II test and RMET-based theory of mind impairments did not differ meaningfully between PD and control men. Third, a non-trivial proportion of PD participants reported prior convictions for sexuality-related offending, current child-related sexual at-risk behavior and at least moderate risk of future child-related sexual at-risk behavior. Fourth, when dynamic risk domains were combined into a predefined composite measure, the resulting summary score was very much larger among PD men vs. controls. This large difference remained after excluding the pedophilic attraction domain and each risk domain score was weakly to very much higher in cases compared to controls.

## Socio-Demographic Characteristics

Although education levels were similar, unemployment was moderately more prevalent among PD participants than controls. PD men also had lower IQ, albeit not clinically significantly so. However, both employment rates and higher IQ among controls may partly reflect selection bias toward

more cognitively high-functioning individuals volunteering for study participation. In addition, our sensitivity analysis suggested that IQ is unlikely to be a major confounder of the link between group status (case or control) and the composite risk score. Although PD participants had less lifetime experience of living with a partner and were more often single vs. controls, the prevalence of being a parent did not differ.

## Pedophilic Disorder

Since PD was a core inclusion criterion, the lowest possible score in this domain was 2 for PD participants; hence, the effect size for the difference vs. controls on this domain risk score was extremely large. Although reluctance to disclose symptoms cannot be ruled out, null findings regarding PD symptoms among age-matched control men agrees with the notion that persistent pedophilic attraction is infrequent in the general population, perhaps 1% at most (Santtila et al., 2015; Seto, 2018).

## Sexual Preoccupation

SDI baseline scores did not differ meaningfully between PD and control participants, indicating that *hypoactive* sexual motivation is not over-represented in help-seeking, non-forensic



**TABLE 2 |** Comparisons of five domains of dynamic risk factors for child sexual abuse among help-seeking, non-correctional adult men with Pedophilic Disorder and age-matched, non-clinical control men in Sweden.

Risk factor/domain	Pedophilic Disorder men (n = 55)	Non-clinical control men (n = 57)	Cohen's d (95% CI)
<b>Pedophilic attraction</b>			
Domain risk score (range 0–3), M (SD)	2.5 (0.6)	0.0 (0.0)	<b>2.40 (1.91 to 2.89)</b>
<b>Sexual preoccupation</b>			
Sexual Desire Inventory score <sup>a</sup> (range 12–109), Mdn (IQR)	70 (19)	65 (14)	0.21 (–0.16 to 0.59)
Hypersexual Behavior Inventory score <sup>b</sup> (range 19–95), Mdn (IQR)	56 (22)	24 (10)	<b>1.70 (1.26 to 2.14)</b>
Past week watched child sexual abuse material or observed children for sexual arousal <sup>c</sup> , n (%)			
Not at all	37 (70)	57 (100)	–
A few days	11 (21)	0 (0)	–
More than half the days	1 (2)	0 (0)	–
Nearly every day	4 (8)	0 (0)	–
Past week socializing with children for sexual arousal, n (%)			
Not at all	50 (94)	57 (100)	–
A few days	3 (6)	0 (0)	–
More than half the days/nearly every day	0 (0)	0 (0)	–
Past week direct sexual interaction with children			
Not at all	52 (98)	57 (100)	–
A few days	1 (2)	0 (0)	–
More than half the days/nearly every day	0 (0)	0 (0)	–
Domain risk score (range 0–3) <sup>a</sup> , M (SD)	1.6 (0.7)	1.0 (0.2)	<b>1.11 (0.71 to 1.51)</b>
<b>Impaired self-regulation</b>			
Conners' Continuous Performance Test aspects most like ADHD norms <sup>b</sup> (range 0–12), M (SD)	2.3 (1.8)	1.8 (1.5)	0.31 (–0.06 to 0.69)
Domain risk score (range 0–3), M (SD)	1.4 (1.0)	1.0 (1.0)	<b>0.44 (0.06 to 0.81)</b>
<b>Impaired cognitive empathy and antisocial traits</b>			
Ritvo Autism and Asperger Diagnostic Scale – Screening Tool mentalizing subscale score <sup>c</sup> (range 0–21), Mdn (IQR)	10 (12)	2 (3)	<b>0.81 (0.43 to 1.20)</b>
Reading the Mind in the Eyes Test score <sup>c</sup> (range 0–36), Mdn (IQR)	27 (7)	29 (5)	–0.33 (–0.71 to 0.04)
No. of DSM-5 Antisocial Personality Disorder symptoms (range 0–12), M (SD)	3 (3)	1 (2)	<b>1.23 (0.83 to 1.64)</b>
Domain risk score (range 0–3) <sup>c</sup> , M (SD)	0.9 (0.8)	0.1 (0.4)	<b>1.18 (0.78 to 1.59)</b>
<b>Self-rated substantial risk of child sexual abuse<sup>b</sup>, n (%)</b>			
Watching child sexual abuse material or observing children for sexual arousal	35 (66)	0 (0)	–
Socializing with children for sexual arousal	9 (17)	0 (0)	–
Direct sexual interaction with children	11 (21)	0 (0)	–
Domain risk score (range 0–3) <sup>b</sup> , M (SD)	1.0 (1.0)	0.0 (0.0)	<b>1.56 (1.13 to 1.98)</b>
<b>Five-domain composite risk score</b> (range 0–15) <sup>a,d</sup> , M (SD)	7.5 (1.7)	2.1 (1.1)	<b>2.12 (1.65 to 2.59)</b>
<b>Four-domain composite risk score</b> (excluding pedophilic attraction, range 0–12), M (SD) <sup>a</sup>	4.9 (1.9)	2.1 (1.1)	<b>1.62 (1.18 to 2.05)</b>

Bolded figures are significant at  $p < 0.05$ .

<sup>a</sup>n = 53 and n = 55 subjects for PD and control groups, respectively.

<sup>b</sup>n = 53 and 57.

<sup>c</sup>n = 54 and 57.

<sup>d</sup>For a description of the composite risk score see **Supplementary Table 1**.

PD patients. In contrast, we found a large difference between PD and control men regarding HBI *hypersexuality* scores, which also contributed substantially to the large difference between PD and control men in the sexual preoccupation domain risk score. The HBI was designed to capture repetitive sexual behaviors in response to dysphoric mood states or stressful life events and the degree to which they are perceived as uncontrollable (Reid et al., 2011). Hypersexual behavior appears to co-occur with paraphilic interest; in

fact, paraphilic and hypersexuality comorbidity might fuel help-seeking behaviors (Kafka, 1997; Walton et al., 2017). The median HBI score for our PD subjects is above the suggested cut off-score of 53 when screening for hypersexual disorder (Reid et al., 2011), suggesting such comorbidity and highlighting their motivation to seek help. Simultaneously, the median HBI score in control men (24.0) was lower than that of a large Spanish non-clinical sample (30.5) (Ballester-Arnal et al., 2019).

## Impaired Self-Regulation

We found no significant differences between PD and control men in binary self-regulation measures derived from the CCPT-II, but a moderate, significant difference when integrated into the risk domain score. The CCPT-II is used supportively in both assessment and treatment evaluation of ADHD, but effect sizes of the mean difference between ADHD patients and controls has only been moderate (Hervey et al., 2004). Due to the insufficient discriminative power for ADHD, CCPT-II results are not considered diagnostic. Yet, test-measured executive dysfunction is not a prominent characteristic of our non-forensic PD patients. Importantly, this agrees with studies suggesting that executive dysfunction is more strongly associated with child sexual offending than with PD as such (Joyal et al., 2007; Suchy et al., 2009; Eastvold et al., 2011; Schiffer and Vonlaufen, 2011). Massau et al. (2017) compared men with *pedophilic attraction* with or without prior contact child sexual offending to men with *no pedophilic attraction* but with or without prior contact child sexual offending. One measure of impulsivity was minimally higher in offending compared to non-offending participants ( $\eta^2 = 0.032$ ,  $p = 0.03$ ) but did not differ according to pedophilic attraction.

## Impaired Cognitive Empathy and Antisocial Traits

The RAADS-14 mentalizing subscale, RMET and Antisocial Personality Disorder symptoms all comprised the *impaired cognitive empathy and antisocial traits* domain but contributed differently to the large difference in this domain risk score between PD and control participants.

The RAADS-14 mentalizing subscale attempts to capture Autism Spectrum Disorder (ASD)-related atypical communication and social interaction (Baghdadli et al., 2017) and our PD participants scored considerably higher than controls. Eriksson and colleagues (Eriksson et al., 2013) found a median RAADS-14 mentalizing score of 15 among adult men in Sweden with ASD and 4 among men with other psychiatric disorders than ASD or ADHD. Thus, PD participants' median fell between those of male ASD patients and men with other psychiatric morbidity, whereas that of our controls agree with those of the non-psychiatric controls (Eriksson et al., 2013). However, importantly, the full diagnostic criteria for ASD were not used by us, and a prior ASD diagnosis did not exclude study participation.

The similarity in RMET scores between cases and controls is somewhat surprising; theoretically, RMET should measure the same construct as the RAADS-14 mentalizing domain. Some research (Oakley et al., 2016) suggests RMET is primarily a measure of *emotion recognition*. Thus, PD participants' self-rated mentalizing impairments might capture more complex real-life social situations than the RMET. Recently, Schuler et al. (2019) compared men with pedophilic attraction with ( $n = 85$ ) and without ( $n = 72$ ) prior contact child sexual offenses to male non-offending controls ( $n = 128$ ) on several aspects of empathy. The only significant difference between PD and control

participants was that those with PD and prior child sexual contact self-reported lower mentalizing ability ( $d = 0.38$ ,  $p < 0.05$ ), and a trend toward impaired emotion attribution ( $d = 0.31$ ,  $p = 0.05$ ) (Schuler et al., 2019). This is partly consistent with the poorer self-rated mentalizing ability and trend toward poorer emotion attribution found among our non-forensic but help-seeking PD men.

The large difference in Antisocial Personality Disorder symptoms should be vetted toward mixed results in prior research. Cohen et al. (2018) studied individuals convicted of child sexual offending ( $n = 50$ ), non-convicted, non-clinical individuals with pedophilic attraction ( $n = 195$ ) and non-PD controls ( $n = 60$ ). Their findings suggested more antisocial traits among convicted offenders, but not among non-convicted PD individuals, compared to controls. Another, likely underpowered study of CSAM offenders ( $n = 23$ ), non-contact offenders ( $n = 15$ ) and contact child molestation offenders ( $n = 49$ ) (Jung et al., 2013) found self-reported antisocial traits to fall within clinically significant ranges across groups. However, more ASPD symptoms in PD participants could partly be inflated by the question specifically asking about "*Repeated illegal acts as an adult*" with previous CSAM offending being somewhat common in our patient population.

## Child-Related Sexually Motivated Behavior: Self-Report and Self-Assessed Risk

The proportion of our PD participants self-reporting any previous conviction of a sexuality-related offense supports the notion that a non-negligible minority of help-seeking PD patients may have prior sexual offense convictions. Additionally, we observed a large proportion of PD participants acknowledging past week, child-related sexual behaviors such as viewing CSAM or observing children for sexual arousal and endorsing a clinically significant risk that they would, if not discovered, watch CSAM or children directly off-line for sexual purposes. First, this supports the notion that watching CSAM may be a diagnostic marker for PD (Seto et al., 2006). Second, it implies that help-seeking individuals with PD may be at risk of committing child sexual abuse and could benefit from risk-reducing treatment. Our findings are consistent with prior research suggesting that most self-identified individuals with PD or respondents in anonymous online surveys endorse past or present CSAM viewing (Riegel, 2004; Neutze et al., 2011; Klein et al., 2015). The present results reflect the *past week* situation when PD patients seek help, and complement the *lifetime* prevalence numbers reported in the seminal German study of 137 self-identified PD individuals where 69% reported previous contact child sexual offending (Neutze et al., 2011).

## Static and Dynamic Risk of Child Sexual Abuse in PD

Static and dynamic risk factors co-occur and interact over time (Craig et al., 2005). To further investigate the overlap of static and dynamic risk among PD patients, future studies might measure

static risk factors with tools such as the recently validated Child Pornography Offender Risk Tool (CPORT) (Eke et al., 2019). The CPORT predicts general sexual and child pornography recidivism (AUCs = 0.72–0.74) among individuals adjudicated for CSAM offending but without known contact sexual offenses.

Dynamic measures for sexual offending risk among convicted offenders have been developed (Hanson and Morton-Bourgon, 2009). Two such established measures are the STABLE-2007 and ACUTE-2007, encompassing for example sexual preoccupation, self-regulation problems and antisocial behavior. They both appear to add incremental predictive power beyond static risk alone to risk assessments (Brankley et al., 2019). However, these measures were designed for individuals currently in contact with the legal system for sexual offending, whereas medical professionals generally lack risk measures for non-forensic clinical use. We propose that our dynamic composite risk score might aid in further development of such clinically useful risk assessment and management methods.

## Strengths and Limitations

PD patients were recruited through a national helpline in Sweden, resulting in a consecutive nationwide sample of self-referred, non-forensic participants. Consequently, included PD patients were likely similar to those clinicians would see in sexual medicine and general psychiatry settings, and representative of the target group often addressed in selective prevention of child sexual abuse. Further, the truthfulness of the self-report provided by participants was strengthened by a pseudonymization procedure. Finally, most employed measures had been properly validated in other clinical settings, enabling comparisons of this patient population to those diagnosed with other psychiatric disorders. Regarding limitations, we were not able to prospectively investigate associations between empirically and theoretically suggested dynamic risk measures and actual future CSAM or contact child sexual offending. Further, poor concurrent validity has been suggested across various measures of the cognitive empathy construct (Chen et al., 2017), indicating that it is indeed difficult to measure. Inevitably, any study that requires opting in or help-seeking efforts will be vulnerable to selection biases toward subjects who are indeed motivated to participate. Here by taking part in a project involving a novel treatment addressing impairing sexual preoccupation, impaired cognitive empathy, antisocial traits and self-assessed offending risk. Last, the validity of self-ratings of sexual offending risk and sexually motivated at-risk or abusive behavior against children has not been investigated. However, by safeguarding participant anonymity, these self-reports may be as truthful as possible in a clinical PD study with face-to-face interactions.

Future studies should investigate prospectively the ability of the measures tested here to predict sexual offending, preferably by looking at risk behaviors and situations, self-reports of child sexual offending, and suspicions/arrests for suspected sexual offenses including CSAM crime (Långström et al., 2013). Also, the malleability of these dynamic risk factors or potential treatment effect mediators should be investigated, as attempted in the recently published results of the PRIOTAB RCT of degarelix (Landgren et al., 2020).

## CONCLUSION

The help-seeking and self-identified PD individuals in this study exhibited offending risk-increasing characteristics. A non-trivial minority also report prior CSAM and direct child sexual offending or current child-related at-risk sexual behavior. This may need consideration in clinical services for help-seeking individuals with PD and supports the idea of PD as a potential treatment target in child sexual abuse prevention. Low-threshold specialist services such as the PrevenTell helpline, the recruitment base for the current study, might be important resources in such prevention efforts. Except from the sexual interest in minors *per se*, risk-related characteristics may include concurrent hypersexuality or sexual preoccupation, mentalizing or cognitive empathy deficits, and antisocial traits. In contrast, non-forensic PD patients may not necessarily differ from healthy general population controls in terms of hypoactive sexual desire and continuous performance tests of inattention, impulsivity, and vigilance. We present a preliminary, dynamic composite risk score that might be useful in developing risk assessment measures for use in child sexual abuse prevention efforts in sexual medicine and general psychiatry.

## DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because the dataset contains sensitive and intimate details about the participants. Requests to access the data will be evaluated on a case by case basis. Such requests should be directed to CR, christoffer.rahm@ki.se.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Swedish Central Ethical Review Board. The patients/participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

CR designed the study and collected the data. FW drafted the initial manuscript and CR, VL, and NL reviewed the manuscript for important intellectual content. All authors contributed to data analyses.

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## SUPPLEMENTARY MATERIAL

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**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# “All of Me Is Completely Different”: Experiences and Consequences Among Victims of Technology-Assisted Child Sexual Abuse

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The aim of the present study was to gain a first-person perspective on the experiences of technology-assisted child sexual abuse (TA-CSA), and a deeper understanding of the way it may affect its victims. Seven young women (aged 17–24) with experience of TA-CSA before the age of 18 participated in individual in-depth interviews. The interviews were teller-focused with the aim of capturing the interviewee’s own story about how they made sense of their experiences over time, and what impact the victimization had on them in the short and long terms. Thematic analysis of the interviews revealed a broad range of abusive experiences that had profoundly impacted the individuals’ lives, health and self-concepts. Three dominant themes emerged from the analysis – *From thrilling to abusive*, *Negative effect on health and wellbeing*, and *A new self after the abuse*. *From thrilling to abusive* captures the wide range of experiences described, starting from the child’s own sexual curiosity to descriptions of having been manipulated or threatened into engaging in sexual activity, as well as the sometimes long and complex process of understanding the severity of one’s experiences. *Negative effect on health and wellbeing* describes the victimization’s comprehensive impact on the life and health of the participants, how they blamed themselves for what had happened, and the struggle of having to live with the constant fear of pictures from the abuse resurfacing. *A new self after the abuse* depicts how the victimization impacted the way participants viewed and thought about themselves in relation to others, and distorted their views of their bodies. The findings are discussed in relation to previous research on both offline CSA and TA-CSA, as well as theoretical and practical implications.

**Keywords:** technology-assisted child sexual abuse, victim, internet, online abuse, thematic analysis, experiences, CSA, consequences

## INTRODUCTION

In recent years, child sexual abuse that is conducted through the means of internet has received increasing attention in the media following several large-scale cases involving many victims, and numerous countries worldwide have reported an increase in cases (Bentley et al., 2019; Swedish National Council for Crime Prevention, 2019). In a

ground breaking sentencing in 2018, Sweden became the first country in the world to sentence a man for the rape of a child, for crimes that had been conducted solely online (B 11734-17). The man, while located in Sweden, had coerced children in the United Kingdom, the United States, and Canada into performing sexual acts on themselves. Evidently, this type of technology-assisted child sexual abuse (TA-CSA) is of global concern and an issue that requires attention. Following the increase in TA-CSA victims worldwide, there is a significant desire to learn more about the phenomenon of TA-CSA. So far, research has largely focused on offenders and offending behavior (e.g., Briggs et al., 2011; Webster et al., 2012; Kloess et al., 2014; Black et al., 2015; De Santisteban et al., 2018), with attention more recently turning to its potential consequences. Although the existing knowledge remains sparse, initial results indicate that the consequences of TA-CSA can be as severe and harmful as offline CSA (Whittle et al., 2013; Hamilton-Giachritsis et al., 2017; Jonsson et al., 2019; Joleby et al., 2020a). Adolescents with experience of TA-CSA (and no offline CSA) reported more trauma symptoms than a reference group, at least at the same level as adolescents with experiences of penetrative offline CSA (and no TA-CSA) (Jonsson et al., 2019). A wide range of psychological consequences similar to those reported among victims of offline CSA (e.g., psychological suffering, self-harming or suicidal behavior, sleeping problems, trust issues, impaired relationships, and difficulties at school) were identified in court documents regarding victims of TA-CSA (Joleby et al., 2020a). It has been suggested that the permanence of pictures of the abuse, which often exist in TA-CSA, potentially complicate the impact of abuse even further and can lead to increased feelings of self-blame (Hamilton-Giachritsis et al., 2017). This argument resonates with a study showing that knowledge of abuse pictures simply existing, or knowledge of them having been distributed, was related to higher levels of post-traumatic stress symptoms compared to being exposed to undocumented CSA (Jonsson and Svedin, 2017).

The existence of a relationship between TA-CSA victimization and psychological suffering is thus initially supported. In order to gain a deeper understanding of what this relationship looks like and which processes are behind it, this study uses in-depth interviews with victims of TA-CSA. The aim is to provide a rich first-person perspective on the experiences of TA-CSA and the way it may affect its victims. This understanding is vital in order to provide victims with sufficient support and help for coping with their experiences. Worryingly, there is a common assumption that TA-CSA is a less severe form of sexual abuse. Research has shown that professionals demonstrate a limited understanding of TA-CSA, may view it as less serious, and fail to prioritize its victims by minimizing their abusive experiences (Hamilton-Giachritsis et al., 2017, in press). Legally, these crimes are also considered less violating and result in lower penalties for the offenders. Despite the worldwide agreement that children should be protected from all forms of CSA (UNICEF, 1989; Council of Europe, 2007), 162 countries have failed to criminalize sexual grooming of children online *unless* the offender also attempts to organize an offline meeting with the child (International Centre for Missing and Exploited Children [ICMEC], 2017). This leaves children legally unprotected in many

cases of online sexual abuse, as not all offenders aim for such a meeting (e.g., Briggs et al., 2011; Joleby et al., 2020b).

Online sexual victimization can take many forms, such as online dissemination of abuse pictures (Martin, 2015), sexual solicitation (Mitchell et al., 2001), online grooming (Whittle et al., 2013), and sextortion (Wolak and Finkelhor, 2016). The focus of this article is on TA-CSA in which children have been incited to engage in online sexual activity. Such activity can include sexual chat, generating sexual photos and/or videos, performing sexual acts live via webcam, or engaging in sexually humiliating activities online (Whittle et al., 2013; Kloess et al., 2019; Joleby et al., 2020a). With regard to the relationship between offender and victim, TA-CSA includes victims who may have perceived the offender as being a romantic partner, as well as victims who have experienced pressure and threats (Whittle et al., 2013; Wolak and Finkelhor, 2016; Joleby et al., 2020b), and no offline meeting is required for the situation to be considered TA-CSA.

This article aims to provide a deeper understanding of the experiences of TA-CSA and its potential consequences. More specifically, the aim is to understand how victims of TA-CSA have made sense of their experiences over time, and what impact the victimization had on them in the short and long terms. As this study was conducted in Sweden, a brief introduction to the Swedish legislation is necessary. In Sweden, the age of sexual consent is 15 years (Swedish Penal Code, paragraph 6). Consequently, all sexual acts involving children under the age of 15 are illegal. In accordance with the United Nations' Convention on the Rights of the Child (UNICEF, 1989), individuals under the age of 18 are defined as children. Thus, some sexual acts (if they harm the child's health and development or if the child is under the care of the offender) between adults and children between the age of 15 and 17 are also illegal (Swedish Penal Code, paragraph 6).

## MATERIALS AND METHODS

### Recruitment

Recruitment to the present study took place between spring 2018 and spring 2020. Initially, the recruitment criteria were (i) having been subjected before the age of 18 to TA-CSA (ii) which had been reported to the police. However, due to recruitment difficulties, the second criterion was excluded after a few months. Recruitment efforts were all aimed at a Swedish audience and included (a) inviting lawyers ( $n \sim 50$ ) to send recruitment flyers about the project to their clients in recent legal cases of TA-CSA, (b) distributing recruitment flyers in waiting rooms at youth clinics, youth centers, child and youth psychiatric centers, psychologists' receptions, and support organizations in several municipalities, and (c) distributing digital recruitment flyers on social media via support organizations, spokespersons engaged in issues of sexual abuse, and celebrities who are known to debate issues of sexual abuse. The flyer included the recruitment criteria, brief information about the focus of the interview ("hearing about your experiences and how your health has been before, during, and after the abuse"), and information about the right to anonymity. Flyers were aimed at both males and females. The



recruitment efforts resulted in nine people (all female) getting in touch to receive more information about the study. One of them asked for information to forward to a friend, and one was under the age of 15 and did not want to ask her parents for consent (which is a requirement according to research ethics guidelines in Sweden), and was thus not allowed to participate in the study. The remaining seven were booked for interviews. Six of the interviewees found out about the study through the same celebrity (a female Swedish artist, author, and social media personality), and the seventh participant did not remember where she had found the information.

All interviews were conducted during summer 2019. The interviews took place at the interviewees' choice of location, at either a library or a university in the chosen city, according to the participants' requests. The first author – the only researcher who knew the identities of the participants – had no prior relationship with the participants and only met them on the one occasion of the interview. The participants did not receive any compensation for their participation (but were offered water and fruit during the interview).

## Interviews

The interviews were based on the teller-focused interview method (Hydén, 2014) due to its suitability for interviews about sensitive topics. This method endorses a dialectical way of thinking about the relationship between the interviewer and the interviewee, in that they are two partners with different tasks and responsibilities during the interview. The aim is to reduce the power imbalance between the two, and to provide a relationally safe space in which the informant feels safe to share his or her story. The method is oriented toward narration and resembles unstructured interviewing (Brinkmann, 2014) in that it uses open questions. Before starting the interview, the first author informed the participants that the aim of the interview was to let them tell their story. The interview used open invitations like “Tell me about yourself and who you are” and “Tell me about what happened,” and open questions like “What was your life like before the abuse?,” which were followed up with cued prompts (“You said X, please tell me more about that”), facilitating utterances (nodding, “Umm,” etc.), clarifying questions (“Do you mean Y?”), and relevant follow-up questions. The aim of the interview was to allow the participant's story to develop naturally, but still make sure that all preplanned topics were covered (friends, school, mental health, and family, etc.). Most questions were broad or open (see full interview guide in **Supplementary Materials**), and covered the life of the participants before, during, and after the abuse.

The interviews lasted for 36 to 90 min, with an average interview time of 68 min (this is the time of the audio-recorded interview and thus exclude the pre-interview information and the completion of questionnaires). Before the interviews, the participants received information about their participation (that it is voluntary, that they will remain anonymous, that they have the right to withdraw their participation at any time, how the data would be stored, and reported), and filled out a consent form. After the interviews, the participants were asked to fill out the Rosenberg Self-Esteem Scale (Rosenberg, 1965), the

Linköping Youth Life Event Scale (Nilsson et al., 2010), and a questionnaire specifying the type of online abuse they had been exposed to and its context. They were given the choice to either fill out the surveys on the spot, or to take them away and post their answers afterward (pre-stamped envelopes were provided). All participants except one chose to fill out the survey on the spot. On leaving, participants received a pamphlet with contact information for support organizations working with victims of sexual abuse.

## Analysis

The aim of the study was to gain a first-person perspective on the experiences of TA-CSA, and a deeper understanding of the way it may affect its victims. Thus, qualitative methods with an explorative and descriptive approach fit well. The study employed a qualitative design by using thematic analysis, which is “a method for identifying, analyzing and reporting patterns within data” (Braun and Clarke, 2006, p. 79). The data was analyzed inductively, which involves open-minded (theory-free) exploration of data (Braun and Clarke, 2013), and generates themes that are closely linked to the data without any theoretical constraint. The analysis focused on the surface meaning of the data, identifying themes on a semantic level.

The procedures recommended by Braun and Clarke (2006) to ensure a rigorous thematic analysis were undertaken. All interviews were conducted, audio-recorded, and transcribed verbatim by the first author, who thus had a high degree of familiarity with the data prior to the commencement of coding. In order not to disembodify the participants, but instead create a fuller contextual understanding of their stories, the thematic analysis used a case-based approach in which each transcript was systematically coded separately.

Throughout the analysis, an iterative approach was employed by revisiting and adjusting existing codes, revising themes, and checking the fit with the original data (Braun and Clarke, 2013). In order to understand how the participants made sense of their experiences and how they were impacted by the TA-CSA, the interview covered the lives and psychological health of the participant before, during, and after the abuse. Therefore, it was crucial to view each initial code in the context of the whole story of the participant. A table was created for each participant to give an overview of all initial codes that were identified within that participant's story before, during, and after the abuse. After the initial coding, each initial code was revisited and compared to other initial codes within that participant's story, in order to look for relationships between them. To be transparent (Yardley, 2008), we clarify with an example. One participant had an initial code of “had a lot of friends” before the abuse and “almost no friends” after the abuse. After revisiting the original quotations, it became apparent that this change in social network was due to the participant no longer daring to trust anyone. This more general part of the participant's story was assigned the initial theme “Trust issues.” Another participant had the initial codes “Easy to be retraumatized”, “People are naïve”, and “The world is evil”, which were merged into the initial theme “Can't trust anyone.” After creating one table for each participant, the initial themes were compared across participants. The initial themes “Trust issues”

and “Can’t trust anyone” (together with similar initial themes from other participants) were merged into the overarching final theme “Difficult to trust people.”

The coding and naming of themes for the first three transcripts were carried out by the first and last authors, who coded each transcript separately and then created initial themes through discussion. The remaining four transcripts were initially coded and analyzed by the first author, and the last author verified that all coding accurately represented the raw data through a process of reading and re-reading all transcripts. The structure and finalized themes were set by the first and last author together, and approved by the second and third author. The iterative process of repeated discussions between two authors during the analytic process ensured that the findings were credible and dependable. Extracts from the interviews were used as illustrative examples to support the analytical claims (Braun and Clarke, 2013).

## Ethics

This research project was granted full ethical approval by the Regional Ethical Review Board in (Linköping, Sweden). According to Swedish law on ethical review of research (Swedish law, 2003:460, Paragraph 18), participants above the age of 15 have the right to consent to participate in research. Thus, no consent from the guardian or legal next of kin is needed.

## Participants

This study involves interviews with seven young women who self-identified as victims of TA-CSA. They were aged between 7 and 13 at the first occasion of the online abuse, and between 17 and 24 at the time of the interviews. All participants had been subjected to TA-CSA, and many of them had also been sexually abused offline either before or after the TA-CSA. See **Table 1** for a summary of the participants’ experiences and survey answers. To provide a context for the data (Levitt et al., 2018), a short description of each participant, based on how they described themselves and their experiences during the interviews, follows. All participants’ names have been changed to pseudonyms and all identifying features removed to protect their identities. All quotes in the manuscript have been slightly edited to facilitate understanding, and translated to English.

**Anna** was subjected to psychological abuse by her parents while growing up. She explained that school was the only place where everything was fine. She was involved in many after-school activities, and only had a few friends. At age 13, when Anna’s grandfather had recently died, she turned to the internet to find someone to talk to. An older man initially listened to and comforted her, but eventually demanded that she take off her clothes and engage in masturbation. This was the first abusive experience that Anna encountered online. As Anna grew older, she started engaging in online sex as a self-harming behavior, which eventually resulted in her also being paid for sexual activities offline.

**Beatrice** described her childhood as being great, with many friends to hang out with. When she was 12 years old, she engaged in online sexual activity with a boy she thought was her age. Two years later, the police contacted her after finding videos of her on the boy’s computer during an investigation involving 30 other

girls. The boy turned out to be much older than he had claimed, and Beatrice found herself suddenly involved in a legal process.

**Clara** stated that she was happy growing up, and that her childhood was nothing out of the ordinary. At the age of 13, she fell in love with a boy in her school class. The boy took advantage of Clara’s feelings and managed to persuade her to send him a picture of her in her underwear and to engage in sexual activity while chatting with him online. Six months after this event, he threatened to disseminate the picture of her unless she sent him a nude picture within a few hours. Clara was scared, and did as he demanded. Despite this, the boy disseminated the nude picture of her to his friends at school.

**Denise** portrayed herself as a super-extrovert child who loved being the center of attention and had lots of friends that she enjoyed hanging out with. While growing up, she suffered from anxiety and was sexually abused offline by her mother’s new boyfriend. At the age of 11, Denise had online contact with a boy she thought was her age. One night, he opened up his webcam and Denise was shocked to see a grown man masturbating. This event really scared her. When Denise was 14, she met a girl online whom she fell in love with. Due to the previous event, she asked for pictures of the girl to make sure the girl existed. Denise and the girl chatted online daily for many months. Eventually, Denise found out that the girl was in fact a man, who used the naked pictures she had sent to blackmail her into sending more pictures.

**Emma** explained that she grew up in a loving and caring family, and described herself as a really “good girl.” When Emma was young, she had good self-confidence, but grew more insecure as she approached adolescence. When she was around 13 years old, men started contacting her online. Although Emma felt a little disgusted, she also enjoyed the attention and the men managed to persuade her to engage in online sexual activity by manipulating her with compliments and flattery. One of the men communicated with Emma daily and convinced her that “love had no age limit.” Emma eventually met with him offline and was raped by him. Four years after this event, Emma was contacted by the police who had found pictures and videos of her on the man’s computer during an investigation involving 70 other children.

**Frida** reported that she grew up with supportive parents, but that she was a shy and somewhat unsocial child who was teased at school. Frida described her young self as worrying and having a lot of anxiety, but online she could be anyone she wanted and therefore used the internet to find people to talk to. At 7 years of age, men started taking the initiative for webcam sex, and Frida – who was initially curious and appreciated the affirmation it gave her – was persuaded. During a period of about 6 years, Frida was repeatedly incited to engage in sexual activities with men online.

**Gabriella** described herself as being an energetic and exuberant person who loves to be seen and heard, and has a great need for attention. At around 11 years of age, Gabriella spent a lot of time on the computer playing games, and found it exciting to talk to new people. One day she received a message saying “I miss seeing you in underwear.” Although confident that she had never sent anyone pictures of herself, she was worried that the man had hacked her webcam and she started chatting with him online. The man, who claimed to be 19 years old, showered Gabriella with compliments and questions. The man managed to persuade

**TABLE 1** | Characteristics and survey-scores across participants.

Name <sup>a</sup>	Age at onset of abuse	Length of contact with offender/s	Age at interview	Number of online offenders	Online sexual abuse <sup>b</sup>	Experience of offline sexual abuse <sup>c</sup>	LYLES score nIPE/IPE/ACC <sup>d</sup>	Rosenberg self-esteem scale score
Anna	13	5 years	24	Numerous	Penetration, sex in exchange for money	Yes, i.a. by online offenders (sex in exchange for money)	2/6/4	Low (4/30)
Beatrice	12	2–4 weeks	19	One	Penetration	No info	5/1/1	Low (15/30)
Clara	13	3 years	17	One	Penetration	No info	3/1/3	Low (4/30)
Denise	11	1 month and 6–8 months	19	Two	Penetration	Yes	9/8/7	Low (12/30)
Emma	13	2 years	20	Numerous	Penetration	Yes, by one of the online offenders	4/No info/No info	Low (11/30)
Frida	7	7 years	22	Numerous	Penetration, sex in exchange for money	Yes	8/2/6	Low (10/30)
Gabriella	11	2 years	19	One	Sexual conversations	Yes	9/3/6	Low (14/30)

<sup>a</sup>All names are fictitious. <sup>b</sup>The most serious type of sexual act that the child was incited to perform of sexual conversation, sexual posing, masturbation, and penetration, as well as whether they had received money in exchange for sexual activity. <sup>c</sup>The question regarding experiences of offline sexual abuse was not limited to before the age of 18, thus the offline sexual abuse may have occurred any time during the participant's life. <sup>d</sup>LYLES = Linköping Youth Life Experience Scale, 41-item questionnaire measuring potentially traumatic life events. nIPE, non-interpersonal event; IPE, interpersonal event; ACC, adverse childhood circumstances. The figures indicate the number of experiences reported for each category. For comparison, a community sample of 172 non-bullied Swedish females (age 15–20) reported on average 6.39 nIPE, 1.87 IPE, and 1.09 ACC (Nilsson et al., 2012).

her to engage in increasingly sexual conversations during their 2 years of contact, but she refused to send nude pictures even when he tried to force her. About a year after the contact had ended, Gabriella was shocked to learn that 68 other children – some of whom had been forced to engage in extreme and violent sexual behaviors – had reported the man to the police.

## RESULTS

The thematic analysis resulted in three main themes – From thrilling to abusive, Negative effect on health and wellbeing, and A new self after the abuse – with two, three, and three subthemes, respectively – see **Table 2**. Each theme is presented below, supported by illustrative quotations and relevant contextual information. Please note that participants sometimes used diminishing and mitigating phraseology when talking about their abusive experiences. Nonetheless, when an adult engages in sexual activity with a child, it is always the adult's responsibility. The participants self-identified as victims of TA-CSA, and according to Swedish legislation their experiences would be deemed to constitute sexual abuse.

### From Thrilling to Abusive

The analysis of how the participants made sense of the abuse revealed that their view and understanding of their experiences had changed significantly over time. The participants had been enticed or lured in different ways into engaging in online sexual activities, and most of them saw their abuse in a different light in retrospect than they did at the time of the abuse. The results are

presented in the two themes *Falling into the hands of the offender* and *Realizing the severity*.

### Falling Into the Hands of the Offender

All participants had different stories about how they had come into contact with their offender(s), ranging from having their curiosity exploited to being exposed to outright threats. Most participants, however, described how they had been duped by the offender's skills in manipulating them in different ways. Some participants described the excitement of having someone showing an interest in them and making them feel seen and heard: 'It was a very sensitive age. And coming into contact with someone was really big, almost thrilling in a way. I was very excited that "Oh, someone wants to talk to me".' Several participants also explained their curiosity and excitement at engaging in something previously unexplored. Beatrice explains:

"It was super exciting! It was... well, about the time where you start to explore yourself and stuff. So it was really cool, but also... top secret. I knew that mom and dad absolutely could not know about it. So it was really exciting, but also extremely important that no-one would find out."

A common theme in the interviews was that the contact initially gave the participants a self-esteem boost and the attention they longed for, which made them overstep their own boundaries. Emma explained how the flattery prevailed over her doubts: "Since this person had showed an interest in me and believed I was cute and hot and all of that, I kind of wanted to do it, to get this affirmation, all the time." When she expressed regret or doubts about the sexual activities, the

**TABLE 2 |** Result from the thematic analysis (Braun and Clarke, 2006) of interviews with seven victims of technology-assisted child sexual abuse (TA-CSA) about their experiences and how the victimization affected them. A brief description of each sub-theme is provided.

Themes	Brief descriptions
<b>From thrilling to abusive</b>	
Falling into the hands of the offender	All participants had in different ways been allured, manipulated, or forced into engaging in online sexual activities, although some participants expressed that they at the time believed they voluntarily engaged in the sexual activities.
Realizing the severity	Most participants had a different understanding of their abuse looking back at it, as they first in retrospect understood the full severity of what they had been exposed to.
<b>Negative effect on health and wellbeing</b>	
Everything collapsed	Despite having different backgrounds, different experiences, and having their abuse revealed in different ways, all participants described having been negatively affected by the TA-CSA. Many of them suffered consequences that largely had affected, and still did affect, their lives and wellbeing, even though several years had passed since the abuse ended.
Self-blaming	The self-blame that many participants described had several sources. From shame about having been sexually curious or for taking an active role in the sexual activities, to shame for not having been able to shield themselves from the online abuse.
Fear of pictures resurfacing	The reality of, or the fear for, pictures being disseminated caused additional stress and led the after-effects of the online abuse to continue long after the abuse ended. This affected the psychological well-being of the participants for a long time, and for some it also affected the decisions they took regarding their future careers.
<b>A new self after the abuse</b>	
Trying to make sense of who I am	Some participants struggled with understanding who they were after the abuse. They believed that the victimization had fundamentally altered them as persons, and thus created a discrepancy between who they really were, and what themselves and others thought of them.
Difficult to trust people	For some of the participants, the TA-CSA had created a distrust in people and a skepticism of the good in others. This could result in participants limiting themselves or the people they surrounded themselves with.
Distorted view of my body	The abuse affected most participant's relationship to and feelings toward their bodies in several ways. From leading to difficulties to view or enjoy their bodies or sexualities, to a failure to listen to their own boundaries or bodily needs.

offender showered her with compliments and manipulated her into thinking that their relationship was genuine and that she could say no if she wanted to. Gabriella also described how she was initially duped by her offender, who became increasingly aggressive throughout their contact.

"I thought it was love, that he cared about me. But that was not really the case, he wanted something completely different. But in my world, I guess I was naïve and believed he wanted to be my friend, and that he cared about me. [...] And it's easy for an 11-year-old to be naïve."

Several participants were exposed to explicit threats. Anna, who was extremely upset after her grandfather had died, went online to find someone to talk to. She started chatting with a 60-year-old man on a chat roulette site, whom she initially thought was just being kind to her.

"To begin with, he was very... considerate? He asked why I was crying and what had happened. [...] I felt pretty safe with him, and he let me cry. And then he asked me to remove my sweater, and I said "No, I don't want to," and he said that if I didn't do it he would stop talking to me. [...] I think I felt, I really needed that, to be listened to. So I did as he said. And he continued to talk to me as if nothing had happened, as if it wasn't weird. So I kind of forgot about it."

The man, however, took advantage of Anna's trust and took a screenshot of her. He then threatened to search out her IP address, find her parents, and send the picture to them unless she engaged in different sexual activities. The man had a hold on Anna:

"I remember I was crying, but for each thing I did, he said "Now I have a picture of *that*." [...] I didn't know how my parents would react. Would they be able to talk to me? Would they be able to look at me if they found out what I had done? So I just did as he said, and he masturbated on cam."

Gabriella also received threats about having pictures of her uploaded to the internet. When Gabriella started to realize that there was something devious about the "boy" she had been chatting with online and tried blocking him, he became angry. Although she was aware that the man did not have any naked pictures of her, she nevertheless felt threatened:

"Okay, he does not have any pictures, but what happens if he writes something, or manipulates a photo. [...] I thought that people I don't know very well on Facebook might see it and not understand that it is photoshopped, that he had done something to the picture. People would think it was me. So I was pretty scared."

Instead of having the threats directed only toward herself, Emma described how one man threatened to commit suicide if she did not comply with his demands. Emma explained her reaction: "I panicked. Like shit, what if, what have I done then? If someone finds this [the chat logs], they might think I have kind of murdered someone." Evidently, the threats made by the offenders were extremely effective. Anna, however, explained that the threats would not have worked on her today: "He said he knew where I lived. Of course he didn't, I mean *now* I understand that he couldn't know. But I didn't really understand that at the time."



## Realizing the Severity

Between four and 15 years had passed between the (first occasion of) TA-CSA and the interview. For most participants, the passing of time had changed their perspective, and when they looked back at their experiences now, they had come to the realization that the situation was not what they initially thought it was. For instance, sexual activities that at the time felt relatively positive and exciting could in retrospect be viewed differently. This changed view could be due to participants growing older and gaining perspective. Emma said: “You do not have the ability to judge the consequences of your actions when you’re thirteen, fourteen, fifteen. You don’t see the consequences, that what you are doing is wrong, until maybe afterward.” Frida initially believed that the sexual contact with men online offered her experiences she would otherwise miss out on, and she appreciated the gifts and money she received. She described communicating with other young girls who were engaged in similar behaviors, and that she was caught up in it. This made it difficult to have a balanced view of what was going on, and it was only afterward that she realized the men had taken advantage of her: “The thing is, at the time you don’t really consider what is going on [...], but afterward you realize how sick it was.”

For other participants, the changed view of the abuse occurred when they found out that the person they had engaged in sexual activities with had lied about who they were. This could turn an activity that they had experienced as seemingly mutually consenting, with someone they cared about and who they thought cared about them, into an experience of betrayal and abuse. Gabriella, who had been chatting online for about 2 years with what she thought was a boy who was a few years older, was shocked to find out about his true identity.

‘It evoked quite a lot of feelings, because I felt, I think it was a slap to the face, like “Oh, *this* is what has happened,” kind of. To just get all this served at one time was really tough, [...] to find out everything, his identity, all the other people that had been abused, and stuff like that.’

Some participants were abused by numerous different people over the course of several years. While they experienced many of the situations as abusive and coercive, it was only in retrospect that they understood the full extent of the consequences it would lead to. What at the time might have appeared to be their own choice, had in fact been them being manipulated and used by people online. Emma explained how she realized in hindsight that “this person was not feeling well” when she looked back at herself. “That’s when it started to catch up with me, that I started to understand what I had been exposed to, and everything that had happened. Yeah, everything caught up with me.” Several participants described how they felt repulsed when they thought back to what they had been incited to engage in. Anna explained: ‘I felt very disgusted by myself and by people in general. Both what I had been asked to do, and that I had been able to do it to myself.’

## Negative Effect on Health and Wellbeing

Although some participants took a while to realize the full extent of their experiences, all participants described how the TA-CSA

had negatively affected their health and wellbeing in both the short and long terms. This is presented in the three themes *Everything collapsed*, *Self-blaming* and *Fear of pictures resurfacing*.

## Everything Collapsed

All participants had different psychological baggage before the online abuse occurred, and they all described their upbringing and mental health differently. Beatrice, Clara, Emma, and Gabriella all said that their childhood prior to the online abuse was good and safe, and none of them mentioned any previous psychological problems. By contrast, Anna, Denise, and Frida described suffering prior to the online abuse. Nevertheless, it was clear that all the participants were negatively affected by the abuse specifically, regardless of their previous mental health. Anna, who grew up in a dysfunctional family, said:

“Well I believe I was feeling. . . yeah, yeah I was already feeling bad (laughs) before. Or I was. . . lonely. A bit sad. Thought everything was a bit hopeless. But afterward. . . it feels like everything became much more precarious. It wasn’t that I was completely naïve about people being mean, and such. But it went from me being comfortable with the feeling of sadness (laughs), to me being completely turned off, and I started dissociating quite a lot.”

Similarly, Denise mentioned that she had suffered from anxiety as a child, but that she still lived a functional life before the abuse changed everything:

‘I talked less to people, I was making less contact with people, I didn’t use social media. I turned off most things. I had extremely high absence from school, and the school was like “You will lose all your grades”. Everything just fell apart for me. I had almost no friends. I ate my own emotions and felt like crap. I was scared and tired of trying.’

For Denise, Anna, and Frida, who were already struggling for other reasons, the online abuse made everything collapse and they became suicidal. The other participants, who seemingly lived relatively untroubled lives before the abuse, also described different forms of psychological suffering. Beatrice described how she was feeling very well and had a great upbringing, but that this suddenly changed when she developed depression following the realization of her abuse 5 years ago:

“I haven’t been genuinely happy for a longer period since before the whole police interrogation thing. Of course, I have happy moments and have had them for several years, but it has been several years since I was feeling good and happy in general.”

Aside from general depressive symptoms, sleeping problems, and anxiety, feelings of shame could also negatively affect the participants’ wellbeing. Emma mentioned the profound effect shame had on her:

“It was all the shame. It has like, kind of stopped me. This, all this shame. I was so extremely ashamed. And that is kind of, shame is maybe the feeling that is most difficult to bear, because it really paralyzes you. It affected how I wanted to live.”

Some described that the initial abuse taught them to ignore their own will, which resulted in them developing self-harming behavior which allowed other people to take power over their

bodies. Anna explained: “I just did what people told me to. And afterward, I couldn’t really understand what I was doing. I remember that. That I had anxiety about it, like why do I do this? Why can’t I just quit?” Frida also described the negative spiral of destructiveness that followed the online abuse:

“Between the ages of 12 and 14, I really noticed that I, kind of, it sounds so sick, but I felt that I kind of wanted to sell my body, thoughts like that. And I don’t know why I felt like that, it was more that I felt like a failure, I would never find someone, so I might as well just do this, and then I could kill myself. [...] The contact with men online made me feel so bad, you kind of lose your self-esteem, and sense of reality.”

All participants experienced negative consequences due to the abuse, but the trauma appeared at different times and in different situations, as described in a previous subtheme (Realizing the severity). In contrast to Frida and Anna, who described the TA-CSA as having been disgusting or traumatic, some talked about the online sexual activities in more neutral or positive terms, and the real trauma seemed to have come afterward when they realized that they had been tricked or deceived, or when they realized that other people had knowledge of the abuse. Beatrice explained that the sexual activity she engaged in with what she thought was a boy her age was “nothing I really thought about. It happened and then I moved on, kind of. It was nothing I gave much attention to, it was nothing I kept thinking about. Until this legal process.” Being thrown into a legal process and becoming aware that the sexual conversations, photos, and videos she had shared were now being viewed by others was traumatic. After the first police interrogation, Beatrice described “three to four years of pure shame about myself.” It seemed as if a large part of the trauma could stem from the social shame of having a secret revealed, and not only the realization that one has been subjected to abuse. Similarly, Emma described her reaction to the first phone call from the police, in which they explained that they had found pictures and videos of her on a suspect’s computer:

‘And I was like “Okay what kind of pictures?” And they were like “I think you know what kind of pictures,” and I was like “Well okay yes I know.” And then the world fell apart, I was extremely sad, I panicked.’

For almost all participants, several years had passed since the online abuse ended, but nevertheless, many of the participants described thinking about it a lot, struggling with ongoing depression, undergoing psychiatric evaluations, only being able to go to university part-time, or being in the midst of recovery. However, despite still struggling, most participants described a positive development and most saw some kind of brightening on the horizon. Frida said that she had not been thinking about it a lot during recent years, and Beatrice explained that she had been able to let go of the feelings of shame and instead felt anger: “I am mad. I am extremely mad. [...] and not only at this man, but... at society as a whole.” Denise described her psychological health as going up and down:

“Some days are horrible, and I don’t want to get out of bed. Other days I can go outside for a run. And just be out in nature, and take

my long walks and feel safe in that. So it varies a lot. But... it feels like it’s getting better.”

It is important to highlight that one interview stood out from the rest. Despite describing that she had indeed been negatively affected by the abuse, Gabriella, who had been encouraged to engage in sexualized conversations, also stated that it had not affected her too much: “Of course, it might have shaped me, but not very much, not so that it has left deep traces on me, but perhaps to some extent.”

## Self-Blaming

A common theme was to put the blame on themselves for what they had been subjected to. For some participants, this was due to them believing that their sexual curiosity was something taboo, and that the activities they engaged in were inappropriate. Emma explained that she kept her online contact a secret, “so in some way I kind of knew it was wrong,” and Frida expressed that her behavior was “abnormal.” For others, the self-blame stemmed from having been fooled. Due to having been misled online before, Denise asked for photos and an address to make sure that the girl she was chatting with online was who she claimed to be. When she realized that she had been deceived by a man despite these precautions, she berated herself:

“I felt that I was so very stupid for having done this, like how can you trust someone you don’t actually know whether you know? [...] I felt so very mad at myself for doing it, and often felt that if something happens now, it’s still my fault to some extent. I’ve contributed to it, erm, so I guess I only have myself to blame.”

Emma said that she did not dare to tell her friends about the abuse she was subjected to, as it would reveal her own stupidity:

“I remember thinking that this would *never* have happened to them. It is so typically me. Because they are so good and perfect and all that. They would 100% understand that this was a pedophile you were talking to, but I’m stupid, and I didn’t understand that.”

Another factor for self-blame was that the sexual abuse was conducted online and that there was no physical meeting between the participants and their offenders. Some participants expressed that they should therefore have been able to shield themselves from the abuse, and that if they had just turned off their computers, “none of this would have happened.” Emma explained:

“Since I was behind a computer screen all the time, I kind of, afterward I thought I had myself to blame. [...] It has led me to think that I have not been subjected to anything, but it is like I have subjected *myself* to it.”

Similarly, the participants had to take an active role in their abuse, for instance by following directions or demands from their offenders, or by playing along with their sexualized conversations. Frida was involved in a legal process, during which she had to listen to her conversations with the offender being read aloud in court. She described how she felt guilty when she realized that she had also been taking the initiative.

'I knew it was wrong somehow [the sexual activities], but I listened to what he said. [...] I've repressed this so much, that I've been a driving force in this, but when I read, when I sat in the courtroom and had it read to me, I got like a shock, like "shit," "what the hell".'

Most participants expressed initial self-blame, but as more time passed after the abuse, many came to realize that the guilt was not theirs but the offender's. Despite this realization, some struggled to rid themselves of the feelings of shame. Gabriella said that she is aware in hindsight that it was not her fault, but nevertheless said:

'I still feel an underlying sense of shame, even if I don't want it to be like that. It's still not something that I would like to talk about. [...] It might be that this shame is still in me today.'

### Fear of Pictures Resurfacing

One of the major causes of anxiety was the existence of pictures or videos of the abuse. Anna was confronted by a colleague who recognized her from videos online, and this caused her such extreme stress that she did not return to that job. It is important to emphasize that it was not only when pictures were disseminated that anxiety or distress occurred. Just the fear that someone could see the pictures or videos was enough to cause concern, and numerous participants described worrying about who had seen them. Several participants described the existence of pictures as something of a ticking bomb; "I always have to be prepared" and "this will eventually come back to me." Clara explained how she deleted her whole Facebook profile because she was so worried that the picture would be posted there: "I was so scared that my parents would see, and I didn't want proof that I had done this." Denise described how she was "just sitting at home, always indoors, waiting for something to happen. [...] I was scared to death." The fear was also present out in public, as Emma exemplified:

'Every time an older man, or a man, gives me more than a glance when I walk past, I automatically think "This person has seen these videos, this is a pedophile." It's kind of sick to think like that. I don't do it as frequently anymore, but when I was younger I thought like that right away, and I kind of panicked.'

For Anna, this worry caused her to develop a fear of men, resulting in her not being able to buy groceries for 2 years if the cashier was a man. Furthermore, the knowledge that compromising pictures or videos might exist could have far-reaching consequences in some of the participants' life decisions. Emma used to think that her future was ruined: "[...] because, if I was to succeed with anything, and in any way become a public person, these videos would resurface. And then the whole world would see." Similarly, Anna described that she had always wanted to be an author. At one time she was nominated for a literature award and had a real chance of becoming an author, but she realized: "No, that will not happen. I cannot have my picture and my name linked to something that I am not sure what will happen to, that is public." She also described feeling that nothing online ever really ceased to exist, "so of course I am worried, but (sighs). . . I try not to think about it too much or else I would not be able to have a life (laughs)."

A few participants also expressed concerns that they had done something illegal when producing the pictures. When Beatrice was summoned to the police to be questioned, she was assigned a lawyer. This convinced her that it was her who had done something wrong. Anna said that she was concerned someone would report her to the police:

"I had read somewhere that it counted as producing child pornography if you uploaded pictures or videos of yourself if you were under 18, and I remember being scared about that as well, that someone would find the pictures and report me."

Another traumatizing aspect of having the abuse documented was described by Beatrice and Emma, who had gone through legal processes in which their videos and chat logs were scrutinized. Since the videos were part of the evidence, Emma had to sit outside the courtroom knowing that everyone in court was watching videos of her touching herself.

'It's so surreal, and it's so very humiliating having to walk back in and sit down in the chair, look someone in the eyes and confirm "Yes, that is me in the video." So it has been extremely strenuous. Partly due to knowing that there are people out there that you don't know, you don't know who has these pictures or where they end up, but also, I don't know, having to live with the facial expressions, the looks you received walking back into the courtroom knowing what they have just watched.'

### A New Self After the Abuse

In addition to the psychological consequences caused by the abuse, the interviews revealed that the victimization also affected some participants' self-concept and how they acted. This is presented in the three themes *Trying to make sense of who I am*, *Difficult to trust people*, and *Distorted view of my body*.

#### Trying to Make Sense of who I Am

During the interviews, participants received the open invitation "Tell me about yourself and who you are." The answers revealed that some participants struggled with their views of themselves and how this contrasted with the views others had of them, or how they themselves wanted to be seen. More specifically, Anna, Denise, and Emma all described themselves as being viewed as "good girls" and that their online victimization threatened that façade. Denise explains: "I was always portrayed as such a good child, because school went really well, and I always did well. And then this happens. That is not who I am. And all of a sudden I am bad." They described the online victimization as something wrong or immoral that they themselves were responsible for. Not living up to the high expectations of them created an internal incongruity that made them question themselves. Anna explained how it was very difficult to cope with the discrepancy caused by the fact that "one side of me was subjected to abuse, and one side was functioning as usual." Anna was very active in student union projects at school, had a job outside school, and had excellent grades. She explained: "Everyone viewed me as proper and high-functioning [...] and that was the image of myself that I liked. I was scared that someone would find the pictures or videos and come to realize who I *really* was."



Clara, who was abused by a boy at her school, described how the boy also manipulated her into treating her friends and brother badly. This had affected Clara's self-esteem, since she now believed that she could not "know what is right and wrong in a relationship." She described how the victimization became a sign of her character: "I have a very hard time accepting myself, like my personality above all. Because all I do is just wrong and mean and evil." Likewise, Anna also questioned her own character. When she was younger, her self-hatred revolved around her looks, her geekiness, or things she was teased for at school. Now, her self-hatred evolved into questions like: "Am I a good person? Am I dangerous? Am I ruined? Am I broken? Things like that." She continued:

'I look at myself like an "after" now. Before, I used to view myself as a whole person, that was just what I was, but now I feel like I'm living in some kind of closing credits to something, and so I have to try to make something good out of it. As if all the important things have already happened.'

Some participants described how being lured into engaging in TA-CSA affected their self-esteem and self-confidence, and Denise described how she struggled with coming to terms with the fact that the abuse had made her a different person: "It's tough to realize that. . . that it has affected you so much. More than you think. Because all of me is completely different."

### Difficult to Trust People

During the interviews, it became apparent that the online abuse had led some of the participants to lose trust in other people. This manifested itself in different ways, and affected their lives to different extents. For Gabriella, Beatrice, and Denise, it resulted in them being very careful online with private accounts and cautious about what kind of information they shared about themselves online. Gabriella said: "I don't trust many people on the internet. It takes quite a lot for me to feel like, okay, this is not a fake person but someone who is decent and does not want to hurt me." She described how she used to be scared of being abused again, but that it had also taught her to be less naïve and easy to fool, which she viewed as some kind of positive. Denise also expressed that the victimization had changed how she operated online:

'I get so paranoid always. As soon as I receive a request to follow me online [. . .] I ask my friends "Do you know this person? Do you know who it is?" [. . .] I keep everything private. I don't upload anything that I'm not 100 percent comfortable with. I use the block button frequently (laughs).'

Both Beatrice's and Denise's distrust in people online also spilled over into their life outside the internet and affected which people they surround themselves with. Beatrice explained that she has chosen friends that "she can really trust." Similarly, Denise described having a hard time letting people into her life, and "didn't dare to trust anyone else" after the abuse. Before the abuse, she described herself as being "the one everyone wanted to hang out with. And I wanted to be with everyone (laughs). I *loved* hanging out with people." By contrast, she described her current social network as going "from having had everyone and anyone, I now have three real friends, and my family." Denise

portrayed how her worry had also changed her in more ways than minimizing her network.

"I used to be a very outgoing person. I was. . . I was always the center of attention. [. . .] I loved to be seen. I loved to be heard, and I would put on talent shows and sing and dance and show off. [. . .] Now I don't want to be out around people. [. . .] I find it very hard to be seen. I don't want to be the center of attention. I'm terrified of attention."

Anna, who had been sexually abused by many men over a period of several years, also struggled with trusting people. She said that she had lost her faith in society and that it was so easy to re-traumatize herself by just going online and confirming that the world was an evil place. This made it difficult for her to have any friends, and she described the isolation as the most challenging part:

"It's difficult to explain to people why I don't trust others. It feels like people in general have a very. . . naïve view of the world (laughs). And they think that people are kind and good, and that there are specific indicators of what a kind and good person is, and that they could never know anyone who would be able to. . . (sighs) hurt a child for instance. And that makes it difficult. . . erm, to relate to other people. I feel very abnormal. . . and I think that that is the hardest part, because I have had to come to terms with the fact that I might have a future without many people around me, and figure out how I can make that feel valuable."

### Distorted View of My Body

All the participants except Gabriella reported that their victimization had affected how they viewed their body or how they thought about their sexuality. Beatrice described how she used to think of her body as a tool before the abuse:

'Before it happened, I didn't reflect on my appearance, it was my body and I needed it to go to school and to do stuff. [. . .] What I'm working on most these days is what I call "clothing anxiety." Picking an outfit in the morning takes at least an hour, and half of the time it results in me not being able to leave.'

Denise talked about how she did not want to see herself naked and could not look at herself in the mirror without feeling ashamed. As a result, she used to cover up as much as possible:

"I wore XXXL in everything, because then you can't tell what I look like. Eh, and I've always thought that if people don't see what I look like, then I can't be accused of contributing to whatever might happen."

At the time of the interview, several years had passed since the online abuse ended. Denise described how things were slowly getting better, and that she was learning to dress more the way she wanted to:

"It feels fantastic to finally not only look at these things that you want to wear, but also to wear them and show them off. But also that I can undress in front of my partner [. . .] and we can have sex. These steps have been tough."

These extracts demonstrate how the abuse could lead to a distorted view of, and guilt about, one's appearance and sexual desire. Denise explained that she used to be open about her

sexuality, but that the abuse led her to feel that she did not want to and should not enjoy sex after what she had been through. With other participants, having been exposed to other people's sexualization at a young age seemed to have blurred the boundaries around their own sexuality and the right to their bodies. For Clara, Emma, and Frida, the abuse caused them to overstep their own limits and lose track of their self-respect for their bodies. Clara described how the abuse made her think that "any guy can decide over my body in some way." Emma explained how she did not feel like she owned her own sexuality because she had always been told what to do. This led her to agree to things that she did not really want to take part in online, and she also allowed guys at school to touch her body because "the attention I received from guys kind of meant more to me than how I was feeling." Frida said that the online abuse was what caused her distorted view of sex, which led her to have a dysfunctional relationship with men and to develop feelings of not being worth anything.

Anna, who developed self-harming behavior in which adults paid her for sexual activities, described how all her abusive experiences had led her to shut off her body:

"I don't think about it. At all. Most of the time, if it does not give me discomfort, umm. . . I forget that it exists, which means that I do not reflect on the fact. . . that it's cold outside. I feel very little physical discomfort."

## DISCUSSION

This study's findings, from in-depth interviews with seven young females who self-identified as victims of TA-CSA, build upon previous research showing that TA-CSA may have severe consequences (Hamilton-Giachritsis et al., 2017; Jonsson et al., 2019; Joleby et al., 2020a) and provide an insight into the underlying processes between TA-CSA victimization and psychological suffering. Despite the participants' different experiences (from being abused by a single offender, to several years of repeated abuse by numerous offenders), they all provided detailed accounts of how their victimization had a negative effect on their health and wellbeing, not seldom of extremely serious proportions. The abuse impacted on several aspects of their lives, such as their relationships with others, their self-respect, and their ability to cope with everyday life. Research has shown CSA to be predictive of internalizing outcomes (Muniz et al., 2019), and many of the consequences described in the interviews match those that several decades of research on offline CSA have reported, namely general depressive symptoms, re-victimization, sexual problems, anxiety, poor self-esteem, and interpersonal problems (Paolucci et al., 2001; Maniglio, 2009).

The impact of the abuse could be both direct and delayed, depending on the participant's understanding of the abusive situation and the time taken to realize its severity. Understanding that one's experiences can be labeled as sexual abuse can be a long and complex process (Hjelen Stige et al., 2020), and the online element may add extra complexity as it allow offenders to hide their identity, leading the victims to

believe that they were communicating with a peer. Thus, for some participants, the realization of abuse was not an inner insight, but occurred when police contacted them and revealed the true identity of the offender, which could be a shocking experience. TA-CSA offenders are, however, not always deceptive (Wolak and Finkelhor, 2013). In these cases, the manipulation and psychological grooming (Craven et al., 2006) that the victims were subjected to led them to gradually gain an understanding of the true nature of their experiences as they grew older and gained perspective. For the participants, the boundaries for when an experience was considered abuse could evidently be blurred. This can have implications for professionals meeting this victimized group. Therapists and support workers should consider what impact the involvement of technology might have, and should be aware of the possibility that young people may have difficulties understanding their experiences as abuse. For the same reason, law enforcement should be cautious when approaching children whom they suspect have been victims of TA-CSA, in order not to cause the victim any additional trauma in connection with the disclosure, as the child themselves may not be aware that they have been exploited.

Participants often expressed that they had initially been excited and sometimes part of inciting the sexual activity. Considering that sexual curiosity is a significant aspect of development (e.g., Kastbom et al., 2012), and that digital advances have led many young people to explore their sexuality online (Valkenburg and Peter, 2011; Anastassiou, 2017; Madigan et al., 2018), this initial excitement is not a deviating trait. Offenders taking advantage of children's natural curiosity, however, seems to impact on the self-blame experienced by the victims, and constitutes an additional obstacle to realizing they had been exploited. The fact that the abuse took place online ("should have been able to turn off the computer") and required the participants to be active in the acts ("felt like I subjected myself to the abuse") led to further self-blame. Professionals have also noted that victims of TA-CSA are more often blamed by others and seen as participating in the abuse than victims of offline CSA (Hamilton-Giachritsis et al., 2017). Higher levels of self-blame among CSA victims have, in turn, been associated with increased psychological distress (Coffey et al., 1996). This illustrates the importance of professionals dealing with abused children working to counter feelings of blame (Hamilton-Giachritsis et al., 2017).

Another consequence of the abuse being conducted via digital technology was the constant fear of pictures resurfacing. This fear was one of the major causes of anxiety and impacted the lives of the participants in several ways, contributing to the long-term effects of the abuse. Always having to be prepared to be confronted and fearing one might be recognized out in public contributed to the never-ending aspect of the abuse, which has previously been reported among victims of online abuse images (Leonard, 2010). In sum, these findings lend support to the idea that some aspects of TA-CSA complicate the impact of the abuse (Hamilton-Giachritsis et al., 2017).

Consequences following CSA are known to vary widely among victims (Maniglio, 2009), which was also evident in this study.

In line with research showing the cumulative negative effect of numerous traumatic experiences (Felitti et al., 2019), the participants who reported psychological suffering and trauma previous to the TA-CSA seemingly experienced the most severe impact following the abuse (e.g., suicidality). The participant with the least extensive abusive experience (being enticed to engage in sexual conversations but managing to refuse to send nude pictures, while the other participants had been incited to penetrate themselves) stood out from the group in that she only reported limited suffering. Whether this is due to the type of abuse she had been subjected to cannot be determined. It may instead be that some individuals are not severely affected by TA-CSA, as research on offline CSA has shown (Kendall-Tackett et al., 1993).

This study identified both immediate and long-lasting negative impacts on the psychological health of the participants following the TA-CSA. One way of explaining how and why CSA can result in both short- and long-term consequences is by using the four traumagenic dynamics model (Finkelhor and Browne, 1985). The model suggests that the experience of CSA changes the child's cognitive and emotional orientation to the world, by distorting the child's self-concept, world view, and affective capacities. Organizing the results from this study under the framework of this model (Finkelhor and Browne, 1985) can thus aid in understanding the findings. The model proposes four different dynamics (traumatic sexualization, betrayal, powerlessness, and stigmatization) that mediate the psychological outcome of CSA (Finkelhor and Browne, 1985). Each dynamic can be expressed in many different ways, and when analyzing the findings from this study through the lens of this model, all four dynamics can be identified. Firstly, traumatic sexualization refers to having one's sexuality shaped in developmentally inappropriate ways. This can, for instance, lead to sexual problems, sexual re-victimization, and negative attitudes toward one's sexuality and body (Finkelhor and Browne, 1985), all of which were expressed in the interviews. Secondly, betrayal refers to discovering that one has been manipulated by a trusted person, and can result in distrusting people and lead to isolation (Finkelhor and Browne, 1985). This was captured in the theme *Difficult to trust people*. Thirdly, powerlessness refers to the process in which one's will, desire, and sense of efficacy are continually contravened (Finkelhor and Browne, 1985). Several participants expressed how they ignored their own will and blindly followed the demands of the offenders. According to the model, powerlessness can result in fear, anxiety, and re-victimization, which were also identified in the interviews. Fourthly, stigmatization refers to the negative connotations surrounding sexual victimization, such as shame, guilt, and badness, or that the activity was seen as taboo or deviant. This view can become incorporated into one's self-image and, for instance, lead to feelings of guilt and shame, as well as self-destructive behavior and suicide attempts (Finkelhor and Browne, 1985), which were all described in the interviews. While this study in no way provided a full evaluation of the applicability of the four traumagenic dynamics model on TA-CSA, it is evident that the experiences and consequences of TA-CSA follow the same pattern as those for offline CSA.

Another way of explaining both the short- and long-term outcomes following CSA is through the potential damage to self-concept that may occur in response to victimization. Broadly, self-concept refers to the way individuals think about, evaluate, and perceive themselves (Baumeister, 1999), and one of its core aspects is self-esteem. Self-concept is proposed to have a mediating role between CSA and its negative outcomes on psychological health, and the relationship between CSA and negative self-concept and self-esteem has been theoretically and empirically explored (Kendall-Tackett et al., 1993; Stern et al., 1995; Turner et al., 2010; Cantón-Cortés et al., 2012; Lamoureux et al., 2012; Halvorsen et al., 2020). This study, in line with studies on offline CSA, showed that the abuse influenced the ways in which participants thought about and understood themselves, as well as how they thought others would perceive them. The time period during which the participants were subjected to TA-CSA is an important time in regards to sexual development (Diamond and Savin-Williams, 2009), fitting in and being accepted by peers concerns (Steinberg, 2011), and the development of a positive self-concept (Berger, 2018). Therefore, negative sexual experiences during this sensitive period may have particularly crucial implications. With regard to self-esteem, the Rosenberg Self-Esteem Scale (Rosenberg, 1965) is the most commonly used measuring tool, and individuals with a history of offline CSA report a higher frequency of low and medium self-esteem, relative to individuals without such a history (e.g., García et al., 2019). In line with this well-established finding, all participants in this study reported low levels of self-esteem, expressed both during the interviews and in the Rosenberg Self-Esteem Scale screening (Rosenberg, 1965) reported in **Table 1**. Again, the processes between TA-CSA and subsequent psychological suffering do not seem to be unique, but follow the same patterns as those of offline CSA.

## Limitations

First, this study's results are based on a relatively small sample (seven young female victims of TA-CSA). The small number of participants is due to the sensitive nature of the topic and thus the extreme difficulty in accessing this population. The sample size was, however, appropriate for the method chosen.

Second, all participants were self-selected and self-identified as victims of TA-CSA. It is possible that this self-selection resulted in a biased sample, as victims who have experienced a more negative impact of abuse may have been more inclined to share their experiences by taking part in the study. The majority of the participants reported experiences of offline sexual abuse in addition to the TA-CSA (occurring either before or after the TA-CSA). The focus of the interviews was, however, the TA-CSA, and any information that was brought up regarding other traumatizing experiences or the impact of these has been omitted from the analysis.

Third, several years had passed between the (first) occasion of TA-CSA and the interview, which means that the participants' stories are based on their retrospective recollections of their experiences. While this might have affected what they remembered and reported, it also provided a valuable

insight into how the perception and impact of the abuse had developed over time.

## CONCLUSION

This study advanced our knowledge of how victims of TA-CSA make sense of their experiences, and provided an in-depth understanding of the ways in which TA-CSA can lead to psychological distress. The stories from seven victims of TA-CSA illustrated the ways in which they experienced that their victimization had profoundly impacted their lives and health, in both the short and long terms. Besides serious negative impacts on their mental health and relationships with other people, victims described how the victimization impacted their self-concept by altering the ways in which they viewed themselves in relation to others. Adding this all together, it is clear that many of the consequences and the processes between victimization and psychological suffering are similar to those of offline CSA. In addition, two factors appeared to add complexity to TA-CSA victimization, that is increased levels of self-blame due to the victims' own participation in the abuse and the fact that it was conducted online, and the long-lasting fear of pictures or videos of the abuse resurfacing.

In sum, viewing these results in light of other initial research demonstrate the potential severity of TA-CSA, and indicates the need to challenge the assumption that it is a less severe form of sexual abuse.

## MANUSCRIPT CONTRIBUTIONS

Given the recent increase in police reports regarding TA-CSA, there is a significant desire to learn more about the phenomenon. So far, research has mainly focused on offenders and offending behavior, with attention more recently turning to its potential consequences. While there seems to be a common assumption that TA-CSA is a less severe form of sexual abuse, initial research indicate that the consequences can be as severe and harmful as for offline CSA. The aim of this study was to provide a deeper understanding of how victims of TA-CSA make sense of their experiences and its potential consequences. Interviews with seven victims of TA-CSA revealed the victimizations comprehensive impact on the life and health of the participants, and the sometimes complex process of understanding the severity of their experiences. In sum, the present findings provided a

first-person perspective on the experiences of TA-CSA and the potential processes between victimization and subsequent psychological suffering.

## DATA AVAILABILITY STATEMENT

No datasets can be shared due to the sensitive nature of the data.

## ETHICS STATEMENT

This study involving human participants were reviewed and approved by the Regional Ethical Review Board in Linköping, Sweden. Written informed consent from the participants' legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

## AUTHOR CONTRIBUTIONS

MJ, CL, SL, and LJ designed the study. MJ conducted the interviews. MJ and LJ performed the thematic analysis. MJ created a draft of the manuscript, which was revised by CL, SL, and LJ. All authors contributed to the article and approved the submitted version.

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# Transgender Identity Is Associated With Bullying Involvement Among Finnish Adolescents

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**Background:** During adolescence, bullying often has a sexual content. Involvement in bullying as a bully, victim or both has been associated with a range of negative health outcomes. Transgender youth appear to face elevated rates of bullying in comparison to their mainstream peers. However, the involvement of transgender youth as perpetrators of bullying remains unclear in the recent literature.

**Objective:** The aim of this study was to compare involvement in bullying between transgender and mainstream youth and among middle and late adolescents in a general population sample.

**Methods:** Our study included 139,829 students in total, divided between a comprehensive school and an upper secondary education sample. Associations between gender identity and involvement in bullying were first studied using cross-tabulations with chi-square statistics. Logistic regression was used to study multivariate associations. Gender identity was used as the independent variable, with cisgender as the reference category. Subjection to and perpetration of bullying were entered each in turn as the dependent variable. Demographic factors, family characteristics, internalizing symptoms, externalizing behaviors, and involvement in bullying in the other role were added as confounding factors. Odds ratios (OR) with 95% confidence intervals (95% CI) are given. The limit for statistical significance was set at  $p < 0.001$ .

**Results:** Both experiences of being bullied and perpetrating bullying were more commonly reported by transgender youth than by cisgender youth. Among transgender youth, all involvement in bullying was more commonly reported by non-binary youth than those identifying with the opposite sex. Logistic regression revealed that non-binary identity was most strongly associated with involvement in bullying, followed by opposite sex identity and cisgender identity. Transgender identities were also more strongly associated with perpetration of bullying than subjection to bullying.

**Conclusion:** Transgender identity, especially non-binary identity, is associated with both being bullied and perpetrating bullying even when a range of variables including internal stress and involvement in bullying in the opposite role are taken into account. This suggests that bullying during adolescence may serve as a mechanism of maintaining heteronormativity.

**Keywords:** transgender, minority, non-conforming, victimization, bullying

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## INTRODUCTION

Gender identity refers to an individual's innate sense of being male, female or an alternative gender (Bockting, 1999). Distinct from gender identity, gender expression refers to an individual's various characteristics which, during a given period, are generally viewed as masculine or feminine (Coleman et al., 2012). While various gender identities exist, the vast majority of individuals present with cisgender identity, meaning that their gender identity is aligned with their birth-assigned sex. Gender minorities are individuals whose gender identity differs to various degrees from their birth-assigned sex. We refer to all gender minorities as transgender. This encompasses those who identify with the opposite sex and those whose gender identity aligns with both or neither sex or varies (non-binary or gender non-conforming gender identity).

Bullying is defined as aggressive behavior in which a pupil or group of pupils intentionally harm victims in various ways, usually over a period of time, and is usually characterized by a power imbalance between the victim and the bully or bullies (Olweus, 1993; King et al., 1996). Bullying may assume various forms, such as physical violence, verbal abuse, spreading rumors, exclusion from peer groups or then sexual gestures or remarks (Olweus, 2013). Cyberbullying extends the scope of bullying to various information technologies, such as social media and mobile phones (Lindfors et al., 2012). A considerable share of bullying among adolescents is of a sexual nature (Ashbaughm and Cornell, 2008) and often refers scornfully to homosexuality and gender-non-conforming self-expression (Toomey et al., 2012).

Adolescents' involvement in bullying is common (Kaltiala-Heino and Fröjd, 2011; Lessne et al., 2016), and whether this is as a victim or as a perpetrator, it has well documented negative associations with health and educational trajectories (Chan and Wong, 2015a). Being bullied has been associated, for example, with depression and suicidal ideation (Liang et al., 2007; Kaltiala-Heino and Fröjd, 2011; Heikkilä et al., 2013) and school truancy and impaired academic performance (Wormington et al., 2016). Being a bully has likewise been associated with depression (Klomek et al., 2008; Kaltiala-Heino et al., 2009; Kaltiala-Heino and Fröjd, 2011) and suicidal ideation (Kaltiala-Heino et al., 1999; Heikkilä et al., 2013), but also with delinquency and substance abuse (Liang et al., 2007).

An abundance of research suggests that sexual minority youth report being bullied 1.5–2 times more commonly than mainstream youth (Friedman et al., 2011; Abreu and Kenny, 2018; Kurki-Kangas et al., 2019; McKay et al., 2019). Recent research has also begun to unveil disparities in bullying involvement between gender minority and cisgender youth, particularly regarding disparities in being bullied. US-based research indicates that transgender youth, in school samples, are bullied more often than their cisgender peers (Day et al., 2018; Eisenberg et al., 2019; Johns et al., 2019; Bishop et al., 2020). Transgender youth have been reported to more commonly experience bullying related to gender or sexual orientation (Day et al., 2018) but also bullying related to weight and size (Bishop et al., 2020). In a clinical UK-based sample, almost 90% of transgender youth reported being bullied (Witcomb et al., 2019).

Both sexual minority and transgender youth may differ from the mainstream by gender expression not conforming to traditional male and female roles (i.e., for males by being feminine or for females by being masculine), which could render them susceptible to being bullied, a behavior commonly directed at peers perceived as different (Jones et al., 2018; Price-Feeney et al., 2018). When comparing birth-assigned males and females in a school sample, Lowry et al. (2020) found that youth who described their appearance as gender non-conforming (i.e., males believing they were perceived as feminine or females believing they were perceived as masculine) were violently victimized more often than those youth who described themselves as gender conforming and that the association was stronger among male students. van Beusekom et al. (2020) likewise found that gender non-conformity was associated with general victimization and homophobic name calling and that the associations were stronger among males. Further, among transgender youth, those who perceived themselves as gender non-conforming were bullied more frequently than those transgender youth who perceived themselves as gender conforming, and also within a transgender sample, the association between gender non-conformity and experiences of being bullied was particularly strong among birth-assigned boys (Gower et al., 2018). In summary, it seems that transgender youth as a whole are bullied more often than their cisgender peers and that among transgender populations bullying is more common among those who present as gender non-conforming.

The association between gender non-conformity and being bullied may originate from heterosexism, a phenomenon describing the effort to govern traditional masculine and feminine roles in society based on the assumption that heterosexuality is the superior sexual orientation and the norm (Chesir-Teran, 2003; Toomey et al., 2012). In the same vein, the stronger association of perceived gender non-conformity and being bullied among natal males could be explained by males' stronger tendency to safeguard traditional masculine roles (van Beusekom et al., 2020). Behavior deviating from culturally accepted masculine norms in boys is less readily tolerated than behavior deviating from the expected feminine behavior in girls (Ristori and Steensma, 2016). Even though the status of sexual and gender minorities has recently improved in many countries, heterosexism is widespread (Dunn and Szymanski, 2017), thus adolescents not conforming to gender norms may be more susceptible to bullying and harassment than their heterosexual gender-conforming peers.

However, confounding by internal stress needs to be considered when evaluating associations between transgender identity and being bullied. Gender minority stress and resilience (GMSR) theory (Hendricks and Testa, 2012; Testa et al., 2015) posits that gender minority people experience external stress, such as discrimination and victimization (such as being bullied), but also internal stress related to internalized transphobia and perceived stigma that predispose them to being constantly vigilant and anticipating discrimination. This may predispose to the development of depressive or hostile attribution bias (Morris, 2007; American Psychological Association, n.d.), possibly leading to the perception of victimization by peers

when none was actually intended. Internal stressors may also include concealment of one's identity. Although hiding one's identity may reduce direct targeting by bullies, it may in turn create stress through identity non-affirmation and expose to mental distress such as depression, known indeed to be associated with transgender identity (Kaltiala-Heino et al., 2018). Mental health problems may in turn further induce negative attribution bias and experiences of being bullied and ostracized (Kaltiala-Heino and Fröjd, 2011). Therefore, when studying associations between gender identity and being bullied, the role of mental distress needs to be accounted for in order to reveal possible independent associations between transgender identity and being bullied. The role that transgender identity *per se* has in being bullied is important for school policies to tackle bullying, and for health and social policies.

Further, being bullied is commonly associated with perpetrating bullying (Cook et al., 2010; Shetgiri et al., 2012; Chan and Wong, 2015b). Those victimized themselves may reactively bully others or perpetrating bullying may be a way of defending oneself. On the other hand, aggressors often socialize in antisocial groups where delinquency occurs, thus elevating the likelihood of being victimized themselves (Jennings et al., 2012). Perpetrating bullying may therefore arise from having been victimized or vice versa.

Thus, when studying the role of gender identity in being bullied among adolescents, perpetrating bullying needs to be controlled for. Additionally, possible participation as a bully is an important problem in itself. To the best of our knowledge, the research so far has not explored bullying perpetrated among gender minority youth (McKay et al., 2019). However, Dank et al. (2014) found that transgender youth reported some of the highest perpetration rates of sexual harassment/perpetration. As bullying among adolescents often has a sexual and heterosexist nature (Ashbaugh and Cornell, 2008; Toomey et al., 2012), similar associations might be expected with bullying perpetration. Elevated rates of bullying perpetration have also been found among sexual minority populations in some studies (Berlan et al., 2010; Eisenberg et al., 2015), who appear similar to transgender youth when it comes to being bullied.

To summarize, it appears that transgender youth are victims of bullying more commonly than their cisgender peers, but research has not taken account of confounding by perpetrating bullying or mental health factors (Day et al., 2018; Gower et al., 2018; Eisenberg et al., 2019; Johns et al., 2019; McKay et al., 2019; Bishop et al., 2020; Lowry et al., 2020; van Beusekom et al., 2020). The possible associations between transgender identity and perpetrating bullying are not known, leaving the understanding of the associations between gender identity and this common problem incomplete. According to the research so far, it moreover remains unclear whether involvement in bullying is similar across various gender minority identities or if opposite sex and non-binary identities differ in this respect. Additionally, most of the literature on transgender youth and bullying originates from North America, a possibly culturally different setting from Northern Europe. In this context, we ask and aim to answer the following questions:

- (1) Is transgender identity associated with being bullied even when known correlates of involvement in bullying are controlled for?
- (2) Is transgender identity associated with perpetrating bullying even when known correlates of involvement in bullying are controlled for?
- (3) Are the possible associations similar between opposite sex identifying and non-binary youth?

During adolescence, small differences in age may have a large impact on development (Laursen and Hartl, 2013; Dahl et al., 2018). Involvement in bullying decreases as adolescents grow older (Boulton and Underwood, 1992; Liang et al., 2007), and with maturation of sexuality (Cacciatore et al., 2019) and identity development (Kroger et al., 2010), both older transgender youth and their mainstream peers are likely more confident and more able to handle diversity, which will likely also reduce involvement in bullying among transgender youth. Thus, we finally ask:

- (4) Are these associations similar among middle and late adolescents?

We first expect to see that transgender adolescents report being bullied in excess in comparison to their cisgender peers, but that the associations will grow weaker when confounding by mental health correlates of bullying involvement and being a bully perpetrator are controlled for. Second, we hypothesize that transgender youth will also report more perpetration of bullying than their cisgender peers. Third, in line with heteronormative social control, we expect to see that the associations between gender identity and being bullied will be the strongest among non-binary/gender non-conforming youth. And finally, we expect to find that the associations between transgender identity and involvement in bullying will be weaker among older adolescents.

## MATERIALS AND METHODS

### The School Health Promotion Study

The School Health Promotion Study (SHPS) of the National Institute for Health and Welfare is a school-based cross-sectional anonymous survey designed to examine the health, health behaviors, and school experiences of teenagers. The survey questionnaire is sent to every municipality in Finland. The municipalities decide if the schools in their area will participate in the survey and the vast majority of schools do indeed participate. The survey is run primarily for health policy and administrative purposes, and the data is available on request for purposes of scientific research. The main aim of the survey is to produce national adolescent health indicators that municipalities can utilize in planning services and that can be used at national level to assess the effectiveness of health policies. The authors obtained permission to use the data for scientific research but were not responsible for collecting it. The School Health Promotion Study has received ethical approval from Tampere University Hospital ethics committee and the ethics committee of the National Health Institute.

The survey is conducted among 8th and 9th graders of comprehensive school and second-year students in upper secondary education (upper secondary school and vocational school) which follow completion of the 9 years of comprehensive school. Survey participants in 2017 numbered 139,829. Of these, 48.9% (68,333) reported that they were male and 50.4% (70,539) that they were female. Of all respondents, 0.7% (957) did not report their sex, and these were excluded from further analyses. Of the respondents, 52.7% were in comprehensive school grades 8 or 9, 25.0% were attending upper secondary school, and 23.3% vocational school. The age of respondents in the comprehensive school sample was [mean (SD)] 14.83 (0.82) years, those in upper secondary school 16.84 (0.83) years and those in vocational school 17.29 (2.43) years. Of the respondents, 3.5% ( $n = 4,940$ ) reported that they were 21 years old or older. These were excluded from further analyses. Descriptive information of the sample is given in **Table 1**. See section “Implausible, Likely Facetious Responding” for final sample size.

## Measures

### Sex and Gender Identity

The respondents were first asked “What is your sex?” with response alternatives “boy” and “girl” in the comprehensive school survey, and “male”/“female” in the upper secondary education response forms. This was intended to elicit the respondent’s sex as noted in their identity documents and was the opening question of the whole survey. Later, in the section of the survey addressing health, respondents were asked about their perceived gender as follows: “Do you perceive yourself to be...,” with response options “a boy/a girl/both/none/my perception varies.” According to sex and perceived gender, the respondents were categorized into one of three gender identities: cisgender identity (indicated male sex and perceives himself as a boy, or female sex and perceives herself as a girl), opposite sex identification (male sex, perceives herself as a girl; or female sex, perceives himself as a boy), and other/non-binary gender identity (independent of sex: perceived to be both a boy and a girl, perceived to be neither a boy nor a girl, variable).

### Bullying

Bullying or being bullied was elicited using two questions derived from a World Health Organization study on youth health (King et al., 1996). The questions are based on Olweus’ definition of bullying (Olweus, 1993) that have been widely accepted as a basis for bullying research. Bullying was first defined as follows: “We say a student is being bullied when another student (or group of students), say or do nasty things to him or her. It is also bullying when a student is being teased repeatedly in a way she or he does not like. But it is not bullying when two students of about the same strength quarrel or fight.” Respondents were then asked how frequently they had been bullied during the ongoing school term, and how frequently they had bullied others: many times a week, about once a week, less frequently, and not at all. In the analyses, responses to these questions were dichotomized to about once a week or many times a week (= frequently) vs. less frequently or not at all.

## Internalizing and Externalizing Symptoms

Internalizing symptoms studied were depression and generalized anxiety. Depression was measured with two screening questions: “During the past month, have you often been bothered by feeling down, depressed, or hopeless?” (yes/no) and “During the past month, have you often been bothered by little interest or pleasure in doing things?” (yes/no). These two questions have shown good psychometric properties in detecting depression in adolescents (Richardson et al., 2010). In the analyses, a sum score of these items was used as continuous variable. Generalized anxiety symptoms were elicited by the GAD-7, a self-report

**TABLE 1 |** Descriptive statistics.

Demographic variables	Comprehensive education		Upper secondary education	
	N (%)	M (SD)	N (%)	M (SD)
<b>Sex</b>				
Girl	36 123 (51.3%)		30 453 (50.8%)	
Boy	34 276 (48.7%)		29 520 (49.2%)	
Age		14.83 (0.82)		17.94 (2.17)
<b>Mother's education</b>				
Only basic	3 815 (6.0%)		2 938 (5.2%)	
Other	59 705 (94.0%)		53 580 (94.8%)	
<b>Father's education</b>				
Only basic	5 520 (8.9%)		5 191 (9.4%)	
Other	56 813 (91.1%)		50 315 (90.6%)	
<b>Family structure</b>				
Nuclear family	47 039 (69.5%)		38 699 (65.9%)	
Other	20 682 (30.5%)		20 053 (34.1%)	
<b>At least one parent unemployed in past 12 months</b>				
Yes	20 736 (31.0%)		18 384 (31.5%)	
No	46 229 (69.0%)		39 972 (68.5%)	
<b>Difficulties to communicate with parents</b>				
Yes	4 902 (7.3%)		3 713 (6.4%)	
No	61 946 (92.7%)		54 671 (93.6%)	
<b>Drinking alcohol weekly</b>				
Yes	2 790 (4.1%)		5 847 (9.9%)	
No	65 843 (95.9%)		53 349 (90.1%)	
Depression*		3.0 (1.5)		3.0 (1.5)
GAD-7**		3.8 (4.7)		3.9 (4.6)
<b>Gender identity</b>				
Cisgender	66 687 (95.7%)		57 540 (96.5%)	
Opposite sex	504 (0.7%)		313 (0.5%)	
Non-binary gender	2 483 (3.6%)		1 792 (3.0%)	
<b>Bullied someone</b>				
Yes	1 717 (2.5%)		750 (1.3%)	
No	68 125 (97.5%)		58 884 (98.7%)	
<b>Been bullied</b>				
Yes	3 438 (4.9%)		1 093 (1.8%)	
No	66 631 (95.1%)		58 789 (98.2%)	

\*Range of depression was 2–8. \*\*Range of GAD-7 was 0–21. The GAD-7 items describe the most prominent diagnostic features of the DSM IV generalized anxiety disorder.



questionnaire designed to identify probable cases of generalized anxiety disorder and to assess symptom severity. The GAD-7 items describe the most prominent diagnostic features of the DSM IV generalized anxiety disorder. The GAD-7 elicits how often, during the last 2 weeks, the respondent has been bothered by each of the seven core symptoms of generalized anxiety disorder. Response options are “not at all,” “for several days,” “for more than half the days,” and “nearly every day,” scored, respectively as 1, 2, 3, and 4. The GAD-7 has been shown to be a reliable and valid measure for detecting generalized anxiety disorder in primary care and general population (Tiirikainen et al., 2019). In the analyses the sum score of these seven items was used as continuous variable.

Externalizing behaviors were represented, in addition to perpetrating bullying, by frequent consumption of alcohol. Alcohol consumption was elicited as follows: “How often do you use even small amounts of alcohol, for example half a can of beer or more?” with response options “once a week or more often/once or twice a month/about once a month/less frequently/not at all.” In the analyses the responses were dichotomized to once a week or more often (= frequently) vs. all other alternatives.

### Family Variables

Family variables used were mother’s and father’s education (basic education, i.e., comprehensive school) only vs. at least upper secondary education, family structure [living with both parents (= nuclear family) vs. any other family constellation], parental unemployment (none vs. one vs. both parents unemployed or laid off during past 12 months) and difficulties in parent-adolescent communication (never able to discuss important things with parents vs. can talk with parents at least sometimes). Family variables were controlled for because they have a strong association with involvement in bullying (Knaappila et al., 2018).

### Implausible, Likely Facetious Responding

It has been demonstrated that some adolescents deliberately misrepresent themselves in survey studies, exaggerating their belonging to minorities as well as their problem behaviors, symptoms, and psychosocial problems (Cornell et al., 2012; Robinson-Cimpian, 2014). Due to this, the proportion of those reporting belonging to minorities appears implausibly high, and associations between minority status and psychosocial problems are overestimated. In relation to gender identity, such overestimation may risk a perception in society that gender variant youth are victims rather than active subjects participating in building the contemporary adolescent community. Particularly in light of the excessive media coverage of gender identity issues (Marchiano, 2017), gender identity is likely to be a topic which tempts adolescents to give facetious responses.

Excluding respondents reporting unlikely combinations of extreme responses outside the focus of present interest on topics theoretically not related to the variables of interest for the actual study questions has been shown to be an appropriate method for controlling for such facetious responding (Robinson-Cimpian, 2014; Kaltiala-Heino and Lindberg, 2019). In line with

this, respondents reporting implausibly young age for being enrolled in the grades studied (<13 years), implausible shortness or height (extreme outliers) or who were calculated to have extreme BMI (< 10 or > 40) or reporting both extremely poor hearing, sight and mobility were classified as mischievous responders (for a detailed description, see Kaltiala-Heino and Lindberg, 2019). Being classified as a mischievous respondent was strongly associated with reporting transgender identity in this data (Kaltiala-Heino and Lindberg, 2019). These respondents (2.7%) were excluded from further analyses. Thus, the data in the analysis was from 130,372 respondents, of whom 96.1% were classified with cisgender identity, 0.6% with opposite sex identification, and 3.3% with other/non-binary gender identity. Descriptive statistics of the variables are presented in **Table 1**.

## Statistical Analyses

Associations between gender identity and involvement in bullying were first studied using cross-tabulations with chi-square statistics. Logistic regression was used to study multivariate associations. Gender identity was used as the independent variable, with cisgender as the reference category. (1) being bullied and (2) bullying others were entered each in turn as the dependent variable. As covariates, in the first model age and sex were added, in the second model family characteristics were added and finally, in the third model, internalizing symptoms, externalizing behaviors, and involvement in bullying in the other role (as a bully when being bullied was studied, and vice versa) were added. Odds ratios (OR) with 95% confidence intervals (95% CI) are given. Due to the large size of the data we set the limit for statistical significance at  $p < 0.001$ . The analyses were run separately for the comprehensive school and upper secondary education groups.

## RESULTS

### Prevalence of Involvement in Bullying

Overall, reported prevalence of experiences of being bullied was higher in the comprehensive school sample than in the upper secondary education sample (4.9% vs. 1.8%). Similarly, reported prevalence of bullying others was higher in the comprehensive school sample (2.5% vs. 1.3%) (**Table 1**).

Experiences of being bullied were most commonly reported by non-binary students, followed by opposite sex identifying and cisgender students in both samples (**Table 2**).

**TABLE 2 |** Experiences of bullying and bullying others according to gender identity, % (n).

	Cisgender	Opposite sex	Non-binary gender	<i>p</i>
<b>Comprehensive education</b>				
Been bullied	4.3 (2 886)	12.8 (64)	16.5 (404)	<0.001
Bullied others	2.0 (1 356)	8.9 (44)	10.5 (256)	<0.001
<b>Upper secondary education</b>				
Been bullied	1.6 (899)	5.8 (18)	8.5 (152)	<0.001
Bullied others	1.0 (582)	4.9 (15)	7.9 (140)	<0.001

Prevalence of perpetrating bullying followed a similar pattern. Bullying others was most commonly reported by non-binary students, followed in both samples by opposite sex identifying and cisgender students (Table 2).

## Relationship Between Gender Identity and Being Bullied

Table 3 presents the associations between gender identity and being bullied in the comprehensive school and upper secondary education samples before and after controlling for relevant confounding. Among the comprehensive school sample, opposite sex identification first yielded over twofold odds while non-binary identity yielded over fourfold odds for being bullied (Table 3; Model 1<sup>a\*</sup>). In the upper secondary education sample, a similar pattern emerged but with even stronger associations (Table 3; Model 1<sup>b\*\*</sup>).

In each model presented in Table 3, more covariates were added and controlled for. The associations between opposite sex identification and non-binary identity with being bullied grew stronger when age and sex were added into the model but diminished when confounding by family variables, alcohol consumption, and finally mental health variables and perpetrating bullying were controlled for. Nevertheless, in the final model (Table 3; Model 3<sup>a</sup>), after controlling for the aforementioned covariates, a statistically significant association between non-binary identity and being bullied persisted among the comprehensive school sample [OR (95% CI) = 1.98 (1.69–2.32),  $p = 0.000$ ]. Among the upper secondary education sample, the association likewise only persisted among non-binary youth [OR (95% CI) = 1.99 (1.50–2.62),  $p = 0.000$ ] (Table 3; Model 3<sup>b</sup>).

Notably, the final models also revealed a strong correlation between being bullied and bullying others, particularly in the upper secondary education sample (comprehensive education sample, [OR (95% CI) = 9.20 (7.96–10.64),  $p = 0.000$ ]; upper secondary education sample, [OR (95% CI) = 46.97 (37.84–58.31),  $p = 0.000$ ] (Table 3; Models 3<sup>a</sup> and 3<sup>b</sup>).

## Other Correlates of Being Subjected to Bullying

In addition to perpetrating bullying, certain family variables, depression, and anxiety were positively associated with being bullied among both samples. In both samples, a negative association emerged between natal female sex and being bullied (Table 3; Models 3<sup>a</sup> and 3<sup>b</sup>).

## The Relationship Between Gender Identity and Perpetrating Bullying

Table 4 presents the association between gender identity and perpetrating bullying among the comprehensive school and upper secondary education samples before and after controlling for confounding. Throughout our models, the associations between gender minority identities and perpetrating bullying were stronger than the associations between gender minority identities and being bullied.

Initially in the comprehensive school sample, all transgender youth had over fourfold odds for perpetrating bullying (Table 4; Model 1<sup>a\*</sup>). In comparison to the comprehensive school sample, the odds for perpetrating bullying were lower for the opposite sex identifying and higher for the non-binary identifying youth in the upper secondary education sample (Table 4; Model 1<sup>b\*</sup>).

**TABLE 3 |** Regression analysis of being bullied.

	Comprehensive education			Upper secondary education		
	Model 1 <sup>a*</sup>	Model 2 <sup>a</sup>	Model 3 <sup>a</sup>	Model 1 <sup>b**</sup>	Model 2 <sup>b</sup>	Model 3 <sup>b</sup>
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
<b>Gender ID (ref. cisgender)</b>						
Opposite sex	<b>2.86 (2.02–4.04)</b>	<b>2.67 (1.89–3.82)</b>	1.66 (1.13–2.49)	<b>3.77 (2.10–6.78)</b>	<b>3.29 (1.82–5.94)</b>	2.13 (1.01–4.17)
Non-binary	<b>4.22 (3.67–4.86)</b>	<b>3.52 (3.04–4.06)</b>	<b>1.98 (1.69–2.32)</b>	<b>5.21 (4.14–6.55)</b>	<b>4.35 (3.44–5.49)</b>	<b>1.99 (1.50–2.62)</b>
Official gender female (ref. male)	<b>0.76 (0.72–0.85)</b>	<b>0.73 (0.68–0.80)</b>	<b>0.54 (0.50–0.60)</b>	<b>0.64 (0.55–0.74)</b>	<b>0.60 (0.52–0.69)</b>	<b>0.64 (0.54–0.75)</b>
Age	0.96 (0.90–1.03)	0.94 (0.88–1.01)	0.83 (0.78–0.91)	1.04 (0.95–1.13)	0.99 (0.90–1.08)	0.94 (0.85–1.03)
Mother only basic education (ref. other)		<b>1.22 (1.03–1.45)</b>	1.17 (0.97–1.40)		<b>1.82 (1.42–2.36)</b>	<b>1.58 (1.18–2.10)</b>
Father only basic education (ref. other)		1.10 (0.95–1.28)	1.01 (0.87–1.19)		<b>1.26 (1.00–1.58)</b>	1.18 (0.92–1.50)
Nuclear family (ref. no)		1.09 (0.99–1.19)	0.97 (0.88–1.06)		<b>1.19 (1.03–1.39)</b>	1.11 (0.95–1.30)
Parental unemployment (ref. no)		<b>1.36 (1.25–1.49)</b>	<b>1.22 (1.13–1.33)</b>		<b>1.35 (1.17–1.57)</b>	1.25 (1.07–1.47)
Communication difficulties with parents (ref. no)		<b>2.51 (2.24–2.82)</b>	<b>1.31 (1.15–1.49)</b>		<b>2.45 (2.01–3.02)</b>	1.37 (1.09–1.74)
Alcohol weekly (ref. no)			1.30 (1.10–1.55)			1.30 (1.05–1.60)
Depression (continuous)			<b>1.18 (1.14–1.23)</b>			<b>1.16 (1.08–1.24)</b>
GAD-7 (continuous)***			<b>1.08 (1.06–1.09)</b>			<b>1.07 (1.04–1.09)</b>
Bullied others at least once a week (ref. no)			<b>9.20 (7.96–10.64)</b>			<b>46.97 (37.84–58.31)</b>

Statistically significant values ( $p < 0.001$ ) presented in bold face. \*Estimates in unadjusted model: Opposite sex OR (95% CI) = 2.73 (CI 1.93–3.86), non-binary OR (95% CI) = 4.09 (3.55–4.70). \*\*Estimates in unadjusted model: Opposite sex OR (95% CI) = 3.51 (1.96–6.30), non-binary OR (95% CI) = 5.01 (4.02–6.34). \*\*\*Range of GAD-7 was 0–21. The GAD-7 items describe the most prominent diagnostic features of the DSM IV generalized anxiety disorder.

**TABLE 4 |** Regression analysis for perpetration of bullying.

	Comprehensive education			Upper secondary education		
	Model 1 <sup>a*</sup>	Model 2 <sup>a</sup>	Model 3 <sup>a</sup>	Model 1 <sup>b**</sup>	Model 2 <sup>b</sup>	Model 3 <sup>b</sup>
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
<b>Gender ID (ref. cisgender)</b>						
Opposite sex	<b>6.13 (4.09–9.19)</b>	<b>5.56 (3.69–8.39)</b>	<b>3.91 (2.47–6.19)</b>	<b>5.62 (2.85–11.12)</b>	<b>5.03 (2.54–9.99)</b>	3.15 (1.38–7.19)
Non-binary	<b>6.00 (4.98–7.24)</b>	<b>4.83 (3.98–5.86)</b>	<b>2.58 (2.07–3.21)</b>	<b>8.61 (6.71–11.05)</b>	<b>7.24 (5.60–9.35)</b>	<b>4.01 (2.91–5.52)</b>
Official gender female (ref. male)	<b>0.28 (0.25–0.32)</b>	<b>0.26 (0.23–0.30)</b>	<b>0.25 (0.21–0.29)</b>	<b>0.18 (0.14–0.23)</b>	<b>0.17 (0.13–0.21)</b>	<b>0.19 (0.15–0.25)</b>
Age	<b>1.13 (1.03–1.24)</b>	<b>1.09 (1.00–1.20)</b>	1.04 (0.94–1.15)	1.07 (0.96–1.20)	1.02 (0.90–1.14)	0.96 (0.84–1.08)
Mother only basic education (ref. other)		1.36 (1.07–1.72)	1.24 (0.96–1.59)		<b>2.01 (1.45–2.78)</b>	<b>1.51 (1.01–2.21)</b>
Father only basic education (ref. other)		1.20 (1.06–1.36)	1.29 (1.03–1.60)		1.12 (0.84–1.50)	0.96 (0.69–1.34)
Nuclear family (ref. no)		1.21 (1.06–1.38)	1.12 (0.98–1.28)		1.13 (0.94–1.37)	1.05 (0.85–1.29)
Parental unemployment (ref. no)		1.21 (1.06–1.37)	1.08 (0.94–1.23)		1.17 (0.98–1.41)	1.03 (0.84–1.27)
Communication difficulties with parents (ref. no)		<b>2.71 (2.28–3.21)</b>	<b>1.59 (1.31–1.92)</b>		<b>2.62 (2.03–3.38)</b>	<b>1.83 (1.35–2.49)</b>
Alcohol weekly (ref. no)			<b>3.99 (3.34–4.77)</b>			<b>2.85 (2.28–3.56)</b>
Depression (continuous)			1.02 (0.95–1.08)			0.96 (0.87–1.06)
GAD-7 (continuous)***			<b>1.04 (1.02–1.06)</b>			1.03 (0.99–1.06)
Been bullied at least once a week (ref. no)			<b>8.90 (7.68–10.30)</b>			<b>45.68 (36.73–56.82)</b>

Bold face indicates statistically significant values ( $p < 0.001$ ). \*Estimates in unadjusted model: Opposite sex OR (95% CI) = 4.77 (3.21–7.10), non-binary OR (95% CI) = 5.10 (4.2–6.13). \*\*Estimates in unadjusted model: Opposite sex OR (95% CI) = 4.31 (2.20–8.44), non-binary OR (95% CI) = 7.57 (5.93–9.66). \*\*\*Range of GAD-7 was 0–21. The GAD-7 items describe the most prominent diagnostic features of the DSM IV generalized anxiety disorder.

The associations between opposite sex identification and non-binary identity with perpetrating bullying grew stronger when age and sex were added into the model but diminished when confounding by family variables, alcohol consumption, and finally mental health variables and perpetrating bullying were controlled for.

In the comprehensive school sample, the association between gender identity and perpetrating bullying nevertheless persisted as statistically significant among both opposite sex identifying [OR (95% CI) = 3.91 (2.47–6.19),  $p = 0.000$ ] and non-binary youth [OR (95% CI) = 2.58 (2.07–3.21),  $p = 0.000$ ] although the association was stronger among opposite sex identifying youth (Table 4; Model 3<sup>a</sup>). In the upper secondary education sample, the association persisted statistically significant only among non-binary youth [OR (95% CI) = 4.01 (2.91–5.52),  $p = 0.000$ ] (Table 4; Model 3<sup>b</sup>).

Notably, the final models also revealed a strong association in both samples between being bullied and bullying others [comprehensive education sample, OR (95% CI) = 8.90 (7.68–10.30),  $p = 0.000$ ; upper secondary education sample, OR (95% CI) = 45.68 (36.73–56.82),  $p = 0.000$ ]. The association was stronger among the upper secondary education sample (Table 4; Models 3<sup>a</sup> and 3<sup>b</sup>).

## Other Correlates of Perpetrating Bullying

Positive associations between perpetrating bullying and difficulties communicating with parents and weekly alcohol consumption were found in both samples. In the comprehensive school sample, anxiety (but not depression) was also positively associated with perpetrating bullying. In both samples, a negative association between natal female sex and perpetrating bullying was found (Table 4; Models 3<sup>a</sup> and 3<sup>b</sup>).

## DISCUSSION

In this study we analyzed the association of gender minority identity with involvement in bullying among a large population-based sample of adolescents. We analyzed whether the association of gender identity and involvement in bullying differed among opposite sex and non-binary identifying youth or among middle and late adolescents.

We firstly found that in our large, nationally representative sample, being bullied was generally associated with transgender identity, and with non-binary identity in particular. This finding is in line with the existing literature, which indicates that experiences of being bullied are more common among gender minority than mainstream youth (Day et al., 2018; Eisenberg et al., 2019; Johns et al., 2019; Bishop et al., 2020). Various factors could explain this disparity. Transgender youth may differ from their peers in that their behavior or appearance deviates from traditional feminine and masculine roles. This could partly explain elevated rates of being bullied as bullying is often targeted at those perceived to deviate from the mainstream (Jones et al., 2018; Price-Feeney et al., 2018). More specifically, relating to sexual orientation and gender identity, bullying sexual and gender minorities could also stem from heterosexism, which refers to efforts to maintain traditional masculine and feminine roles in society (Chesir-Teran, 2003; Toomey et al., 2012). On the other hand, internal stress, as described in gender minority stress and resilience theory (Hendricks and Testa, 2012; Testa et al., 2015), could result in constant vigilance and anticipation of being victimized through the development of hostile or depressive attribution bias thus predisposing transgender youth to detect victimization by their peers where none was actually intended.

Secondly, we found that transgender identity was generally associated with perpetrating bullying and that the association was stronger than that of transgender identity and being bullied. To the best of our knowledge, past research has not examined perpetration of bullying among gender minority youth, thus rendering comparisons to prior research impossible. In a study by Dank et al. (2014), however, it was reported that the few transgender young people in their study were the ones most likely to perpetrate dating violence among their sample.

Such aggressive behavior could arise from being victimized or having witnessed victimization of other gender or sexual minorities (Eisenberg et al., 2016), as a coping mechanism or avenue through which one could release negative feelings.

On the other hand, adolescence in general is a mentally challenging time (Paus et al., 2008) during which adolescents struggle with a series of developmental tasks such as forming peer relations and coming to grips with their sexuality (Havighurst, 1948; Seiffge-Krenke and Gelhaar, 2008). The added complexity due to the emergence and further development of transgender identity could cause extra stress for adolescents. In this context, perpetrating bullying could be seen as sign of acting out, perhaps due to transgender adolescents' own unresolved developmental issues.

Thirdly, non-binary identity was more strongly associated with involvement in bullying than opposite sex identity. Past research has found elevated rates of being subjected to bullying among youth (Lowry et al., 2020; van Beusekom et al., 2020) and transgender youth (Gower et al., 2018) who perceive themselves as more gender non-conforming (i.e., masculine females or feminine males) than youth with no such perception. Non-binary identifying youth particularly may display gender expression that does not conform to either masculine or feminine roles, and this may make them vulnerable to being bullied either due to simply being different from the mainstream, or as a result of heterosexist control. We found, however, that not only being bullied but also engaging in bullying was even more common among non-binary (perception of gender conforms to both or neither sex or it varies) than among opposite sex identifying youth.

It may be that the process of gender identity formation is a more complex process among non-binary youth than those young people identifying with the opposite sex. Such differences could stem from the nature of non-binary identity itself, as perceived gender may fluctuate, or align with both or neither traditional gender roles. This could delay the achievement of so-called transgender identity milestones, or factors associated with the formation of transgender identity, such as first living in the gender role felt within (Wilkinson et al., 2018) as young people struggle with their still unresolved gender identity. This internal turmoil due to uncertainty about one's own identity, could, for example, impede the formation of peer relationships, a key part of adolescent development (Laursen and Hartl, 2013). This could exacerbate internal stress and predispose non-binary youth to mental health symptoms such as depression, which are known to relate to involvement in bullying (Kaltiala-Heino and Fröjd, 2011).

Finally, regarding age differences, the existing literature shows that as adolescents mature and progress toward adulthood,

involvement in bullying decreases (Boulton and Underwood, 1992; Liang et al., 2007; Coulter et al., 2018). In line with this, involvement in bullying in our data was reported less commonly by the older adolescents in the upper secondary education sample across all gender identities. The association between opposite sex identification and being bullied also leveled out when confounding was controlled for in both samples. However, regardless of lower reported prevalence, the association between non-binary identity and perpetration of bullying was stronger among the older than among the younger adolescents in our study. It might be that those adolescents who still remain involved in bullying at an older age represent adolescents with the most developmental challenges. This finding could be seen to lend support to the notion that among transgender youth the possibly more complex nature of non-binary identity (in comparison to opposite sex identifying or cisgender youth) is indeed related to additional developmental challenges.

Additionally, while involvement in bullying was less prevalent among the older students of our study, the correlation between being bullied and being a bully grew stronger. This is likewise in agreement with the assumption that when involvement in bullying becomes less common as age increases, those who remain involved likely represent adolescents with the most developmental challenges. Being both a bully and a victim (bully-victim) is known to correlate with greatest amount of mental health problems and developmental difficulties (Forero et al., 1999).

## Strengths and Weaknesses of the Present Study

Our study has several strengths. Our large sample was an unselected, population-based sample representative of Finnish middle and late adolescents. This enhances the generalizability of our results.

There are indications even between European countries of variation in transgender youth's peer relationships and psychological functioning (de Graaf et al., 2018; van der Star et al., 2018). One could speculate that such differences are even greater between European and North American adolescents. As most research on gender identity and involvement in bullying originates in the United States, we feel our study in a Northern European setting is a useful addition to the existing literature on the important subject of involvement in bullying and transgender identity.

We controlled in our analyses for a wide range of confounding factors closely related to involvement in bullying and gender minority identity. This allowed us to examine more closely the relationship between transgender identity and involvement in bullying. This is a strength of our study.

As has been recommended (Reisner et al., 2014; Eisenberg et al., 2017), we identified transgender youth with two separate questions located far apart from each other in the study questionnaire ("two-step method"). Due to the large sample size, we were additionally able to separate opposite sex identifying youth from non-binary youth, rather than grouping all transgender youth as one in our analyses.



Involvement in bullying was elicited using questions derived from WHO's Youth Study (King et al., 1996). The WHO questions have since then been used in numerous studies across countries (for review see Kaltiala-Heino and Fröjd, 2011) which makes data elicited with them comparable with earlier research. This is a strength of our study.

Our study also has several weaknesses. In spite of our large sample, the number of transgender youth reporting perpetrating bullying was on the smaller side, although we still feel we reached adequate cell sizes for statistical validity.

In the present study, a secondary data was used. The data was not planned nor collected by us, and we were therefore unable to influence the way certain topics of interest were elicited. As a result, the way experiences of bullying were elicited in the study questionnaire made it impossible to distinguish between different types of bullying behavior in which adolescents had been involved, such as traditional school bullying or cyberbullying, or physical and verbal bullying and exclusion.

Additionally, whether respondents were living in their desired gender roles was not elicited in the questionnaire. This inhibited additional comparisons regarding involvement in bullying among those who conceal their gender identity vs. those who do not. The GMSR theory suggests concealment of one's experienced gender identity (for example not living in the desired gender role) is a stressor that could possibly negatively affect mental health of gender minority people. One could thus speculate that living in the desired gender role could in fact reduce mental health symptoms such as depression, thus decreasing bullying involvement, a behavior associated with mental health issues. On the other hand, living in the desired gender role could manifest as behavior or appearance deviating from traditional masculine and feminine roles (such as natal girls using boys' restrooms or natal boys having a more feminine appearance) thus predisposing youths to bullying, a behavior commonly directed to those who deviate from the mainstream. Lastly, as the study was a cross-sectional one, caution must be exercised when interpreting the results as causality cannot be determined from such data.

## CONCLUSION

Transgender identity and non-binary identity in particular, is associated with both being bullied and bullying others even when a range of variables, including internal stress and involvement in bullying in the opposite role, are taken into account. This could

suggest that the development of transgender identity (and non-binary identity in particular) is an additional stress for youth as they navigate the already developmentally challenging years of adolescence toward adulthood.

Future studies should focus on including gender minority specific measures in study questionnaires. Such measures could include various gender identities and for example gender minority specific stressors named in the GMSR theory, such as living in the desired role. Such measures could help uncover in more detail the association between bullying involvement and various gender identities *per se*.

Programs that promote gender diversity should be implemented in schools and in larger context in the society with the aim of reducing heteronormativity and promoting the acceptance of gender diversity.

Teachers, parents and health care workers must consider that gender minority youth are not necessarily only victims but also perpetrators of bullying.

## DATA AVAILABILITY STATEMENT

The data analyzed in this study is subject to the following licenses/restrictions: The data belongs to the Finnish Institute for Health and Welfare and is available for researchers by application. Requests to access these datasets should be directed to pauliina.luopa@thl.fi.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Tampere University Hospital ethics committee (Tampere University Hospital, Tampere, Finland) and National Institute of Health and Welfare ethics committee (National Institute of Health and Welfare, Helsinki, Finland). Written informed consent from the participants' legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

## AUTHOR CONTRIBUTIONS

RK conceived the idea of the study and supervised the project. NE and RK designed the statistical analyses while NE carried them out. EH wrote the manuscript with help from RK and NE. All authors contributed to the final manuscript, each with a specific focus.

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# Young People's Experiences of Attending a Theater-in-Education Program on Child Sexual Exploitation

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Child sexual exploitation and abuse (CSEA) has grave implications for the mental health and wellbeing of children and young people. It has been linked to a wide range of difficulties which may extend into adulthood. School-based prevention programs that aim to raise awareness (and thereby have the potential to prevent CSEA) are popular, however, have historically lacked robust and consistent evaluation. The purpose of the present study was therefore to explore young people's experiences of attending a school-based theater-in-education program, and the impact this had on their awareness and understanding of CSEA. Four focus groups of between four to six participants each were conducted with young people from two co-educational State schools in the United Kingdom. The approach of Template Analysis was used to analyze the data, and revealed a number of themes related to the superordinate themes of "Information and Detail Delivered" and "Format and Timing." The results suggest that participants gained new awareness and understanding of aspects related to CSEA, including other forms of (criminal) exploitation, as well as how to avoid harm and what to do "if bad things happen." Participants further reported that the theater performance/live element of the program was particularly impactful, feeling that this was delivered to them at the right time, but suggesting that younger people would also benefit from the important messages. In addition, areas for improvement were identified in terms of the delivery of the program, and the issue of victim blaming. Findings are discussed with a view to practical implications and directions for future research.

**Keywords:** child sexual exploitation, child sexual abuse, internet safety education, theater in education, awareness raising, school-based prevention, relationship and sex education

## INTRODUCTION

Child sexual exploitation and abuse (CSEA) involves an individual or group "taking advantage of an imbalance of power to coerce, manipulate or deceive a young person (i.e., a person below the age of 18 years) into sexual activity (a) in exchange for something the victim needs or wants, and/or (b) for the financial advantage or increased status of the perpetrator" (Department for Education, 2017, p. 5). CSEA takes place in the physical world and via Internet technologies, with over 9,000 incidents of sexual offenses against children between October 2017 and September 2018

involving an online element, including rape, sexual assault, and grooming (National Society for the Prevention of Cruelty to Children [NSPCC], 2019).

The accurate detection and recording of CSEA remains a huge challenge, given that it is usually shrouded in secrecy, resulting in low rates of disclosure. Official, up-to-date prevalence rates of CSEA are therefore hard to establish, and retrospective data from various samples are relied upon in order to provide estimates (Office for National Statistics, 2020). According to data collected as part of the United Kingdom Adverse Childhood Experiences (ACEs) studies, the prevalence rate for England is 6.3% (Bellis et al., 2014), and the prevalence rate for Wales is 10% (Public Health Wales NHS Trust, 2015). Similarly, a retrospective survey of 24,899 adults in the general population (aged between 18 and 74 years) in England and Wales for the year ending March 2019 revealed that 7.5% of the sample had reported experiences of sexual abuse which had been committed against them before the age of 16 years (Office for National Statistics, 2020). Internationally, in their meta-analysis of 217 studies, Stoltenborgh et al. (2011) reported a global prevalence rate of 12%, based on the analysis of hundreds of samples consisting of a total of approximately 10 million individuals.

Evidence suggests that CSEA has profound consequences for children's and young people's physical and psychological wellbeing which often continues into adulthood. In a systematic literature review of 14 reviews (comprising 587 studies), Maniglio (2009) concluded that there was evidence to suggest that those who experience CSEA are at significant risk of developing a variety of mental health difficulties, including psychosis, personality disorder, posttraumatic stress, and substance abuse. In an umbrella review of negative outcomes linked to experiences of CSEA, Hailes et al. (2019) estimated that up to 10% of common mental health problems in the general population, including depression, anxiety, eating disorders and post-traumatic stress disorder, could be prevented if CSEA was eliminated. Finally, it also has to be acknowledged that these figures demonstrate that we are dealing with a public health issue, with substantial implications not only for associated support services, but also for society as a whole.

Recognition of the long-term impact of CSEA, and the difficulty of detecting it, has led to growing emphasis on preventative measures in order to reduce young people's vulnerability to being exposed to and experiencing CSEA (Beckett et al., 2017). Research with survivors of CSEA suggests that failing to report such experiences may be related to the victim believing that they are in a real and loving relationship with the perpetrator (Quayle et al., 2012; Whittle et al., 2014; Beckett et al., 2017). The subject most often talked about by young people interviewed in Quayle et al.'s (2012) study was how "what seemed in some ways so normal or desirable turned into the opposite" (p. 50). Educational preventative measures that enable children and young people to distinguish legitimate relationships from inappropriate and abusive ones may therefore help tackle CSEA more widely. In a recent NSPCC study, young people highlighted that "online safety" needed to be part of a broader education about healthy relationships and consent (rather than being delivered on its own) (Hamilton-Giachritsis et al., 2017).

For the purpose of the present article, preventative measures and strategies aimed at "educating" children and young people about CSEA will be termed school-based sexual abuse prevention programs (SSAPPs). They may be delivered in a range of formats, including videos, role plays, structured exercises, and group discussions. While Brown and Saied-Tessier (2015) suggest that SSAPPs are the most common form of CSEA prevention, the great majority of research which has explored their effectiveness was conducted outside the United Kingdom. In order for these programs to be effective, the authors argue that they should comprise at least four sessions or more, covering a range of topics, including healthy relationships, consent, online safety, and where to go for help. SSAPPs Topping and Barron (2009) cautioned against taking apparently positive SSAPP outcomes at face value, and highlighted that effect sizes often paint a different picture, with actual outcomes varying considerably. They expressed concern over the 22 studies included in their review generally lacking valid and reliable outcome measures, having minimal replicability, and reporting no measures of fidelity. It was therefore merely possible to calculate effect sizes for 11 of the 22 studies by focusing on knowledge and skills around safety as outcomes which showed large variation ( $d = 0.14$ – $1.40$ ). The authors also noted that there was evidence of negative outcomes for some participants, such as a fear of strangers, and embarrassment and wariness around touch. However, these were predominantly reported by adults (and not young people themselves), and were short in duration.

A Cochrane review of SSAPPs found that when compared to a control group, the programs increased children's and young people's protective behavioral skills (measured in a pass/fail simulated grooming scenario) immediately post-intervention (Walsh et al., 2015). It was also found that SSAPPs produced increases in knowledge of CSEA prevention concepts (i.e., body ownership, private parts, distinguishing appropriate and inappropriate touch, and types of secrets, as well as whom to tell), as assessed by means of both vignettes and questionnaires. These effects were sustained at 6 month follow up. Young people who had taken part in SSAPPs were more likely to disclose experiences of CSEA, while at the same time acknowledging that this may be impacted by the clustering of participants in schools/classes. However, the review concluded that there was insufficient evidence to support the long-term effect of SSAPPs in terms of reducing the incidence of CSEA in participants.

Based on their meta-analysis, Bovarnick and Scott (2016) took a more critical position by suggesting that even the most effective programs are unlikely to change how children and young people actually behave, especially if they are "one-off" measures. They did acknowledge, however, that SSAPPs may increase children's and young people's knowledge of and confidence around aspects related to CSEA (such as power imbalance), as well as having the potential to challenge attitudes around gender and relationships that contribute to and underpin harmful sexual behavior (e.g., consent). The authors concluded by recommending more intensive programs of longer duration, and advised that these should be tailored to meet the specific needs of the relevant school in order to be most effective.



In 2019, the NSPCC published a report detailing an evaluation of their Protect and Respect Child Sexual Exploitation Programme (Williams, 2019). This program includes group-based education work that is delivered in schools. Children were referred into these groups following concerns raised by staff about their potential risks of experiencing CSEA. The evaluation employed a predominantly qualitative methodology, and data derived from interviews with NSPCC practitioners suggest that young people engaged best with these groups when they were based around their own life experiences, and by having the opportunity to share these and ask questions. Overall, practitioners reported that they had observed a positive impact for young people in terms of their awareness and understanding of CSEA-related risks (although no additional outcome measure of this appears to have been collected), however, they were in disagreement as to whether this awareness and understanding would translate into a real-life reduction of risk in terms of experiencing CSEA (Williams, 2019). It is important to note that our knowledge of SSAPs and their effectiveness is not yet well understood, and therefore care must be taken to ensure that children and young people are protected from experiencing unintended adverse outcomes as a result of taking part in them.

One particular approach to SSAPP is theater in education, which is a process of using performance, workshops and role play to encourage young people to explore topics that they may feel reluctant or ill-equipped to discuss (Sawney et al., 2003; Wooster, 2016). It aims to prompt safe communication around these topics, and develop young people's capacity to make informed decisions (Sawney et al., 2003). Sawney et al. (2003) suggest that it can be difficult to measure the effectiveness of theater in education due to its dynamic and co-constructed nature, as well as existing disparity in terms of what may constitute meaningful change and impact. Nevertheless, there is evidence to suggest that theater in education is effective in: (i) increasing awareness of sexually transmitted diseases in 14–15 years old graduate students (Lightfoot et al., 2015); (ii) further developing young people's understanding of healthy vs. abusive relationships in a group of 12–13 years old pupils (Bell and Stanley, 2006); and (iii) enhancing the impact of sexual health education, based on reflections of facilitators about their experience of delivering the program (Gordon and Gere, 2016).

The use of this approach to delivering SSAPPs therefore seems to be appropriate. However, in terms of long-term change, few studies have directly examined the role of theater in education in terms of reducing the risk of children and young people experiencing CSEA. In a group randomized control trial by Krahé and Knappert (2009), one group of German school children watched a play about how to manage abusive interactions involving adults ( $n = 44$ ), with another group watching a recording of the performance ( $n = 55$ ), and a third group acting as a control group ( $n = 49$ ). Both intervention groups showed significant increases in skills for dealing with abusive interactions (i.e., distinguishing good/bad touch and secrets, getting help, and rejecting unwanted touch), which was measured at 2 and 30 weeks post-intervention. Those who saw the play showed a significant increase in skills ( $M = 48.73$ ,  $SD = 6.44$  and  $M = 48.55$ ,

$SD = 5.67$ ), while this remained unchanged in the control group ( $M = 42.42$ ,  $SD = 8.67$ ).

In the Cochrane review by Walsh et al. (2015), three out of the 24 SSAPPs involved some element of theater in education. While the findings of the review were generally positive, neither the studies included in the review nor the review itself isolated the impact of theater in education from other interventions. In an integrative review of SSAPPs specifically, Fryda and Hulme (2014) found that six out of the 23 identified programs used theater, with the most common mode of delivery being film. Group discussion and role play, both elements of theater in education, were part of 10 and 12 SSAPPs, respectively. Overall, the studies included in the review highlighted positive outcomes for children in terms of disclosures of abuse, perception of risk, and self-protection skills, with the most frequently measured outcome being knowledge gain. However, in light of the limitations across the studies, these findings are to be interpreted with caution. The authors also suggest that the variation across studies in terms of measures that were used to capture changes in children represents conflicting views of which aspects/factors may significantly reduce children's and young people's risk of experiencing CSEA.

In recent years, there has been growing recognition that statutory education for children and young people on healthy relationships, sex and consent is lacking in the United Kingdom. More specifically, an inquiry by Barnardo's (2014) found that the young people who responded had received inadequate teaching around healthy relationships and sex, concluding that the provision of high-quality education on relationships and sex in schools was vital. In response to these identified deficits, from September 2020, it became a statutory requirement for all primary school children to receive Relationships Education, and for all secondary school children to receive Relationships and Sex Education. This is enshrined in The Relationships Education, Relationships and Sex Education and Health Education (England) Regulations 2019 under Sections 34 and 35 of the Children and Social Work Act 2017<sup>1</sup>. Schools are permitted flexibility in determining how they choose to deliver this education (Department for Education, 2019), with one option being theater-in-education programs.

It therefore seems timely to present our findings from a study that sought to explore young people's experiences of attending a school-based theater-in-education program, as part of which aspects of unhealthy relationships and sex were covered. The company whose program was evaluated as part of the present study uses a theater-in-education approach to delivering their SSAPP. It is based in the United Kingdom, and provides a range of theater-in-education programs to educate children and young people about various important aspects, including relationships, consent and exploitation. The primary aim of the study presented here was to explore young people's experiences of attending a school-based theater-in-education program, and the impact this had on their awareness and understanding of CSEA by conducting focus groups with pupils who had attended the relevant performance and participated in

<sup>1</sup><https://www.legislation.gov.uk/ukpga/2017/16/part/1/chapter/4/enacted>



subsequent workshops<sup>2</sup>. The study therefore aimed to answer the following questions:

1. How did young people experience attending the program?
2. What did young people find most helpful/useful?
3. What do young people know now that they did not know before?
4. What were young people's views of the characters?
5. What was the impact of attending the program on young people?
6. What additional elements did young people think would have been beneficial to include?
7. Did young people think the program was delivered in the right format and at the right time?

## MATERIALS AND METHODS

### Ethics

Full ethical approval for the study was granted by the Science, Technology, Engineering, and Mathematics Ethical Review Committee at the University of Birmingham, and the Psychology Research Ethics Committee at the University of Bath. The researchers adhered to the British Psychological Society's (2018) throughout the study.

### Sample/Participants

A total of four focus groups were conducted at two co-educational State schools in the United Kingdom. At the first school, the program was delivered to Year 10 pupils (aged 14–15 years) in February 2019, with two focus groups (FG1 and FG2) taking place 4 days later. At the second school, the program was delivered to Year 9 pupils (aged 13–14 years) in June 2019, with one focus group (FG3) taking place 9 days later, and the second focus group (FG4) taking place 15 days later. In both schools, the program formed part of a dedicated day for pupils to learn about healthy relationships and sex. More specifically, Focus Group 1 ( $n = 5$ ) consisted of three females and two males; Focus Group 2 ( $n = 4$ ) consisted of three females and one male; Focus group 3 ( $n = 4$ ) consisted of four females; and Focus Group 4 ( $n = 6$ ) consisted of four females and two males.

### Procedure

When schools contacted the theater-in-education company, they were asked whether they would be interested in taking part in a research study. If they agreed, they were put in touch with the PI (second author) to receive further information about the study, and to discuss relevant organizational aspects for the day of the program, and the running of the focus groups, respectively, including the distribution and collection of parent/guardian consent forms and young people's assent forms.

On the day of the program, the researchers visited the schools and attended the program for its duration. At the start of the program, they were introduced to the pupils by the actors. The

<sup>2</sup>It should be noted that the young people who attended the program, and took part in our study, were teenagers aged between 13 and 15 years, and consequently received the program quite late in their relationship and sex education.

actors informed the pupils that, if interested, they were able to take part in a research study that involved providing some feedback about their experience of attending the program. At the end of the workshop part of the program<sup>3</sup>, the researchers told the pupils about the possibility of contributing to a set of focus groups, and handed out information sheets to anyone who expressed an interest.

### Consent and Assent

Consent forms were distributed to interested young people as consent by parents/guardians was required in order for young people to be able to take part in the study. Young people were asked to take the consent forms home to get them signed by their parents/guardians, and hand them back to a member of teaching staff who then liaised with the researchers over organizing a date and time for the focus groups to take place. Prior to the commencement of the focus group discussions, young people were reminded of the purpose of the study, invited to ask any questions, and asked to sign an assent form.

### Data Collection

The focus group discussions followed a semi-structured interview schedule, asking participants about their experience of attending the theater-in-education program. The researchers allowed participants' contributions and discussion in response to questions to reach a natural conclusion before continuing with the interview schedule. Clarification was sought from participants, where necessary. The discussions were audio-recorded using a Dictaphone and transcribed verbatim by a professional transcription service.

To the researchers' knowledge, no disclosures of sexual exploitation and abuse were made by participants. One participant in FG3 made statements which alluded to the possibility of a friend having had experiences similar to those depicted in the program. In line with the company's safeguarding policy, the researcher informed the designated member of teaching staff upon completion of the focus group to ensure that this could be followed up in accordance with the school's policies and procedures around safeguarding.

### Data Analysis

The transcribed focus group discussions were analyzed using Template Analysis. Template Analysis is a qualitative data analysis approach for thematically grouping and analyzing text. It results in a list of codes (i.e., a "template"), with hierarchical codes signifying themes that were identified in the data. It differs from other forms of thematic analysis in that some of these codes are defined by the researcher in the form of a preliminary template prior to analyzing the text. These are subsequently expanded and modified throughout the process of data analysis (King,

<sup>3</sup>The program consists of two elements—one is in the form of a performance, one is in the form of a workshop. For the purpose of the present study, analysis was conducted on any data relevant to the performance element. This element focused on child sexual exploitation and abuse (CSEA). Any data in focus group discussions that were concerned with the workshop element (covering county lines and other forms of criminal exploitation) were not analyzed as part of the study presented here.

2004). Transcripts were imported into NVivo12, a qualitative data analysis software, with the purpose of facilitating the process of analysis (see **Figure 1** for an overview of the process).

## Epistemological Position

Template Analysis is compatible with a range of epistemological stances that may be adopted as one undertakes qualitative research (Brooks et al., 2015). For the purpose of the present study, the researchers adopted a realist position with a view to discover factual information about the experiences of young people who attended a school-based theater-in-education program, and the impact this had on their awareness and understanding of CSEA.

## RESULTS

The original research questions were borne in mind during the process of data analysis, as well as the interpretation and organization of themes. In order to help make sense of the data derived from the focus group discussions, the themes were amalgamated into two overarching categories, namely “Information and Detail Delivered” and “Format and Timing.” Themes and subthemes relevant to these categories are reported below.

### Information and Detail Delivered

This category presents young people’s views of the content and level of detail provided as part of the program. Participants’ responses indicated that they learnt about the following aspects from the program: (i) avoiding harm; (ii) what to do if bad things happen; (iii) characteristics of victims and perpetrators; (iv) healthy vs. abusive relationships; and (v) the various forms CSEA can take. Participants also reported that they would have liked more detail/information about related topics, such as consent. Seven themes (including 24 subthemes) are captured within this superordinate theme (see **Figure 2**). Themes are denoted by the following subheadings, with further subthemes referred to in the body of the text<sup>4</sup>.

#### Theme 1: Avoiding Harm

This theme summarizes a sense of young people becoming aware of the risks and the potential consequences of interactions, along with a suggestion of how their behavior may change as a result, particularly with regard to social media use. It includes the subthemes “Becoming aware” and “Being wary (Being careful on social media).” As one participant noted: “It [the performance] makes you aware of like...makes you aware of what might happen” (FG4). The extracts presented here were typical of many responses where the word “aware” was used alongside a non-specific sense of negative consequences:

*Just being more aware and like there’s...there’s people that claim that they’re someone else and that you need to have a better mindset*

<sup>4</sup>For example, the theme “Avoiding Harm” contains two subthemes, namely “Becoming aware” and “Being wary (Being careful on social media).” “Being wary” contained a further second-order subtheme (“Being careful on social media”). Second-order subthemes appear in brackets.

*and more...you need to be more mature in the way you do things, because you might make one small mistake or just reply to someone, and that could be the worst mistake you ever made (FG2).*

Across the focus group discussions, there was a sense that this new awareness of potential risk was being translated into wary and less trusting behavior by participants:

*Just be careful, even if it’s not online and it’s meeting somebody in real life...it’s just being really careful who you trust and how quickly you trust somebody before you know more about them (FG3).*

Much of the behavioral change participants mentioned was focused around the use of social media or internet communication platforms, which was identified as a common pattern across all focus group discussions:

*Be suspicious, like if a boy...if a man started texting you, just block them or remove them or report them, say if it was Instagram or something, just try and block them, report them, so you don’t have to get yourself into a situation like Cath’s<sup>5</sup> situation (FG4).*

*Like when it comes to having private accounts on social media, only accept the people you know because then you know what they’re like and you can trust them more because you already know them in person (FG3).*

#### Theme 2: What to Do if Bad Things Happen

This theme summarizes young people’s understanding of what they think they should do if they spot any signs of CSEA (involving either themselves or friends/peers), as well as what may happen if they chose to seek help. It includes the subthemes “How to seek help and what to expect” and “Helping each other.” Participants across all four focus groups talked about where they could go for help and/or advice, including Childline<sup>6</sup>, Umbrella<sup>7</sup>, teachers, and family members. In addition to this practical knowledge, participants in three of the focus groups emphasized the importance of having reassurance about confidentiality should they come forward and/or wish to speak to someone:

*When you’re growing up, you always know the people that you can turn to, but I think it’s good to have extra information, and maybe societies that you don’t know at all that you can go to anonymously and like talk about it with because, sometimes, it’s things that you don’t want to share with anyone you know because maybe you don’t want to be judged or you think it’s going to change their opinion of you. But if you can go anonymously and say, “This is happening,” and get help for that, that’s really good (FG3).*

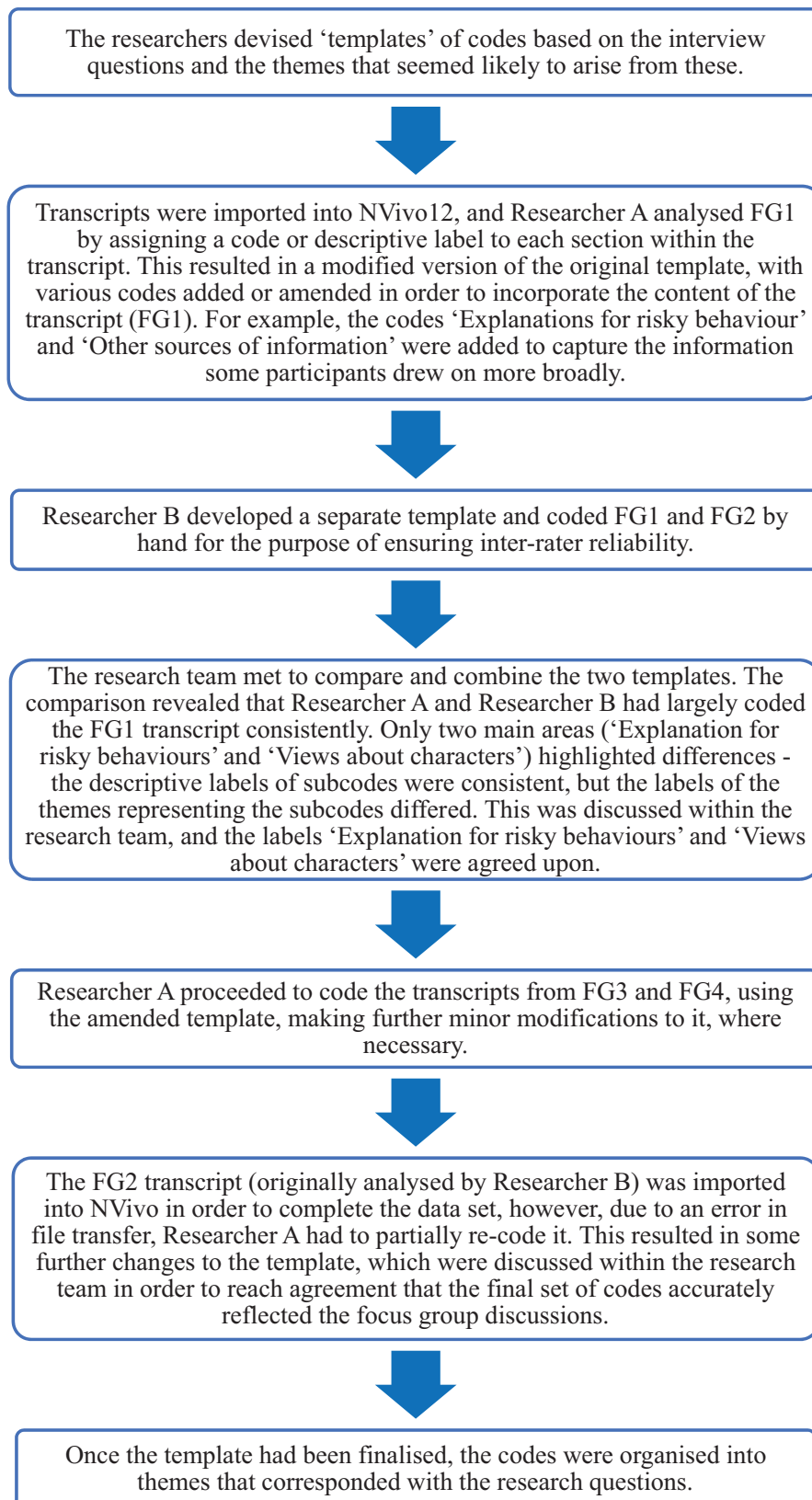
In two of the focus groups (each from a different school and as such representing a different year group), participants spoke about being able to spot the signs of someone struggling and/or having issues (both in themselves and friends/peers) after seeing the program, and how this shared recognition would enable them to support one another:

*say if certain...someone was to like text me or something, and I told my friend, they would have that in their minds then too. I would*

<sup>5</sup>The name of the victim character was changed in order to preserve the anonymity of the theater-in-education company.

<sup>6</sup><https://www.childline.org.uk/>

<sup>7</sup><https://umbrella.uk.net/>



**FIGURE 1** | Overview of the steps by King (2004) used to guide the process of template analysis.

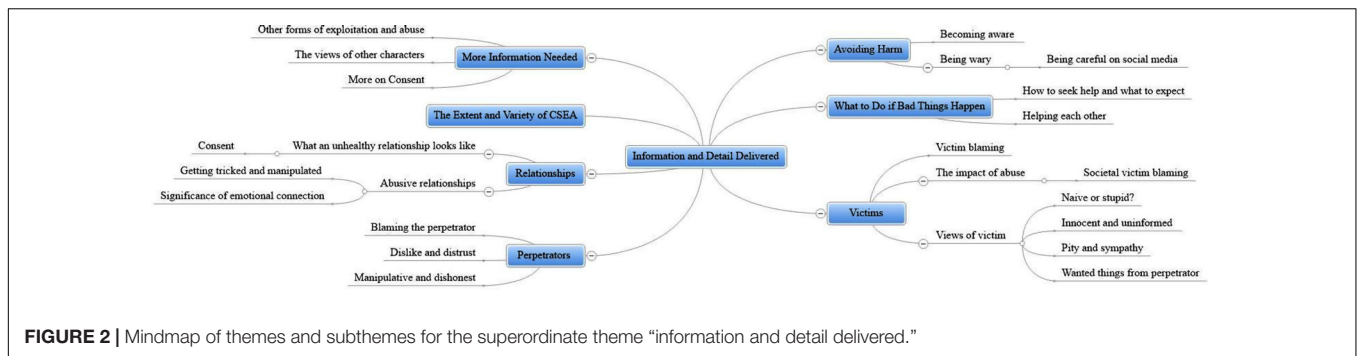


FIGURE 2 | Mindmap of themes and subthemes for the superordinate theme "information and detail delivered."

have it, and other people would have it, so it's like it's distributed a lot through our age group (FG1).

### Theme 3: Victims

This theme summarizes a common pattern across all four focus group discussions which represents young people's views of the victim's character. It includes the subthemes "Victim blaming," "Impact of abuse" ("Societal victim blaming"), and "Views of the victim" ("Naïve or stupid?," "Innocent and uninformed," "Pity and sympathy," "Wanted things from perpetrator"), which capture a range of often contradictory perspectives about Cath's actions and the causes behind them.

#### Victim Blaming

Some participants in each of the focus groups made statements which might be considered examples of victim blaming. They thereby held Cath at least partially responsible for being abused. Many participants made reference to the warning signs the perpetrator had displayed, and how they themselves had "known" that "there was something wrong with him" (FG1). Some quotes illustrate how some participants appeared to suggest that Cath's failure to recognize these signs, and/or her "irresponsible" behavior, made her at least somewhat culpable for what followed:

*I personally think that the fact that she's 14 and she went into a bar and had like drinks, it was irresponsible in a way because she shouldn't have been like met someone online [...] but I did feel like really sympathy for her because she's like obviously thought this person trusted her and that...but then again, she was just being a bit irresponsible, in my opinion. I did feel bad for her but she was a bit irresponsible (FG3).*

*I have empathy for her because he took it too far, but then I kind of don't because she went and met up with him and still stayed with him after he lied about his age, and, em, even what he did the first time, and still carried on (FG4).*

However, while some participants' apparent attribution of blame to Cath did not seem to shift, there was a sense that they felt more empathy for her as the story progressed:

*At the start, I was kind of like...like I was kind of angry with her, like what is she doing, like why is she talking to random people, and then, as it went on, I was like, yes, she made a mistake, but then it shouldn't have got this far, and I felt really bad for her (FG2).*

In two of the focus group discussions, there was some debate around the degree of blame the victim deserved, with participants often contradicting both each other and at times themselves:

*I feel like she deserves 20% of the blame, and he deserves 85%. [...] So, you can also put 80% of the blame on him, 5% on Cath, and then that other 15% can just go to the school, her parents, and people like that who haven't told her (FG1).*

*I don't think it was all down to him. I think, in the first place, like social media is obviously a big platform that people talk about with all this thing happening about vulnerability and stuff, but she shouldn't have done it in the first place. But even if she did, or if she was put in that place without her even doing that, then it was obviously his fault because he's manipulated her...which is why it's his fault (FG2).*

#### Impact of Abuse

The majority of participants appeared to be anticipating that CSEA would have far-reaching consequences for the victim, and spoke of Cath's life being "ruined" or "wasted." In two focus group discussions, participants' perceptions of these consequences seemed to be influenced by societal attitudes toward victims of CSEA:

*Because he said, he said something like, "Nobody's going to want damaged goods"—that's what he said. And like that obviously hit her because she knows it's true. So, in that situation, she'd probably think to herself, "Is it better for me to just leave it, rather than being demeaned in society, or should I go out there and try and work harder to get out of it?" (FG2).*

#### Views of Victim

Participants expressed a variety of different views of and feelings toward Cath, including: (a) pitying her, (b) seeing her as innocent, (c) debating whether she was naïve or stupid, and (d) thinking that she wanted things from the perpetrator (see Table 1). Interestingly (in light of the victim blaming demonstrated above), participants in two of the focus groups suggested that it was not Cath's fault that she lacked information about CSEA, and that others were to blame for failing to give her the relevant awareness and understanding that might have protected her.

### Theme 4: Perpetrators

This theme summarizes the negative views young people expressed about perpetrators of CSEA, and the character in the performance, respectively. It includes the subthemes "Blaming



**TABLE 1 |** Themes and quotes identified in relation to views of the victim.

	Quotes
Pity and sympathy	<i>I pitied her. I mean, it was just sad, like she wasted so much time for her...like of her life, just because of one mistake she made. (FG1)</i> <i>Because I generally think that she was just like, you know, trying to get...trying to be happy and all, but like...things like didn't go the way that she wanted, so I kind of felt sorry for her really. (FG3)</i>
Innocent and uninformed	<i>She's still like an innocent child who doesn't understand like what's going on in the world." (FG3)</i> <i>P1: Yeah. Because I don't think anyone told Cath what, em, people would do to her.</i> <i>P2: Yeah, she hasn't been educated correctly. (FG1)</i>
Naïve or stupid?	<i>P1: She was a stupid teenager.</i> <i>P2: No, she wasn't!</i> <i>P1: Yes, she was.</i> <i>P2: She wasn't stupid, she was naïve—there's a difference.</i> <i>P1: Yeah, innocent but stupid, so, you know...naïve...</i> <i>P2: No, naïve and stupid are two different things. (FG1)</i>
Wanted things from perpetrator	<i>There was like someone who was being there and like kind of...being that person that she could go to because there was no one else for her to go to. So, it's like...she saw him as like a cool person in a way because he was offering her like things that like she couldn't go and get herself, like alcohol and things like that. (FG3)</i> <i>I think that like...you see like...she wanted that...love from somebody, like for someone to comfort her and all that stuff, because you could tell by the way—like she was going...like she was on her page looking, like going with the intention to look for males like...and then... (FG2)</i>

the perpetrator,” “Dislike and distrust,” and “Manipulative and dishonest.” Participants expressed almost globally negative views of the character, with responses indicating that they blamed him for his actions, disliked and distrusted him, and viewed him as manipulative and dishonest (see **Table 2**). It was notable that despite the prevalence of victim blaming, it was clear that participants in three of the focus groups blamed the perpetrator too.

### Theme 5: Relationships

Young people predominantly spoke about negative, abusive, or non-consensual aspects of romantic relationships, as captured in the subthemes “What an unhealthy relationship looks like” (“Consent”) and “Abusive relationships” (“Getting tricked and manipulated,” “Significance of emotional connection”). It was of particular note that they were able to offer little explanation and/or understanding of what a “healthy relationship” entails, and mostly defined a “healthy relationship” in terms of what it is not, thereby focusing minimally on any positive relationship aspects. While present across three of the focus group discussions, “What an unhealthy relationship looks like” was merely referred to marginally:

*Because I think, if you feel like you can talk to someone and tell them that you don't want to or you do, that's a healthy relationship, but if you're constantly living in fear and thinking, oh, when I get home, I can't...I can't do something or I can't do this because someone's going to say something or I'm going to be judged or something, that's*

**TABLE 2 |** Themes and quotes identified in relation to views of the perpetrator.

	Quotes
Blaming the perpetrator	<i>I really dislike him because like he's like, what, 20, he knows like faking his age is wrong, especially to a 14-year-old, because he knows that they'll fall for it because of how young they are, so, obviously, he knew that was wrong. So, like I don't really like him for doing that. (FG3)</i> <i>I don't think she got herself in—like she was naïve in that she didn't...she didn't know to like...she didn't block him straightaway. However, it's still his fault, like you can't blame the girl. (FG1)</i>
Dislike and disgust	<i>Dehumanizing. To [make like] a 14-year-old girl have sex with men so he can get money—I thought it was absolutely disgusting! Horrible! (FG3)</i> <i>I don't like him. I don't like him. (FG2)</i>
Manipulative and dishonest	<i>Him talking to her constantly and like just saying things and muddling up her own words and making her think randomly, making her confused herself, she won't know, in that situation, like she won't know whether she did say yes or no, like she will just be confused because he's just constantly confused her and manipulated her. (FG2)</i> <i>He was lying the whole time. (FG1)</i>

*an unhealthy relationship because you're constantly living in the fear that you're going to be judged or you're going to be hurt or something if you don't, if you don't agree to it, which is probably how she felt (FG2).*

Participants briefly discussed the importance of consent, however, they mainly referred to it as an aspect that characterizes a healthy relationship. As the following extract illustrates, the majority of participants did not go on to define it, nor explained how they thought it was established, but merely discussed it in terms of its absence and the ensuing consequences thereof, as well as instances where consent was not given:

*there's got to be consent off both people for it to happen, otherwise it can get a bit serious within court and police and stuff like that so... (FG4)*

Participants in all of the focus groups identified trickery and manipulation as key features of abusive relationships, with many participants expressing surprise that a victim could be manipulated into such situations without the use of overt force:

*I obviously knew that things like this happened and I was like aware that people can get involved in things they don't want to get involved in, but I thought it was more like people would be forced or pressured into it, rather than doing it because they wanted to protect the person that was getting them involved because they'd like tricked them that much. I thought that was really kind of...terrible (FG3).*

Related to this was a sense of realization amongst participants that victims may have feelings for their abusers, and that this is how they are able to exploit them, resulting in victims agreeing to things they would never otherwise have agreed to:

*When I watched the performance, I knew the majority of the things that was going on, like I like understood it and I already was like aware of it, but the one thing that like I definitely got informed about was about, em, the way someone can use someone else to do something for them, like have sex with multiple people*

*and... because they know that that one person has like an emotional connection to them (FG3).*

## Theme 6: The Extent and Variety of CSEA

Participants in two of the focus groups reported that they had learnt more about other potential forms of exploitation and abuse through the program, explaining that they had known about single-perpetrator-to-single-victim abuse, but were not aware (prior to the program) of multiple victims being abused by one perpetrator, and/or one victim being abused by multiple perpetrators:

*...it doesn't have to be the person at hand who is like abusing them sexually or physically, it can be multiple people who they might not even know (FG3).*

## Theme 7: More Information Needed

This theme summarizes the range of topics young people highlighted as wanting more information about. It consists of the subthemes “Other forms of exploitation and abuse,” “Views of other characters,” and “More on consent.” There were various suggestions from participants regarding other forms of abuse they thought should be depicted, including county lines, radicalization/extremism, and indecent images of children. Participants in two of the focus groups reported that they would have liked to hear the views and experiences of other characters, such as the perpetrator and the victim’s parents (see **Table 3**). In particular, and perhaps most significantly, consent was identified by some participants as an aspect deserving of and needing more attention. As can be seen in the extracts in **Table 3**, participants in two of the focus groups appeared to be confused about the concept of consent and what it meant/represented.

## Format and Timing

This category presents young people’s views of the accessibility, appropriateness, and timeliness of the program, as well as how effective, enjoyable and believable they found it, and the emotional impact it had on them. Six themes (including 20 subthemes) are captured within this superordinate theme (see **Figure 3**). Themes are denoted by the following subheadings, with further subthemes referred to in the body of the text.

### Theme 1: Effectiveness

This theme summarizes young people’s views of the effectiveness of the format of the program. It consists of two subthemes, namely “Use of theater helped” (“Connecting with characters,” “Better than just being told,” “Memorable,” “Visualizing”) and “Useful to have it at school.” A view strongly endorsed across all focus group discussions was the positive impact of using a live theater performance to tell the story. Several participants made reference to being able to “visualize” the story (due to the live element of the program), and that this along with the emotional connection to the characters made them more likely to remember what they had seen. Furthermore, there was a sense that this facilitated participants putting themselves in the victim’s shoes (see **Table 4**).

Participants in one focus group reported that it was helpful to see the program in the context of the school day, as this

**TABLE 3 |** Themes and quotes identified in relation to suggestions for more information.

	Quotes
Other forms of exploitation and abuse	<i>And, you know, the people in this school very, very need a workshop or a drama piece on child pornography because these little children are doing the most. They need lessons... (FG1)</i> <i>That's also why I think we need to learn more information about the other ones [forms of exploitation] because I wasn't aware of the, em, traveling with drugs [to other people] because they didn't want to—again, I can't remember what it's called. But I wasn't aware of that at all, so that was something new to me, but that also made me realize, because it was also presented as one that... like the most common, right now, especially for young people, it really showed the fact that I feel like... sexual exploitation isn't presented too much, but it's presented like a lot more than everything else, and I feel like the others need to be addressed just as much as sexual exploitation.” (FG3)</i>
Views of other characters	<i>I thought... you know how he did the [hot-seating] for, em, Cath, we could have like done that on him to see what he would have done with... like why he was so desperate for money. (FG3)</i> <i>I think I would have liked to have seen what her family thought about it after and like people in the community, so like how she would go around... Like she said herself that people would still make snide remarks or some people will try and help her, but I'd like to see it, like I'd like to see her carrying on with her life and see how she gets through it or seeing how hard it is and how her—I want to see like her family's opinions as to how... if they were being supportive or if they were like it's also her fault. I wanted to see that as well. (FG4)</i>
More on consent	<i>I think, even though that grooming was a very good topic, they probably should have done like a different topic, like, like, em, consent and stuff like that, and more focus on consent and that because that's stuff that happens more... (FG1)</i> <i>Participant 1: Consent is a scary thing.</i> <i>Researcher: Consent?</i> <i>Participant 1: Yeah, because women can withdraw consent after—I can [...].</i> <i>Researcher: Well, anyone can withdraw consent.</i> <i>Participant 2: Anyone can withdraw—don't just say women!</i> <i>Participant 1: I know, I know, I know, but it's mostly women that do it. (FG1)</i> <i>Participant: I don't get consent... like I don't get it like... Not to like... I don't want to sound rude, but like... .</i> <i>Researcher: That's alright, go on?</i> <i>Participant: How do you just not say no? (FG2)</i>

ensured that everyone (including teachers) was exposed to the same information:

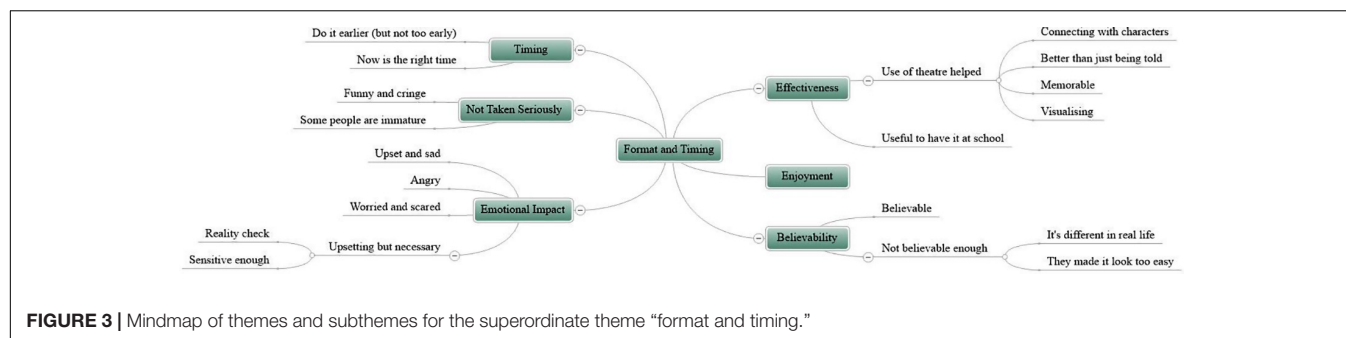
*if that happened to me, I'd talk to, they also have seen it as well. I would have it, and other people would have it, so it's like it's distributed a lot through our age group (FG2).*

### Theme 2: Enjoyment

Participants in three of the focus groups expressed that the performance had been “entertaining” (FG1) or enjoyable: “it was a good show and all” (FG3).

### Theme 3: Believability

This theme summarizes young people’s views on how believable they thought the program was. It consists of two subthemes, namely “Believable” and “Not believable enough” (“It’s different in real life,” “They made it look too easy”). While participants



**FIGURE 3 |** Mindmap of themes and subthemes for the superordinate theme “format and timing.”

in three focus groups felt that the program was believable, they thought that some aspects were unrealistic. For example, participants in two focus groups highlighted the evident discrepancy between the perpetrator character’s true age and the age he claimed to be: “His age. Like he’s saying he’s 17 but he looks like he’s 55. . . No one’s going to believe that.” (FG1). The same participants also reported that the performance made it look as though it was easy to avoid perpetrators:

*I think also that, em, in the drama, it was too easy for him to do it. Like people need to understand that they ain’t just going to do that. You’re going to like say, “Oh yeah, I wouldn’t let them take me out like that.” They need to understand that they will work harder (FG1).*

A pattern that was identified in three of the focus group discussions was an acknowledgment by participants that reality would be different to watching a play. More specifically, participants realized that the warning signs that may have seemed obvious to them as an audience would be more difficult to spot in real life: “If like, obviously, watching it, you can kind of maybe see where it’s going, but if you’re in that situation, you don’t have a clue what’s going to be happening in the future” (FG3).

**TABLE 4 |** Themes and quotes identified in relation to use of theater.

Quotes	
Connecting with characters	<i>I feel it’s like easier to connect with the characters like in that play, em, and it just made it much more effective. (FG2)</i> <i>I think just seeing it sort of performed, it just shows you what happens and the emotional level of the—like, for example, what was her name, Cath, Cath must have felt or how she [would be scared] for the rest of her life. (FG3)</i>
Better than just being told	<i>Yeah. It’s better if you see it than rather reading it or like listening to it because, like she said, you can visualize it and see what they’re thinking and what they’re feeling. But when you’re like, em, when you’re reading it, it’s like very hard to picture in your head what’s happening and how they feel and stuff. (FG2)</i>
Visualizing	<i>It’s easier to visualize then. (FG1)</i> <i>Actually seeing the characters react, it just changes how like the situation plays out. (FG1)</i>
Memorable	<i>But like. . . you only get this play like once, and the play is effective because you. . . you have it once and you visualize it, you see it, and it’s a good thing because you don’t forget it. Like I could remember that he said she’s damaged goods, but that only came to me because I actually remembered the play, and it kind of. . . and it kind of touched me. (FG2)</i>

#### Theme 4: Emotional Impact

This theme summarizes a range of emotions young people described feeling when watching the program. It consists of four subthemes, namely “Upset and sad,” “Angry,” “Worried and scared,” and “Upsetting but necessary” (see Table 5). A common pattern identified across all focus group discussions was participants reporting to have found the performance upsetting and/or sad, as well as scary and/or worrying. In two of the focus group discussions, a pattern of anger was also identified. However, there was a strong sense that the elements of the performance that triggered those emotional responses were necessary in order for the program to be effective:

*Children can’t tell what that is, like they don’t know it’s grooming until you actually tell them what grooming is (FG1).*

Participants in three focus groups felt that the delivery of the program had been sufficiently sensitive, and again seemed to suggest that a degree of reality was important in delivering the message:

*I think it was like quite sensitive in the way it was delivered. . . But also, I think, with topics like this, there’s only a certain level of sensitivity you can provide because, at the end of the day, it needs to be a reality check. It needs to be. . . this happens and something needs to be done about it, basically (FG3).*

#### Theme 5: Not Taken Seriously

While this theme was not very prominent across the focus group discussions, there was a sense from some participants that the

**TABLE 5 |** Themes and quotes identified in relation to emotional impact.

Quotes	
Upset and sad	<i>I don’t know, I just felt really upset, like I was on the verge of tears. I was like. . . how can someone be so. . . sly and malicious to manipulate someone like that? (FG2)</i> <i>It kind of made me feel like upset because. . . not because personally but because I empathized with all the characters and I felt bad for them. (FG3)</i>
Angry	<i>It made me feel angry because they’re horrible people. (FG3)</i> <i>I didn’t feel as like angry at him [character in the workshop] than I was with [the character of the perpetrator]. (FG2)</i>
Worried and scared	<i>Well, I was scared at one point. (FG1)</i> <i>It made me scared because it’s. . . like anybody that that can happen to, so. . . (FG4)</i>

program had not been taken seriously by everyone. They reported that this may have been due to different reasons, represented in the subthemes of “Funny and cringe” and “Some people are immature” (see **Table 6**).

### Theme 6: Timing

This theme summarizes the range of opinions expressed by young people about the timeliness of attending the program. It consists of two subthemes, namely “Do it earlier (But not too early)” and “Now is the right time.” The question around timing of the program generated considerable discussion in all of the focus groups, with participants generally agreeing that now was a good time to have seen the program, while also suggesting that it could be shown to younger children as well. Views on how much earlier young people should receive the program were more varied. One participant endorsed seeing the program both now and later: “I think it was a good time now, but I think they should warn us like again, so like for people who just didn’t take it seriously” (FG3).

#### *Do It Earlier (but Not Too Early)*

While several responses cautioned against the program being delivered too early [i.e., “Not to primary schools.” (FG1)], the majority of participants endorsed showing it to children younger than themselves, and suggested that if Cath had had more awareness of and information about CSEA when she was younger, this might have led to a different outcome for her:

*Cath, she was technically in the situation in our year group. She didn’t know about it before that. So, if she was maybe like 8, 9, like so it could start from there, and then having more conversations about it, it could progress until the full understanding, and like prevent stuff from happening, it would have had more of an effect for her to make the right decisions (FG2).*

#### *Now Is the Right Time*

Despite some debate on the issue of timing, participants in all focus groups endorsed that the time at which they had seen the program was right. There was no suggestion that the timing was poor and/or inappropriate, and participants in all focus groups referred to the particular stage they are at in their lives, emphasizing the relevance of the program to this:

*This is the age where things like this can actually start happening to people we know. Like it can happen younger, it can happen older, but around this age is when things can start, so it’s good to kind of prepare people with the knowledge so then, as things go forward,*

*they can be more careful, be more prepared, and not get themselves into situations like this (FG3).*

## DISCUSSION

Findings from the present study suggest that young people who attended a school-based theater-in-education program developed new awareness and knowledge around CSEA, including victims, perpetrators, unhealthy, and abusive relationships, as well as how to avoid harm and what to do “if bad things happen.” Young people demonstrated an increased awareness of these aspects during the focus group discussions, and clearly identified possible ways of changing their behavior (by means of the subthemes “Being wary” and “Being careful on social media”), however, unfortunately, it was not possible to determine whether this increased awareness translated into actual behavioral change. Young people reported that they would have liked to receive more information about the concept of consent, and the views and experiences of other characters, especially the perpetrator and the victim’s parents. Furthermore, their responses to questions about healthy relationships and consent suggest that they were predominantly defining these in terms of what they are not (i.e., by referring to aspects characteristic of unhealthy and abusive relationships).

In terms of the format and timing of the program, the majority of young people reported that the theater-in-education element of it helped them to connect with and remember the story, as well as making it more real—“better than just being told.” Young people generally felt that it was beneficial for the program to take place during school time, with everyone having to attend, and pupils and teachers thereby receiving and being exposed to the same information. Young people in all the focus groups endorsed that they had received the program at the right time. The majority of pupils (from both Year 9 and Year 10) also agreed that it would be useful to have this information earlier (e.g., at the start of secondary school), suggesting that it should be shown to children younger than themselves. While the focus group discussions featured some debate on how early was “too early,” United Kingdom prevalence data highlight that around half of CSEA experienced by young people occurs prior to secondary school age (Office for National Statistics, 2020). This signifies that targeting younger year groups may indeed be effective. In addition, some young people talked about experiencing negative emotional responses/states, while at the same time acknowledging that this was necessary and fitting given the purpose and subject matter of the program. Others reported that they and/or their classmates found the performance “funny” and/or “cringe worthy,” suggesting that some young people had not taken it seriously.

Overall, our findings suggest that a school-based theater-in-education program can lead to increased awareness and understanding of CSEA in young people, as well as what to do “if bad things happen.” According to Fryda and Hulme (2014), knowledge gain is the most commonly captured outcome for SSAPPs undoubtedly due to the relative ease of measurement. However, Williams (2019) highlights that there is no indication of whether improving young people’s knowledge of CSEA leads to

**TABLE 6 |** Themes and quotes identified in relation to not taken seriously.

	Quotes
Funny and cringe	<i>That was the funniest part of the whole play: she goes, “I love you,” and he goes “I know.” (FG1)</i> <i>Yeah, like...em, like half of it, the first half of it was like...they thought it was like a bit funny and like, you know, cringe [laughing]. (FG3)</i>
Some people are immature	<i>Some people took it more seriously than others. (FG1)</i> <i>I feel like...not...like out of the whole year, there’s going to be two or three people that don’t maybe take the ideas on-board as well as everybody else because of maturity issues or whatever, but you’re always going to get that. (FG3)</i>



an actual reduction in victimization. More specifically, Finkelhor et al. (1995) argue that education that aims to prevent CSEA does not necessarily stop abuse from occurring, and that even when young people understand preventative measures and strategies they may still go on to experience CSEA (Pelcovitz et al., 1992). While the program involved in the present study appears to have contributed to young people's increased awareness and understanding of CSEA (and their hypothesizing about potential behavioral change in the future), we were not able to determine whether this translated into *actual* behavioral change.

It is of particular note that the level of victim blaming present in young people's responses during the focus group discussions was unexpected, given the program's aim of increasing young people's empathy for victims of CSEA. Despite the fact that many expressed pity and sympathy for the victim in the program, and a strong dislike and/or disgust for the perpetrator, the majority of young people still at least partially blamed her for being abused. However, there were interesting nuances in young people's responses in that they reflected on the fact that some manipulation may not be as overt, and therefore more subtle as a result. While some young people blamed the victim for not heeding warning signs and engaging in "risky" behavior, others also felt that responsible others had failed in not providing her with the awareness and understanding that would have allowed her to protect herself. In addition, some young people recognized that warning signs of CSEA may be much harder to identify and spot in real life, however, interestingly, this was not reflected in their views/perceptions of the victim.

In particular, a certain level of awareness of the victim-blaming attitudes held by society at large was evident in the discussions by some young people. This suggests that some of the attitudes and views they endorsed may originate from exposure to common societal discourses around sexual violence and consent. Unfortunately, British young people and adults alike are presented with many examples of victim-blaming narratives in the media, at times even from public sector organizations such as the police and the judicial system (e.g., Halliday, 2019; Petter, 2019). Challenging these is therefore likely to be a substantial and enduring task for those who deliver school-based intervention programs, and we must also be realistic about how much change is achievable in relation to this in young people, when a substantial proportion of the adult world continue to subscribe to these attitudes and views. In addition, research has demonstrated a link between victim blaming and traditional views of gender roles (Ben-David and Schneider, 2005), with people being more likely to blame a woman for being sexually assaulted if they perceive her to be non-conforming to stereotypically female behaviors and traits (e.g., Kunst et al., 2018). This would suggest that confronting attitudes and perceptions around traditional gender roles may be a route through which SSAPPs may be able to open up a dialogue about these issues with school-aged children and young people.

In reviewing SSAPP evaluation methods, Fryda and Hulme (2014) noted that it was rare for programs to use standardized measures, usually devising their own and/or heavily adapting those in existence. The same is true of the company involved in the present study, who developed their own questionnaires based on the aims of the program. However, Fryda and Hulme (2014)

highlight that several standardized measures have been used to evaluate SSAPPs, including the Children's Knowledge of Abuse Questionnaire (Tutty, 1992) (used by Daigneault et al., 2012), and the "What If" Situations Test (Saslowsky and Wurtele, 1986) (used by Chen et al., 2012; Daigneault et al., 2012) in adapted forms. Adapting a standardized measure may be a means through which programs can measure their impact more meaningfully, as well as enabling more accurate comparisons across different interventions.

There is no fixed guidance as to what information SSAPPs should contain. Topping and Barron (2009) identified a number of key aspects that appear across various SSAPPs. Some of these (e.g., being able to recognize CSEA, and knowing what to do when one experiences it) were evident in the program involved in the present study. However, the authors emphasize that there is a lack of evidence concerning the "differential effectiveness" of the key aspects they identified, and therefore called for more research to be conducted into this. Complicating this issue further is more recent evidence that contradicts established narratives of how perpetrators operate online, such as (i) perpetrators' main goal for engaging children and young people in sexually exploitative and abusive interactions online being "cybersex" (rather than a physical meeting); (ii) the majority of perpetrators not using deception and/or hiding their true age online; and (iii) perpetrators not necessarily engaging potential victims in a friendship-forming and/or relationship-forming stage as part of sexually exploitative and abusive interactions online (Kloess et al., 2015). In addition, there appears to be a misperception among the general public and professionals of what constitutes "online grooming," and sexual exploitation and abuse of children via internet technologies, respectively. More specifically, research has shown that professionals who support young people in a therapeutic capacity sometimes perceive "online abuse" to be less impactful and of less urgent concern than "offline abuse." However, the same piece of research also discovered that "online abuse" can have just as much impact on young people as "offline abuse," with additional psychological effects due the unique elements of the online environment, such as being in constant contact with the perpetrator (particularly at night, which leads to lack of sleep and subsequent exhaustion), and enduring fear that explicit images may be distributed and made public online (Hamilton-Giachritsis et al., 2017).

While the majority of SSAPPs focus on increasing awareness and knowledge of a specific threat (e.g., CSEA) in school-aged children and young people, other programs have concerned themselves with teaching pupils more generic life skills. More specifically, in reviewing SSAPPs aimed at promoting internet safety in the US, Finkelhor (2014) argues that teaching children and young people such skills (e.g., conflict management, consequence anticipation, refusal techniques, and help-seeking) is a more effective preventative measure than targeted internet safety education. This suggests that a skills-based approach may be of more value in helping children and young people to avoid and/or safely navigate interactions online than any type of program that seeks to promote internet safety. It is also important to note that standalone SSAPPs are unlikely to achieve long-term impact, and that more intensive programs of longer duration and/or repeated exposure have greater effectiveness

(Bovarnick and Scott, 2016). As such, it is important not to overstate their influence or value. In their review, Whittle et al. (2014) also highlight the importance of family systems and secure attachment relationships, and emphasize that insecure attachment relationships contribute to increasing vulnerability to CSEA in children and young people. Naturally, the issue of family dynamics and attachment relationships is difficult to mediate in the context of SSAPPs.

Furthermore, Brown and Saied-Tessier (2015) make an important point by noting that despite the popularity of SSAPPs, prevention should not be made the sole responsibility of children and young people. The move to situate preventative measures and strategies within SSAPPs has been criticized by some for the inherent assumption that children and young people have the ability and power to avoid being exploited and abused (Williams, 2019). The lack of conclusive evidence that SSAPPs prevent experiences of CSEA led Eaton and Holmes (2017) to suggest that they should not be seen as “preventative” (although they may still have a positive impact). Eaton (2017) takes an even more critical stance by arguing that CSEA does not occur because children and young people lack awareness, knowledge and/or understanding thereof, but because perpetrators exploit and abuse them, and that similar preventative measures and strategies do not stop adults from being abused. She further cautions that we must retain a critical perspective on organizations who stand to benefit from the narrative that mere education can prevent CSEA.

While the present study offers unique insights into young people's experiences of attending a school-based theater-in-education program, and the perceived impact this had on their awareness and understanding of CSEA, there are a number of limitations that require acknowledging. Firstly, young people self-selected to take part in the focus group discussions, which may suggest that they were generally more engaging, or had been impacted by the program. This group of young people is therefore not representative of the year groups of Years 9 and 10 overall. Secondly, given the very few male participants in the present study, it was not possible to determine differences between male and female young people in terms of the attitudes they held, the views they endorsed, as well as the level of impact the program had on them. In light of existing research demonstrating a link between victim blaming and traditional views of gender roles, this would have been interesting to explore in more depth. Thirdly, the present study did not consider the needs of young people with learning disabilities, or those in non-mainstream education (e.g., pupil referral units). Research indicates that young people with learning disabilities are more vulnerable to experiencing CSEA, and at a disadvantage with regard to accessing support and protection (Franklin et al., 2015). Finally, Brown and Saied-Tessier (2015) point out that SSAPPs rarely deal with intra-familial CSEA or harmful sexual behavior engaged in by young people, despite evidence suggesting that these are significant areas of concern. Taken together, this adds to the complexity in terms of how to identify and evaluate the most useful and effective content for SSAPPs.

There are a number of complex factors and issues that impact on the interpretation of our findings. However, overall, they tentatively indicate that the program involved in the

present study increased young people's ability to spot signs of CSEA, maintain their own safety, and feel confident in seeking help and getting support. Nevertheless, no conclusions can be drawn as to whether this will translate into actual behavioral change. So far, evaluations of SSAPPs (especially those in the United Kingdom) have predominantly focused on increasing awareness and understanding, as well as shifting attitudes, rather than assessing behavioral change in children and young people. While this is undoubtedly challenging to achieve, it is necessary in order to justify the current spending on SSAPPs, especially in light of the recent introduction of the statutory requirement for both primary and secondary schools to offer relationships and sex education. With this, there is the potential that the number of providers commissioning them is going to rise. As such, future research would benefit from exploring behavioral change in young people, as well as how young people of male/non-binary genders, diverse cultural/ethnic backgrounds, and differing intellectual abilities, experience SSAPPs. In addition, evidence as to which aspects and/or topics included in SSAPPs are most useful and effective would allow existing programs to tailor their content accordingly, and thereby be in line with evidence-based practice. This would be best explored by means of a large-scale quantitative study that ideally also records how attendance at SSAPPs translates into actual behavioral change in young people. Last, but not least, future research would benefit from identifying effective strategies to combat victim blaming in school-aged children and young people.

## DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available due to the focus group discussions representing personal perspectives and experiences of children. It is therefore not deemed appropriate for the data to be made publicly available. Requests to access the datasets should be directed to JK, J.A.Kloess@bham.ac.uk.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Science, Technology, Engineering, and Mathematics Ethical Review Committee at the University of Birmingham, and the Psychology Research Ethics Committee at the University of Bath. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

## AUTHOR CONTRIBUTIONS

JK conceived and designed the project, with support from CH-G. HM and KD collected the data, with support from JK. HM and KD analyzed the data under the supervision of JK and CH-G. HM completed the majority of the write-up, with

contributions from JK, KD, and CH-G. JK and CH-G edited the different versions of the manuscript. JK prepared the manuscript for submission to *Frontiers in Psychology*. All authors were involved in agreeing the final coding template.

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# Prioritizing Indecent Image Offenders: A Systematic Review and Economic Approach to Understand the Benefits of Evidence-Based Policing Strategies

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In 2013, there were an estimated 50,000 individuals involved in downloading and sharing indecent images of children (IIOC) in the United Kingdom (UK). This poses challenges for limited police resources. We argue that police officers can make most effective use of limited resources by prioritizing those offenders who pose the greatest risk of contact offending, by nature of demonstrable pedophilia, hebephilia or dual offending status and thus, those at highest risk must be dealt with first. What is currently lacking is a clear idea of the potential scale of the problem in socio-economic terms and why, therefore, it is so important that evidence-based approaches to offender detection and investigation continue to be a top priority for funders and policy makers. A systematic literature review was undertaken to address two related questions. First, what is the scale of the problem in the UK, in terms of the number of pedophilic and hebephilic individuals who pose a risk of contact offending against a child? Second, what is the potential socio-economic burden generated by the national IIOC suspect pool if left unattended to by targeted police action? Applying population estimates of pedophilia and hebephilia to the male population (16–89 years), we estimate there are between 2,365–5,991 males with paedophilia and 12,218–30,952 males with hebephilia who are likely contact offenders. Applying average prevalence and incidence based costing methods to a conservative estimate of one victim per offender, the combined socio-economic burden from these persons could amount to £236–£597 million (incident costs) increasing to £2.9–£7.3 billion (lifetime costs; £3.3–£8.3 billion including QALY measures). Applying the same costs to CEOP (2013) estimate of 50,000 IIOC offenders we estimate that between 6,000 and 27,500 dual offenders could have already committed past contact offenses, contributing an economic burden of between £97–£445 million (incident costs) increasing to £1.2–£5.4 billion (lifetime costs; £1.4–£6.2 billion including QALY measures). Future contact offenses could contribute a further burden of £16–£18.6 million (incident costs) increasing to £198–£227 million (lifetime costs; £226–£260 million including QALY measures). Drawing upon these findings, we argue for the benefits of a research-informed prioritization approach to target IIOC offenders.

**Keywords:** indecent images of children, child sexual abuse, child sexual abuse material, risk assessment, arrest prioritization, police decision making

## INTRODUCTION

The number of indecent image of children (IIOC) offenses, in recent years, has created a growing workload for the police officers investigating them. Convictions for IIOC offenses are increasing (Sentencing Council, 2012) and police forces are struggling to manage the demand and risks posed by this offending group. In the United States of America (USA), for example, Waters testified to United States Congress that despite 500 000 national offenders being identified, only 2% of cases were being investigated due to a lack of police resources (Committee on the Judiciary, 2008). He described the situation as “catastrophic” as the magnitude of the problem had already overwhelmed USA law enforcement’s forensic and investigative infrastructure. In the United Kingdom (UK), the Child Exploitation and Online Protection Center (CEOP, 2013) received 8,000 reports in 2012 that contained a total of 70,000 still and moving IIOC. This represents a two-fold increase from the previous year. They estimated that in 2012, there were around 50,000 individuals involved in downloading and sharing IIOC in the UK (CEOP, 2013). More recently, 39 police forces recorded 17,521 obscene publication offenses against children in the year ending March 2019 and identified 552 unique victims within IIOC (Elkin, 2020). These figures help to provide some indication of the size of the task now faced by British and international investigating authorities.

Safeguarding children is at the forefront of the policing agenda; with the aim of protecting children from abuse in the first place (where possible) and reducing the likelihood of reoffending and repeat victimization. CEOP (2013) claim that 20% of the images they received in 2012 had been assessed as being self-generated by offenders; raising concerns about contact offending and the need to identify and safeguard these children. Set against this, meta-analysis by Seto et al. (2011) confirms that there is a considerable subgroup of offenders who offend online only (by downloading and sharing images) and who are unlikely to present a risk of contact offending. This article argues that evidence based policing approaches can help prioritize those offenders at highest risk of committing contact offenses and in so doing, demonstrate the most efficient use of limited public sector resources toward safeguarding goals.

Seto et al. (2011) found approximately one in six internet offenders are expected to have a history of contact sexual offenses. Criticality is important here; researchers report substantial variation in reported prevalence rates dependent upon what method is used. Prevalence rates reduce to one in eight when using official data and increases to one in two when using self-reports. As Seto et al. (2011) meta-analysis is primarily based on studies involving official data it is likely that a prevalence rate of one in six is also an underestimate. These figures do not take account of undetected offenders. An analysis of undetected offenders by Neutze et al. (2012) suggests a higher rate of undetected dual (offline and online) offending than would be suggested by Seto et al. (2011) meta-analysis. Research examining specialization and “cross over” (Howard et al., 2014) suggest

that IIOC offending does not tend to lead to contact sexual offenses but that the converse is not true; specialization is most evident for IIOC offenders but contact sexual offenders against a child will “cross over” to IIOC offending. Further, frequency of pornography use (including offline IIOC) has been shown to contribute to the prediction of crime and violent (including sexual) recidivism for child contact sexual offenders (Kingston et al., 2008). This suggests a general paraphilic lifestyle for some high risk dual offenders and that police resources should be focused on dual offenders. Set against this, there is still a recognized risk that those with IIOC offenses may cross over to contact offending. In their meta-analysis, Babchishin et al. (2014) propose that the psychological factors that differentiate those who do and do not act on their interests should be related to propensities for rule violation. Those most at risk for cross over offenses would be expected to have high levels of pedophilia, high levels of anti-sociality, have access to children, and have few psychological barriers to acting on their deviant impulses. Those least at risk would experience the converse. These findings provide useful insights into potential decision criteria, although a limitation of Babchishin et al. (2014) meta-analysis is that up to half of IIOC offenders could be expected to have undetected offline offenses (Seto et al., 2011). As such, the profile of IIOC offenders is recognized as diverse and the management of offenders with IIOC offenses should carefully consider the existence of concomitant contact sexual offenses.

The scale of the IIOC sex offending problem, both now and in the long term, has prompted multidisciplinary research in the area, with collaborations between academics and police forces to help improve detection and direct the allocation of policing resources to the most concerning cases. Researchers such as Steel (2009), Hughes et al. (2006) Brennan, Hammond and colleagues (Hammond et al., 2009; Brennan and Hammond, 2011, 2017) are beginning to explore the investigative and inferential value of examining pedophilic-related search terms and other online behavior amongst IIOC offenders. Hammond et al. (2009) and Brennan and Hammond (2017) for example, suggest that there is evidence of quite discrete paraphilic sexual interests to be found in offenders’ online behavior. Their analysis of 119,869 search terms and 3,000,000 records (representing one week of activity on a P2P site) revealed seven class taxonomy of paraphilic use; indicating the presence of distinct paraphilic sub-communities in the P2P network space (Hammond et al., 2009). This included pedophilic, hebephilic, gerontophilic, bestiality, sadistic, rape and incest sub-communities. The concern here is that whilst there is a wide range of offenses, pedophilic individuals are at increased risk of contact offenses against children. Research has demonstrated the serial nature of pedophilia, the large number of children abused by each pedophilic individual and the under reporting of assaults (e.g., Abel and Harlow, 2001; Hall and Hall, 2009). Hammond et al. (2009) suggest that effective targeting strategies, such as those that draw upon the action of distinct online sub-communities, may be a more effective strategy for targeting offenders than a random or “scatter gun” (pg. 7) approach.

An alternative approach espoused by the Fighting International Internet Pedophilia (FIIP) project, a collaboration between Kent Police and academics at the University of Liverpool, is to prioritize the investigation of known IIOC offenders who share features with dual offenders (those who have committed IIOC and contact offenses). This approach has led to the development of the Kent Internet Risk Assessment Tool (KIRAT: Long et al., 2016). KIRAT does not purport to predict future risk or re-offending. It is a four-tiered decision tool used nationally by UK Police to prioritize IIOC offenders, based on nine features most often associated with dual offending, with upwards of 95% accuracy for higher risk offenders and <20% false positive rates for lower risk offenders. Recent cross-cultural validations have successfully demonstrated the relative homogeneity of KIRAT risk factors for contact offending across 24 countries. A further recidivism tool (CPORT) with investigative value has also been developed by Michael Seto and colleagues (Seto and Eke, 2015; Eke et al., 2019) and has recently been applied in a Spanish context (Soldino et al., 2019).

The approaches outlined above demonstrate that it is important to have a conceptually driven and empirically supported approach about the links between online behavior and risk, which guides practical action. Whilst lower risk cases still need to be processed through the legal system (Long et al., 2016) police officers can facilitate optimal attainment of harm reduction goals by prioritizing those offenders who pose the greatest risk of contact offending, by nature of demonstrable pedophilia or dual offending status and thus, those at highest risk must be dealt with first. A random approach would arguably be less effective beyond the general deterrence that it may provide.

What is currently lacking is a clear idea of what the potential scale of the problem is in socio-economic terms. Child sexual abuse victimization impacts society (in terms of costs of supporting victims) along with the long term economic development of victims (in terms of mental well-being, education and employment). Economic metrics that seek to establish the disease burden associated with child sexual abuse encapsulate this interdependence by establishing costs to society along with the less tangible emotional costs to victims. As such, we prefer the term socio-economic to describe our approach. By establishing the scale of the problem in socio-economic terms we aim to demonstrate the importance of evidence-based approaches to offender detection and investigation and that they should continue to be a top priority for funders and policy makers. The aim of the current article is to expand and develop upon this debate by drawing on published prevalence studies and econometrics to present some of the economic burden that could be contributed by IIOC offenders. It draws on a systematic review and economic approach to examine two research questions. First, what is the potential scale of the problem in the UK, in terms of the number of and socio-economic burden of males with pedophilia and hebephilia who pose a risk of contact offending against a child? Second, what is the socio-economic burden potentially generated by the national suspect pool of 50,000 IIOC offenders?

## MATERIALS AND METHODS

The broad objective of the work is to estimate the potential scale of the problem in the UK by establishing offending and economic figures that could form the basis of sensible cost estimates. As the body of literature has not been comprehensively reviewed for these purposes, a scoping review was preferred. This would allow a preliminary assessment of the size and scope of the existing literature and the extent to which it could be used to answer the two research questions. Where gaps in knowledge are identified, we can draw on the available evidence to make informed decisions about derived estimates. As such, neither narrative nor quantitative synthesis were the primary aims of this paper. Quality assessment and data extraction that you might anticipate from systematic review or rapid evidence assessment was therefore, limited. Rather, we follow in the economics tradition; producing a systematic literature review to help provide an overview of the available evidence from which we make critical decisions about which figures to use in our cost estimates. The estimates that we provide should be seen as a “starting point” of a much wider discussion about the benefits of police action in this area and how these benefits may be measured. Toward this end, the first author undertook a systematic literature review in August 2020, to identify relevant academic and gray literature that would inform our research questions.

### Search Strategy

The search strategy included setting objectives and specifying inclusion and exclusion criteria for reviews, designation of search terms and databases to be searched. The following databases were examined for published material 2000–2020; Cochrane library, Web of Science, Scopus, PubMed, APA PsychINFO and National Criminal Justice Reference System (NCJRS). There followed conduct of searches, de-duplication, application of screening procedures and compilation of target lists for further review. Material would be excluded if full text was unavailable in English, or unavailable through the University of Liverpool online library services. Where possible, the search results were exported into reference management software, *Endnote Online*. Search teams were applied to online searches (Google/Google Scholar) to identify soft literature available in the public domain. Decisions were made by the research team to select economic and prevalence figures that would best provide a sensible basis for cost estimates. In the discussion that follows we provide an account of our search strategy, the relevant material that was found along with a critical discussion of that material that led to our decision about which material (prevalence, contact offending, economic figures) to include in our cost estimates.

### Estimating Victim Costs

A key objective of the review was to estimate the average victim cost for child sexual assault including children who are sexually assaulted during the commission of a first generation IIOC offense (the offender records the abuse). If arrest prioritization tools are effective by picking out contact offenders then these costs to the victim and the National Exchequer can be averted; constituting costs saved for future contact victims, Historical victims can also be safeguarded from repeat victimization.

Material would be included if it provided an economic analysis of the impacts of sexual harm that could be extracted directly from the published account. Econometrics emerging from sexual assaults against children and adults were both considered on the basis that the latter is a more established field of study and could shed light on costs experienced by child victims. Material would be excluded if it did not provide unit level costs (i.e., costs per victim). The first author applied Boolean operators to search terms to generate search phrases (*cost AND victim AND sex\* crime OR rape OR child sex\* abuse OR indecent image\* OR internet sex\* offend\* OR online sex\* offend OR contact sex often OR groom\* OR chat room off\* or solicitation off\* OR molest\* OR pedo\* OR paedo\**), resulting in 523 items. These items were then screened for filtering, such that items were excluded based on duplication, or on the basis that the full text did not inform the research question. Subsequent screening of 50 items was undertaken by the first author. A great wealth of material was available around the impact of sexual harm on victims, the relative costs of reporting and non-reporting of sexual abuse, and factors affecting disclosure of abuse. Promising work is beginning to emerge around the vicarious costs associated with being a victim of an IIOC offense. However, this work is arguably too underdeveloped for the purposes of the present paper as it relies on US legal case studies or potential restitution frameworks (Jacques, 2011; Cassell et al., 2013). As such, these references were excluded. Twenty three references provided unit costs for victims of sexual assault, including 8 that provided a focus on child abuse or child sexual abuse. Of the remaining 23 references, 3 were discarded on the basis that more recent updates were available [i.e., Heeks et al. (2018) was retained whilst Brand and Price (2005), Dubourg et al. (2005) and Home Office (2011) were discarded]. **Table 1** provides a summary of the remaining 20 references. These references draw upon a range of economic and survey methods to establish sensible (and often conservative) cost metrics. Three broad costing methods are employed. Incident methods attempt to identify the cost per incident and can range in scope from single costs (e.g., cost of medical or mental health treatment) to total costs incurred. Prevalence methods draw out incident costs but examine the number of cases reported within a year period to establish the total cost of disease incurred that year. Incidence methods calculate the lifetime costs of cases first diagnosed in a particular year. The references in **Table 1** vary in scope, but provide rich information on the range of tangible and intangible costs attributable to sexual harm. Tangible costs are often more readily quantifiable; they include those costs that arise immediately or proximally to the offense, such as medical care, mental health services, criminal justice costs, victim/children's services and loss of economic productivity. Intangible costs are the hardest to quantify; constituting the human and emotional cost to victims. A range of measures are employed (quality of life years adjusted, jury compensation awards and willingness to pay) to try capture meaningful metrics on the reduced quality of life resulting from victimization. In **Table 1** half of the references are solely focused on quantifying tangible costs, with seven incorporating intangible costs and three focused specifically on the issue of intangible costs and how they can be best be measured. For this research it was deemed

important to select a study that incorporated both tangible and intangible costs. From these, Saied-Tessier (2014), Letourneau et al. (2018) and Heeks et al. (2018) were considered for inclusion in further economic analysis given their focus on either child sexual abuse, the full range of costs included and/or focus on the United Kingdom (UK).

Saied-Tessier (2014) provides a comprehensive review of psychological and physical health problems experienced by victims of child sexual abuse in her prevalence based assessment of child sexual abuse in 2014. She argues that costs per victim do not appear to exist for the UK and represents a much needed area of research. This NSPCC report focuses on annual costs and whilst unit costs are provided, where available, individual level data is arguably still too underdeveloped for the purposes of the present report. As such, Saied-Tessier (2014) was not utilized for further analysis. As such, a decision was made to calculate lower bound costs from the prevalence based (annual) costs provided by Heeks et al. (2018); (UK) and upper bound costs from the incidence based (lifetime) cost estimates provided by Letourneau et al. (2018) (United States).

Heeks et al. (2018) provide sexual offense unit costs of victims in the UK. The Home Office focus takes account of a wide range of child sexual offenses (such as intercourse with a female under 13 years/16 years, incest and indecent assault against a minor) in its definition of sexual offenses and the figures below can be applied to cases of child sexual abuse. However, the total burden costs are based on responses from adults (16–59 years old) to the Crime Survey for England and Wales. Adults complete a Self-Completion Module that asks questions about sexual abuse experienced during childhood. The Self Completion Module is not used in the 10–15 year old survey as it is too sensitive. As such, prevalence and economic figures do not specifically take into account offenses against children that have taken place 2015/16. There are limitations in applying adults cost to children though, arguably, it is a conservative strategy because children are likely to experience negative effects of child sexual abuse throughout their lifetime.

To provide a cost per incident, the figures from Heeks et al. (2018) were extracted and retained for subsequent cost estimates. Heeks et al. (2018) calculate the unit cost of rape as £39,360 and other sexual offenses as £6,520 in 2015/16. These figures increase to £43,214 and £7,158 in 2019 using Bank of England Inflation Calculator (Bank of England Inflation Calculator) online “inflation” calculator with inflation averaged at 3.2% a year. We do not know the exact extent to which child sexual abuse involves acts of penetration but we can estimate this from the most recent figures provided by the Office of National Statistics (2020)<sup>1</sup>. Around one quarter of child sexual offenses recorded by the police March 2018–2019 were rape offenses (ONS, 2020)<sup>1</sup>. Whilst one might argue this risks conflating figures as rapes might be more likely reported to the police than sexual assaults, responses to the anonymous CSEW Self Completion Module reported by ONS (2020)<sup>1</sup> found that roughly one third of those reporting any contact sexual offense before the age of 16 had

<sup>1</sup>Available online at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates> (accessed September 1, 2020).



**TABLE 1** | Unit costs of sexual abuse and child sexual abuse (published 2000–2020).

References	Country	Offense type <sup>a</sup>	Costing method <sup>b</sup>	Security	Health	Criminal justice	Victim services	Labor	Intangible	Unit cost
Cohen et al. (2004)	USA	SV	WTP						✓	US resident willing to pay \$126 per year for 10% reduction in rape and sexual assault
Dolan et al. (2005)	UK	SV	P		✓				✓	Monetary value of discounted QALY losses £16,480 rape and £4,790 sexual assault. Intangible victim costs £1,027 rape and £341 sexual assault
Fang et al. (2012)	USA	CA	I		✓	✓	✓	✓		Lifetime cost for non-fatal child maltreatment \$210,012
Gelles and Perlman (2012)	USA	CA	P		✓	✓	✓	✓		National prevalence provided
Heeks et al. (2018)	UK	SV	P	✓	✓	✓	✓	✓	✓	Rape £39,360; and other sexual offenses £6,520
Hunt et al. (2017)	USA	SV	In			✓				Average cost to taxpayers for legal services per rape/sexual assault is \$2000–\$5000
Letourneau et al. (2018)	USA	CSA	I	✓	✓	✓	✓	✓	✓	female victim of non-fatal CSA \$282,734; male victim of non-fatal CSA
McCollister et al. (2010)	USA	SV	In		✓	✓		✓	✓	Combined tangible and intangible cost per rape/sexual assault \$240,776
New and Berliner (2000)	USA	CSA	In		✓					Average amount billed for mental health treatment was \$2634.09
Olavarria-Gambi (2007)	Chile	SV	P		✓					\$1,368.8 medical assistance to victims of rape and sexual assault
Peterson et al. (2017)	USA	SV	I		✓	✓		✓		Lifetime economic burden of rape per adult female \$122,461
Peterson et al. (2018)	USA	SV	I					✓		\$730 average cost of lost productivity across victims of intimate partner violence, sexual violence and stalking
Post et al. (2002)	USA	SV	P		✓	✓	✓	✓	✓	Cost of rape and sexual assault \$94,466 1996 USD
Saied-Tessier (2014)	UK	CSA	P		✓	✓	✓	✓	✓	National prevalence provided
Shanahan and Donato (2001)	Australia	CSA	In		✓	✓	✓		✓	Tangible and intangible victim costs between \$119,340–\$218,790
Smith et al. (2014)	Australia	SV	P		✓			✓		Incident costs for sexual assault \$3,912
Tennessee et al. (2017)	USA	SV	In		✓					\$6,737 hospital billing for victims of sexual assault
Walby (2004)	UK	DV	P						✓	Rape and assault by penetration £104,300; and non-penetrative sexual assault £240
Wang and Holton (2007)	USA	CA	P		✓	✓	✓	✓		National prevalence provided
Yang et al. (2014)	USA	CSA	P		✓	✓	✓	✓	✓	Estimated costs averaged \$159,610 <i>per sexual violence incident</i> for children, \$110,937 rape of adult and \$389 sexual assault of adult

<sup>a</sup>CA, Child abuse; CSA, Child Sexual Abuse; DV, Domestic Violence; SV, Sexual Violence.

<sup>b</sup>I, Incidence; In, Incident; P, Prevalence; WTP, Willingness to Pay.

experienced rape and assault by penetration (including attempts). As such, in calculating incident cost estimates we conservatively estimate 25% offenses at £43,214 and 75% at £7,158.

Letourneau et al. (2018) provide average lifetime costs for victims of non-fatal child sexual abuse in the USA in 2015. Drawing upon a wider range of measures than Heeks et al. (2018) such as education costs, they also draw on the available child sexual abuse literature to establish life time effects on health, criminal offending, suicide death and QALY losses. They estimate that the lifetime cost for female victims of non-fatal child sexual abuse is \$282,734. Estimates for male victims are “artificially low” (pg. 419) at \$74,691 due to a lack of reliable data pertaining to losses in male victim work productivity.

Similar to Saied-Tessier (2014), they calculate loss to quality of life separately from estimated total burden because of mixed opinion about the validity of converting QALY to a monetary amount (e.g., see Dolan et al., 2005). Separately, they estimate quality of life losses as \$41,001 for female victims and \$38,904 for male victims.

Converting these figures to the UK context required a number of decisions to be made. First, Letourneau et al. (2018) do not differentiate different forms of child sexual abuse and so it is not possible to estimate costs based on rape or sexual assault (as in Heeks et al., 2018). Set against this, Letourneau et al. (2018) draw on an established literature that examines the impact of child sexual abuse in general. As such, we were confident that their

robust and replicable incidence based methods would not lead to inflated life time estimates. The literature on harms emerging from different forms of abuse is arguably too under developed to meaningfully change their estimates. Second, Letourneau et al. (2018) establish total burden based on 75% of victims being female. This is in spite of absent male work productivity data significantly impairing male estimates (apart from a small difference in suicide death costs all other costs are equal). In this paper, we decided that differences between males and females in Letourneau were methodological artifacts and so would not be applied. As such, we would apply the value provided for female victims. Third, their values are provided in 2015 USD. Examining exchange rates provided by HM Revenue Customs Exchange Rates (2011) the average value of \$1 was £0.6255 (average for the year to 31st March, 2015). As such, \$282,734 was calculated as £176,850 in 2015, this figure increases to £197,535 in 2019 using Bank of England online “inflation” calculator with inflation averaged at 2.8% a year. This would be used to estimate lower bound lifetime costs. Upper bound estimates would include quality of life losses adjusted to \$40,477 to account for 75% of victims being female (as these figures were not affected by paucity of male productivity data). This was calculated as £25,318 in 2015 and increased to £28,279 in 2019 using Bank of England online “inflation” calculator with inflation averaged at 2.8% a year. As such, an upper bound estimate of lifetime cost would be £225,814.

## Estimating Prevalence of Pedophilia and Contact Offending

To support review question 1, a systematic search of the literature was undertaken to identify a) prevalence of pedophilia (interest in pre-pubescent children, generally aged 13 years and younger) and hebephilia (interest in pubescent children) in the general population, and b) rates of contact offending amongst pedophilic and hebephilic individuals.

In terms of prevalence, material would be included if it provided population-based prevalence rates that could be extracted from published accounts. Clinical and forensic samples were not retained. Community and convenience based samples were retained for further inspection. Since Seto (2008) provides an outline of prevalence studies published 2000–2013 the first author made use of these resources (of which five studies potentially met the study criteria) and searched for journal articles published post 2013. She applied Boolean operators to search terms to generate search phrases (“prevalence” AND “paedophil\*” OR “pedophil\*” OR “hebephil”), resulting in an additional 219 items. These items were then screened for filtering as described above. Seventeen items were downloaded for further consideration. Only 8 of these items provided a population based estimate of pedophilia or hebephilia with Santtila et al. (2010, 2015) drawing upon the same data set. Three additional post 2,000 references were identified from Seto (2018). **Table 2** provides a summary of 11 references that met the inclusion criteria.

American Psychiatric Association (2013) estimate that the highest possible prevalence for pedophilic disorder in the male

population is ~3–5%. Seto (2008) agrees these as upper limits and has suggested more conservative estimates in recent years (1–3%; see Seto, 2018). The epidemiological problem stems from the inability to fully explore the diagnosis of pedophilia or hebephilia using survey methods. Studies, such as those outlined in **Table 2**, include self-report measures of sexual fantasies, arousal, viewing child-adult sex and to a lesser extent behavior but they do not typically explore persistence, recurrence nor intensity of such thoughts, feelings and behaviors (Seto, 2018). As such, prevalence is likely to be overestimated. That said, one could also argue there are issues with self-disclosure and that these surveys identify only those individuals willing to admit paraphilic thoughts. An alternative view expressed in the literature is that surveys such as these might attract individuals who are more sexually curious, open-minded or deviant (Ahlers et al., 2011; Santtila et al., 2015). Whilst recognizing these limitations, the prevalence rates described in **Table 2** were considered for inclusion in economic analysis.

Three studies were considered for inclusion based on (a) their focus on a wider range of ages, (b) large sample size and their attempts to identify a representative sample and/or (c) attempt to differentiate prevalence of pedophilia and hebephilia. In their stratified random online sample of the Czech population, Bartova et al. (2020) report a *current* sexual preference for pre-pubescent children amongst 0.6% of males (aged 18–88 years) and for pubescent children amongst 3.1% of males. This is similar to Santtila et al. (2015) who in their attempt to identify a *1 year incidence* of pedophilia in their analysis of 1,310 Finnish twins report a prevalence of 0.2% for pedophilia (children aged under 12 years) and 3.1% for hebephilia (13–15 years). The age range of their study is more limited, focused on males aged 33–43 years. In their online survey of 8,718 German men, Dombert et al. (2016) explore *lifetime* sexual interest in pre-pubescent (children aged under 12 years) only, reporting 0.1% exclusive pedophilic sexual preference and an upper estimate of 5.4% non-exclusive pedophilic sexual interest. Though the findings from these three studies are broadly similar, we decided to opt for Bartova et al. (2020) for a number of reasons. First, both Santtila et al. (2015) and Dombert et al. (2016) define paedophilia as a sexual interest in children under 12 years. This makes sense given many children biologically mature earlier than 13 years, however, this does not match the cut off criterion for prepubescence outlined in DSM V nor does it align with UK legislation (the Sexual Offences Act 2003 uses distinct differences between sexual assaults on children, section 5–8 specifically distinguishes “rape and other offenses against children under 13 years”). Like Dombert et al. (2016) and Bartova et al. (2020) explore a wider range of ages than Santtila et al. (2015) but compared to the former Bartova et al. (2020) provide separate estimates for pedophilia and hebephilia. As such, we proceed with the estimate that 0.6% of the UK male population exhibit pedophilic sexual preferences and 3.1% exhibit a hebephilic sexual preference.

It is difficult to estimate the number of pedophilic and hebephilic individuals that pose a risk of contact offending as this is not always explicitly considered in research. Bartova et al. (2020), for example, omitted to ask about contact offending because of its criminal implications, preferring to ask whether

**TABLE 2 |** Outline of prevalence studies (published 2000–2020).

References	Country	Method	Sample	Prevalence
Abdullahi et al. (2015)	Nigeria	Survey	Student: 871 randomly selected sample from one university ( $n = 447$ males, mainly 18–25 years)	0.2% males reported pedophilia (symptoms lasted up to 6 months/causes distress)
Ahlers et al. (2011)	Germany	Survey	Community: 367 males in a metropolitan city (from a representative sample of 6,000 men aged 40–79 years)	9.5% had sexual fantasies about pre-pubescent child; 6.0% had masturbation fantasies; <b>3.8% had experienced sexual contact with a pre-pubescent child</b>
Bartova et al. (2020)	Czech Republic	Survey	Community: 10,044 stratified random online sample ( $n = 5,023$ males, aged 18–88 years)	0.6% disclosed a sexual preference in pre-pubescent children (causing 3.3% to confide in a health care professional; 3.1% disclosed a sexual preference in pubescent children (causing 11.5% to confide in a health care professional; 0.9% sexually aroused by pre-pubescent children (4.4% pubescent); 0.6% disclosed "porn use" with respect to pre-pubescent children (1.7% pubescent); 0.4% experienced sexual fantasies about pre-pubescent children once a week/every day (1.4% pubescent); 1% would definitely have sex with a pre-pubescent child if it was legal (4.4% pubescent)
Dawson et al. (2014)	Canada	Survey	Student and online; 1,015 non-representative sample ( $n = 305$ males, average age 23 years)	0.6% report sex with a pre-pubescent child as sexually arousing; 0.9% rated sex with a pubescent child as sexually arousing
Dombert et al. (2016)	Germany	Survey	Community; representative sample of 8718 males aged 18–89 years	Estimate upper limit of 5.4% non-exclusive paedophilic disorder, with 4.1% reporting sexual fantasies involving pre-pubescent children and 0.1% evidencing exclusive pedophilia; 3.2% indicated sexual behavior involving pre-pubescent children, with 1.7% indecent image offenders, 0.8% reporting sexual contact with children and 0.7% mixed offenders ( <b>1.5% combined contact offending</b> ); 0.4% had paid a child for sexual services, similarly 0.4% had intended child sex tourism
Joyal (2014)	Canada	Survey	Online; non-representative sample of 1,516 ( $n = 717$ males)	1.8% ever fantasized about pre-pubescent children
Santtila et al. (2010, 2015)	Finland	Survey	Twin study: 1,310 males aged 33–43 years	0.2% reported sexual interest in children aged 12 or younger; 3.1% for children aged 13–15 years; combined 1 year incidence estimated at 3.3%
Seto et al. (2015)	Sweden	Survey	Schools; representative sample of 1,978 males aged 17–20 years	4.2% reported use of indecent images of children, which was positive associated with self-reported coercive sexual behavior involving pre-pubescent children; <b>14% reported sexually coercive behavior against a pre-pubescent child</b>
Williams et al. (2009)	Canada	Survey	Student; non-representative sample of 191 males (average age 19.7 years)	12% admitted any sexual fantasy about children; <b>5% admitted any sexual behavior involving children</b>
Wurtele et al. (2014)	USA	Survey	Student and online; 435 non-representative sample ( $n = 173$ males, aged 18 years and older)	Nearly 10% reported some likelihood of having sex with children or viewing child pornography if they would not be caught or punished; 4% reported some agreement with each of following items, fantasize about having sex with child, being sexually attracted to little children, masturbation fantasies about sex with children

*Bold values indicate prevalence of contact offending provided in reviewed papers.*

respondents would engage in such behavior if it were legal. Four studies in **Table 2** had attempted to address the issue of contact offending in their prevalence studies. Sexual contacts with children range from 1.5 to 14% with the larger prevalence figure exploring a broader range of sexually coercive behaviors amongst young adults (Seto et al., 2015). Ahlers et al. (2011) and Dombert et al. (2016) provide representative samples from a wider range of ages than Seto et al. (2015) and Williams

et al. (2009) and so were considered for inclusion. In line with the purposes of the current paper, Ahlers et al. (2011) attempt to extrapolate self-reported rates of contact offending to the general population. They apply observed prevalence (14/376) but use the number of individuals invited to participate in the research as the denominator (14/6,000) resulting in a much more conservative contact offending prevalence rate of 0.23% (rather than 3.8% of the sample). This translates to 1,800 and 69,000

males (aged 40–79 years) who have acted out their sexual interest on pre-pubescent children in the City of Berlin and Germany, respectively. They do acknowledge that the absolute number is likely to be considerably higher. Their figures are based on self-disclosure amongst men aged 40–79 years, whereas they acknowledge that 20–40 year olds are both sexually and criminally more active. Further, only non-exclusive heterosexual pedophilic types appeared to participate in Ahlers et al. (2011) and so it is unclear how well this prevalence would translate to exclusive nor homosexual pedophilic types. Dombert et al.'s (2016) sample includes those with an interest in males and females, they have also used a particularly in-depth methodology more closely aligned with DSM V. As such, we decided to use Ahlers et al.'s (2011) 3.8% as an upper bound estimate and Dombert et al.'s (2016) 1.5% prevalence as a lower bound estimate of contact offending. Note, neither of these references provide estimates of contact offending for hebephilic individuals. Further, we elected to use self-reported prevalence from the sample rather than the population-based sample approach taken by Ahlers et al. (2011). There are many reasons why the remaining 5,624 individuals did not participate in their study; no doubt ranging from repulsion to undisclosed contact offenses.

## Past and Future Offending of IIOC Offenders

Since Seto and colleagues have already conducted a detailed meta-analysis on past and future offending of IIOC offenders (Seto et al., 2011) we did not conduct further systematic search of the literature. In terms of past offending, Seto et al. (2011) found approximately one in six internet sex offenders have a history of contact sexual offenses. Prevalence rates reduce to one in eight (12%) when using official data and increase to one in two when using self-reports (55%). In line with Seto et al. (2011) findings we adopt 12 and 55% as lower and upper bound risk estimates for past contact sexual offending. In terms of reoffending, recidivism studies (Seto et al., 2011; 1.5–6 year follow up) indicate that internet sexual offenders have a lower rate of sexual recidivism (4.6%) than contact sexual offenders (e.g., 13.7%). Where information is available on type of sexual recidivism in Seto et al. (2011) meta-analysis, 2% recidivate with a contact sexual offense and 3.4% recidivate with a further IIOC offense. These figures are likely to be underestimates as information is based on official criminal records in all samples.

On the balance of evidence, dual offenders demonstrably show slightly higher rates of both internet and contact sexual offenses than internet sexual offenders (Goller et al., 2010; Graf and Dittmann, 2011; Wakeling et al., 2011). As Wakeling et al. (2011) study provides an analysis of a large UK data set—a “routine” correctional sample ( $N = 1,344$  UK IIOC offenders), we elected to use this study to help inform upper bound estimates for dual offenders. Wakeling et al. (2011) found that dual offenders had a two year proven sexual reoffending rate of 6.6% whilst internet specialists had a reoffending rate of 1.6%. In the economic analysis that follows we draw on both Seto et al. (2011) and Wakeling et al. (2011) to provide lower and upper bound reoffending estimates.

## RESULTS

### Review Question 1: What Is the Potential Scale of the Problem in the UK, in Terms of the Number of and Socio-Economic Burden of Pedophilic and Hebephilic Individuals Who Pose a Risk of Contact Offending Against a Child?

Applying Bartova et al. (2020) prevalence rates of 0.6% for pedophilia and 3.1% for hebephilia to mid-year population estimates 2019 ([www.ons.gov.uk](http://www.ons.gov.uk)) of adult males (16–89 years) in the UK ( $N = 26,275,165$ ), there could be as many as 157,651 males with pedophilic sexual preferences and 814,530 males with hebephilic sexual preferences. To get a sense of those that pose a risk of contact offending we apply Ahlers et al.'s (2011) prevalence of 3.8% as an upper bound estimate and Dombert et al.'s (2016) prevalence of 1.5% as a lower bound estimate of contact offending. The estimated number of contact offenders multiplied by incident and lifetime victim costs are provided in Table 3.

We estimate that there could be between 2,365 and 5,991 males with pedophilia who are likely contact offenders. Applying Heeks et al.'s (2018) costs of £43,214 (25%) and £7,158 (75%) this could mean between £38 million and £97 million socio-economic burden (based on a conservative estimate of one victim per offender). Applying life time costs this could increase to £467 million (£534 million, QALY) to £1.2 billion (£1.35 billion, QALY). Applying the same assumptions to population estimates of males with hebephilia, we estimate between 12,218 and 30,952 males are likely contact offenders, translating to between £198 million and £500 million incident costs and between £2.4 billion (£2.8 billion, QALY) and £6.1 billion (£7 billion, QALY) life time costs.

### Review Question 2: What Is the Socio-Economic Burden Potentially Generated by the National Suspect Pool of 50,000 IIOC Offenders?

#### Historical Victims Are Potentially Identified and Safeguarded

In line with Seto et al. (2011) findings we adopt 12 and 55% as lower and upper bound risk estimates for past contact sexual offending. Economic estimates are outlined in Table 4.

#### Lower Bound Estimate Based on Official Records

It would be expected that at least 6,000 individuals in the UK who download and trade IIOC online will have an official history of contact sexual offending. Applying the average cost per victim (incident, lifetime and lifetime plus QALY) to a conservative estimate of one prior victim per offender, the potential UK suspect pool *could have already* contributed toward a socio-economic burden between £97 million (incidence costs) and £1.2 billion-£1.35 billion (QALY)(lifetime costs).



**TABLE 3 |** Estimated socio-economic burden attributable to paedophilic and hebephilic contact sexual offending (one victim per offender).

Population	Contact offending prevalence	Contact offenders (n)	Incident costs <sup>a</sup>	Lifetime costs <sup>b</sup>	Lifetime costs (with QALY) <sup>c</sup>
Males with pedophilia (n = 157,651)	Lower bound: 1.5% (Dombert et al., 2016)	2,365	£38,237,766	£467,170,275	£534,050,110
	Upper bound: 3.8% (Ahlers et al., 2011)	5,991	£96,895,466	£1,183,432,185	£1,352,851,674
Males with hebephilia (n = 814,530)	Lower bound: 1.5% (Dombert et al., 2016)	12,218	£197,589,496	£2,413,482,630	£2,758,995,452
	Upper bound: 3.8% (Ahlers et al., 2011)	30,952	£500,555,744	£6,114,103,320	£6,989,394,928

<sup>a</sup>Estimate 25% offenses at £43,214 (penetrative) and 75% at £7,158 (non-penetrative) in 2019 GBP.

<sup>b</sup>Estimated at £197,535 in 2019 GBP.

<sup>c</sup>Estimated at £225,814 in 2019 GBP.

**TABLE 4 |** Estimated socio-economic burden attributable to historical contact offending of IIOC suspects (estimated at one victim per offender).

IIOC suspects (N = 50,000)	Offending prevalence	Contact offenders (n)	Incident costs <sup>a</sup>	Lifetime costs <sup>b</sup>	Lifetime costs (with QALY) <sup>c</sup>
Past contact offending	Lower bound: 12% (Seto et al., 2011)	6000	£97,032,000	£1,185,210,000	£1,354,884,000
	Upper bound: 55% (Seto et al., 2011)	27,500	£444,730,000	£5,432,212,500	£6,209,885,000

<sup>a</sup>Estimate 25% offenses at £43,214 (penetrative) and 75% at £7,158 (non-penetrative) in 2019 GBP.

<sup>b</sup>Estimated at £197,535 in 2019 GBP.

<sup>c</sup>Estimated at £225,814 in 2019 GBP.

### Upper Bound Estimate Based on Self-Reports

It might be expected that as many as 27,500 would disclose a history of contact sexual offending (including undetected cases). Again, applying the cost per victim of sexual assault to a conservative estimate of one prior victim per offender, the potential UK suspect pool *could have already* contributed an economic burden between £445 million (incident costs) and £5.4 billion–£6.2 billion (QALY) (lifetime costs).

### Potential Future Victims May Be Safeguarded

Estimates associated with future offending are provided in **Table 5**.

### Lower Bound Estimate Based on Official Records

Given the conservative recidivism rates identified by Seto et al. (2011) it would be anticipated that 4.6% of the 50,000 suspect pool would go on to commit a new sexual offense of some kind within 1.5–6 years ( $n = 2,300$ ). Specifically, 2% with a contact sexual offense ( $n = 1,000$ ) and 3.4% with a further IIOC offense ( $n = 1,700$ ). Under this model, there are potentially 1,000 future victims of contact sexual offenses. Heeks et al. (2018) annual costs can be predicted over the length of time included in follow up studies, as such, incident costs are estimated over 1.5–6 years. Combined with lifetime and lifetime (with QALY) future contact offending against 1 victim per offender could contribute a further socio-economic burden between £16 million (incident costs) and £198 million–£226 million (QALY) (incidence costs).

### Upper Bound Estimates Based on Detection of Dual Offenders

If we assume more dual offenders amongst the suspect pool then we can apply Wakeling et al. (2011) prevalence rates. Conservative application of their consolidated prevalence rate (6.6% across all risk levels) to the national suspect pool suggests that 3,300 new offenses could occur within two years. This would be estimated to include 2,300 (4.6%) offenders committing new internet offenses and 1,150 (2.3%) offenders committing new contact offenses. Under this model, there are potentially 1,150 future victims of contact sexual offenses which with a conservative estimate of 1 victim per offender could contribute a further socio-economic burden between £18.6 million (incident costs) and £227 million–£260 million (QALY) (lifetime costs).

## DISCUSSION

This article has presented two ways in which the socio-economic burden that is potentially contributed by child sex offenders can be estimated. The aim of this work was to demonstrate the potential scale of the problem within the UK and to provide a clear argument for evidence based policing strategies to help identify the riskiest offenders, in terms of their risk of contact offending.

In our first analysis, we consider the amount of pedophilic and hebephiliac males in the UK who are likely contact offenders. At one victim per offender, the combined socio-economic burden from males with pedophilic and hebephiliac sexual preferences

**TABLE 5 |** Estimated socio-economic burden attributable to future offending of IIOC suspects (estimated at one victim per offender).

IIOC suspects ( <i>N</i> = 50000)	Offending prevalence	Recidivists ( <i>n</i> )	Incident costs <sup>a</sup>	Lifetime costs <sup>b</sup>	Lifetime costs (with QALY) <sup>c</sup>
Future contact offending	Lower bound: 2% (Seto et al., 2011)	1,000	£16,172,000	£197,535,000	£225,814,000
	Upper bound: 2.3% (Wakeling et al., 2011)	1,150	£18,597,800	£227,165,250	£259,686,100
Future internet offending	Lower bound: 3.4% (Seto et al., 2011)	1,700			
	Upper bound: 4.6% (Wakeling et al., 2011)	2,300			

<sup>a</sup>Estimate 25% offenses at £43,214 (penetrative) and 75% at £7,158 (non-penetrative) in 2019 GBP.

<sup>b</sup>Estimated at £197,535 in 2019 GBP.

<sup>c</sup>Estimated at £225,814 in 2019 GBP.

could amount to somewhere in the region of £236–£597 million incident costs and £2.9–£7.3 billion lifetime costs (increased to £3.3–£8.3 billion including QALY). These figures are likely underestimates given the average number of children abused by pedophiles [estimates ranging from 1.7 for homosexual incest pedophiles to 27 for bisexual pedophiles; Abel and Harlow (2001)]. The results of our first review question suggests that targeted police action toward those offenders with pedophilic and hebephiliac themes in their online behavior is a sound investigative strategy. However, further work is needed to understand the differences between those who admit to using indecent images and those that admit to contact sexual offenses. In this review, rates of indecent image use were low (Table 2) but contact offenses were even lower. This concurs with broader meta-analysis of Seto et al. (2011) and Babchishin et al. (2014). As the work by Babchishin et al. (2014) demonstrates, IIOC only offenders have a higher rate of pedophilia than contact sexual offenders against children. Dual offenders had higher rates of pedophilia than IIOC only offenders and also pose a greater risk of contact sexual offenses. As such, investigative strategies that focus on both evidence of pedophilia, hebephilia and concomitant contact offending would appear to be the optimal approach.

In our second analysis, we examined the national pool of 50,000 IIOC offenders in the UK (CEOP, 2013) estimating that between 6,000 and 27,500 dual offenders could have already contributed to an economic burden of between £97–£445 million incident costs and £1.2–£5.4 billion lifetime costs (increased to £1.4–£6.2 billion including QALY). Given the problems in defining prevalence of past contact sexual offenses it is likely that the estimates are conservative and that there have been a larger number of victims for the highest risk cases. We know very little about how many victims are harmed by detected IIOC offenders, and virtually nothing about the victims of undetected IIOC offenders. Bourke and Hernandez (2009) found an average of 14.7 past victims for each IIOC offender entering cognitive behavior therapy in prison. Although self-report studies such as this run the risk of conflating undetected victim prevalence and have been criticized (Seto, 2013) the findings help to provide reasonable assurances that one victim per offender (for both review questions) is a conservative estimate. In terms of

future contact offenses amongst the suspect pool of 50,000 IIOC offenders we estimate that there could be between 1,000 and 1,150 future contact victims. These offenses could contribute a further socio-economic burden of between £16–£18.6 million incident costs and between £198–£227 million lifetime costs (increasing to £226–£260 million including QALY). It should be stressed that these estimates are based on what would be expected based on official records. It is likely that there could be further undetected internet and contact sexual offenses, but these estimates are not available.

The results of our review have supported the argument that targeted police action toward those offenders with past sex offending histories or those who share characteristics with known dual offenders makes sound moral and fiscal sense as these offenders are likely to cause more harm to victims in real terms. There is also the potential that historical victims are identified and potentially safeguarded through targeted police action, thereby contributing further to victim safety and harm reduction goals. Whilst there is a mutual consensus that action must be taken, academics and practitioners are also beginning to appreciate that indiscriminant arrests would not be effective in reducing the scope of the IIOC problem [beyond the general deterrence purpose that they would serve, e.g., Wolak et al. (2014)]. Viewing all internet IIOC offenders as high risk for contact offending or recidivism is unworkable because the population is simply too diverse. There are also ethical implications with an indiscriminant or random arrest strategy in potentially tackling less harmful offending whilst not tackling more harmful offending. Further, if a random strategy was made public via the media and resulted in few convictions, because it did not pick out the most serious offenders or those who posed the greatest risk for recidivism, it could seriously undermine public confidence in investigative competence in this area. Our review has suggested that prioritization based on aspects of behavior that are most correlated with pedophilia, hebephilia and dual offending is an effective strategy for identifying offenders who pose the greatest risk of harm to children. Indeed, the application of Wakeling et al. (2011) figures are persuasive here. If, by nature of prioritizing dual offenders, law enforcement agencies detect more dual than internet only offenders more victims can be safeguarded. Here, even a modest estimate of 150

additional victims saves millions in socio-economic terms along with the untold toll on victims' lives.

In terms of practical implications for law enforcement, our review demonstrates the importance of evidence-led risk prioritization tools. Currently, only one such tool has been developed and validated in investigative contexts. KIRAT (Long et al., 2016) prioritizes individuals suspected of possessing, making, taking and/or distributing IIOC based on their risk of *also* committing contact offenses. KIRAT focuses on previous criminal history, access to children, current online and offline behavior, and other relevant factors, and shows a 95% accuracy rate for high-risk offenders and a 20% false positive rate for lower risk offenders. Prior to KIRAT, the relative significance of risk variables were unknown – and over 150 variables identified by the research team that many officers might think discriminate between contact and IIOC offenders have now been discarded. It is the national standard in the United Kingdom, having been legally mandated for use in all 43 UK police forces by the National Police Chiefs Council. KIRAT has many benefits for police force; it is simple to use, does not require clinical training, it is objective and immune to offenders' forensic awareness since it is based largely on criminal history rather than indecent image preference or search terms. Further work is needed to develop KIRAT and to help embed and sustain use within police forces internationally. A further promising tool, CPORT has been developed by Michael Seto and colleagues (Seto and Eke, 2015; Eke et al., 2019) however this recidivism tool would benefit from further validation in investigative contexts. At present, its approach is predominantly risk assessment (who will go on to reoffend) rather than risk prioritization (who is likely to have already committed contact offenses). Our review also demonstrates the importance of technology driven strategies that prioritize offenders evidencing pedophilia, hebephilia along with concomitant contact offending. Whilst academics are working with police forces to identify suitable tools further academic research is needed to understand the links between online behavior and risk of contact offending. Existing research demonstrates language has limited potential to differentiate different types of offenders (e.g., Broome et al., 2018) and the evidence base around indecent image content and collections has proven inconclusive (e.g., Long et al., 2016).

In addition to practical implications, this work contributes to the Evidence Based Policing literature on cost effectiveness. Economic Evaluation is one of the five key aspects of policing intervention evaluation [as outlined in the College of Policing's EMMIE model; Thornton et al. (2019)] and academic-practitioner partnerships are working in multi-disciplinary settings to explore a range of ways by which the cost effectiveness of police action can be assessed [Crime Harm Index, Sherman et al. (2016); QALY, Heaton and Tong (2016)]. Our paper is the first of its kind to provide an economic framework that could be applied to establish the cost effectiveness of a range of evidence-led strategies to tackle online child sexual abuse. As such, we anticipate that this paper will be of interest to a range of academics and practitioners across multiple disciplines.

There are a number of limitations with our approach in the current study. First, we rely on single studies as the basis of estimates rather than meta-analyses. However, there are

limited systematic reviews and meta-analyses available. Some of the available evidence is based on small, non-representative, convenience samples, age restricted samples, broad range of measures and definitions. We have attempted to identify those studies that have large population based national samples of community males from a variety of ages and which utilize some discriminate operationalization of sexual interest. These could be improved upon and we recognize that our choices may impact the validity of our findings. Specifically, Bartova et al. (2020) ask whether respondents "have such a preference" for intimate contact with pubescent or pre-pubescent children. This does not help to establish how exclusive that preference was. Bartova et al. (2020) approach falls foul of the types of criticisms levied at surveys by Seto (2013). Dombert et al. (2016) methodology takes us closer to understanding exclusive and non-exclusive pedophilic types but they did not include hebephilic sexual interests and so were not utilized in this study. A second limitation is the application of pedophilic individuals' contact offending prevalence to males with hebephilia. Further population-based studies aligning more closely to DSM-V criteria (including contact behavior and mirrored content for hebephilia) would be clearly beneficial here. One final limitation is the application of pedophilia and hebephilia prevalence to the male population aged 16–17 years of age. The studies cited in **Table 2** had surveyed males over 18 years of age. We made the decision to estimate national prevalence from 16 years as males of this age can be diagnosed with pedophilia and pedophilic disorder. And yet, we do not know the extent to which prevalence and rates of contact offending apply to this younger group. Set against these limitations, the rates of pedophilia and hebephilia reported here are within the range of those reported by other researchers (e.g., Seto, 2013) and so we are confident that we have not radically overestimated prevalence of pedophilia and hebephilia. Further work is needed on contact offending prevalence and, in the absence of UK studies, it would be helpful to establish the external validity of international studies.

There are a number of limitations with our cost estimates. First, our estimates assume that victims disclose their abuse and so use the services making up the bulk of tangible costs. However, as few as 14% of sexual violence victims report offenses to the police (Daly and Boughours, 2010). Further work is needed to understand economic costs attributable to non-reported offenses. Certainly, the innovative approaches being developed to capture intangible costs would be insightful here, as these costs would apply whether a victim disclosed or not. Second, Heeks et al. (2018) do not specifically identify costs of sexual violence with child victims. As we have noted above, we anticipate this has led to cost underestimation but further work examining child related costs would be clearly beneficial. Third, we assume an equivalence between prevalence based annual costs and cost per incident. This is not inconsistent with the economics literature but we should be categorically clear that our incident estimates do not purport to be annual estimates. What we take from this prevalence based approach is the cost that could be anticipated from each sexual offense and apply this as a cost per incident, irrespective of time frame. Fourth, the evidence underlying assumptions in Letourneau et al. (2018) is essentially

US centric. Further and more detailed work would be needed to interrogate the equivalent literature base in the UK, drawing upon databases routinely used within Health Economics as well as Psychology. Fifth, whilst Letourneau et al. (2018) approach is particularly in-depth some measures are under developed. For example, educational impacts are measured using the typical costs of special education and this does not do justice to the profound educational impacts following sexual violence (e.g., Bolger, 2016). Further, Letourneau et al. (2018) estimates are based on victimization at age 11 years. This is a good starting point given the age preferences of males with pedophilia and hebephilia but further work is needed to explore variation in victim costs as a function of victim age. Finally, we apply costs to each estimated past or future contact offense and this is despite there being a wide range of contact offenses amongst males with pedophilia, hebephilia and dual offenders. Cohen and Galynker (2002), for example, found that pedophilic individuals are 2.5 times more likely to engage in physical contact with a child than voyeuristic or exhibitionistic activities. However, in a review article, Hall and Hall (2009) report that pedophilic individuals typically engage in fondling and genital manipulation more than intercourse. Exceptions to this include cases of incest, hebephilia and when children are physically coerced (Murray, 2000; Cohen and Galynker, 2002). We have tried to address this, to some extent, in the application of Heeks et al. (2018) by estimating only 25% of cases involve penetrative acts of rape. However, we acknowledge further scrutiny would be beneficial here.

There are a number of ways in which the present study could be developed. Further work exploring victimization would be beneficial. For example, Abel et al. (1987) found that pedophilic individuals with male victims had a higher number of victims. A more realistic assessment of victim numbers would drastically alter the estimates provided here. Further, conspicuously absent from this review is the population of contact sexual offenders who are neither exclusively pedophilic nor hebephilic and yet pose a considerable risk of harm to children. In Seto (2009) study only 50% of child sexual abuse offenders expressed a sexual preference for children. This population contributes significant socio-economic burden and yet it was not deemed feasible to gain prevalence and rates of contact offending from the population-based approach taken in the present study. Investigating authorities are also beginning to appreciate the considerable impact of “high harm” offenders; those online offenders who have little intention of meeting children in real life but coerce children to engage in sexual acts through blackmail or coercion. Evidence is beginning to emerge on the impacts of online child sexual abuse and how it can engender levels of sexual harm experienced by online victims comparable to that experienced by offline victims of child sexual offenses (Hanson, 2017; Hamilton-Giachritsis et al., 2017; Jonsson et al., 2019). Any measure of national socio-economic burden needs to take account of this emerging group. Further development is also needed in establishing the vicarious costs associated with being a victim of an IIOC offense. In this study, we estimate that there could be between 1,700 and 2,300 future IIOC offenses but it is not possible, as yet, to attach a meaningful cost to these offenses in terms of victim harms. Evidence is beginning to emerge that

highlights the additional impact that IIOC distribution has on its victims. Many victims report that additional distress is caused by knowing that images of their abuse are circulated and viewed for sexual purposes (von Weiler et al., 2010) leading some authors to conclude that this constitutes revictimization in real terms as victims experience exacerbated PTSD symptoms including flashbacks and panic attacks. The extent to which IIOC internet offenders are made culpable for prolonged victim distress, by downloading and sharing IIOC, is being hotly debated in the US Supreme Court. Certainly, we might expect in time that the human cost of being a victim during the commission of a sexual offense for IIOC purposes is more realistically calculated. With further work, such as that started by Saied-Tessier (2014) and through restitution awards we might gain further clarity about how to calculate victim costs for IIOC offenses.

There is a more general point to be made here about wider community costs. Researchers and legal academics argue that, in very simple terms, social harms arise from the sexual objectification of children for adults’ sexual pleasure. Leary (2007) argues that the vicarious harm emerging from IIOC images manifests in many ways; offenders may use images for sexual gratification, to groom children to be sexually molested, to support the idea that adult-child sexually abusive relationships are acceptable, to decrease the inhibitions of potential victims, to demonstrate to victims how to sexually please a sexual offender, to control victims, to barter/exchange on the internet, and for profit (pg. 13). In short, IIOC images create additional harm and costs to children not in IIOC images and to society in general. Whilst it is difficult to attach a socio-economic metric to this it does point toward the vicarious harms that the proliferation of IIOC online may potentially cause, further justifying evidence based and targeted policing strategies in this area.

Whilst the cost estimates we present here are alarming our intention is not to provoke moral panic, particularly in the discussion around persons with pedophilia and hebephilia. Our cost estimates are based on the assumption that the overwhelming majority of individuals with these sexual preferences (96.2–98.5%) do not contact offend. Rather, our intention is to outline the very real risk that police offices and other public sector agencies work with every day, and which impact on the safety and safeguarding of children. As such, a key issue, in our view, are evidence-based methods to assist in the triaging of this otherwise overwhelming task. The estimates that we provide should be seen as a “starting point” of a much wider discussion about the benefits of police action in this area and how these benefits may be measured. We argue that evidence-led decision criteria can start to facilitate investigative goals by helping to prioritize high risk offenders and in doing so, contribute most successfully to harm reduction. It is hoped that by outlining potential impact in socio-economic terms that funders and policy makers would continue to recognize the fiscal and moral value of funding the collaboration between academics and police forces as they attempt to make the most efficient use of limited public sector resources.

With more detailed and focused cost estimates (as outlined above) we can start to produce a sketch of how the economic and social burden of targeted and random approaches can be



calculated. This could take the form of quasi experiments where police forces who take targeted approaches Vis “business as usual” or random approaches can be compared. Alternatively the implementation of targeted approaches can be staggered so as to provide a baseline of “business as usual” or random approaches for police forces in the period before targeted approaches are rolled out (Bandyopadhyay, 2017). Sufficient time will be needed to establish legal outcomes, that is, whether targeted approaches did, (a) identify individuals with more historical contact offenses, and related to this then (b) safeguard more historical victims and lower potential rates of victimization and offending, and potentially (c) contribute to higher rates of conviction with (d) longer sentences (as per crime harm index calculations). It may be the case that targeted approaches help lower offending rates because of deterrence and improved apprehension may deter more would be offenders with consequent benefits for potential victims. It is necessary to establish how much of the outcomes can be attributed to targeted approaches as concurrent interventions as well as socio-economic and technological change within the same time frame can all impact the outcomes we are trying to measure. The cost of incorrect identification of offenders would also need to be taken into account.

It is clear, given the exponential rise of IIOC online, that action must be taken now to offset the potential long term problems we might witness by failing to address the problem before it gets worse. For example, the proliferation of IIOC on the internet could stretch police forces beyond their investigative capabilities and could lead to desensitization to IIOC images. The widespread availability of IIOC could promote trivialization of content and thereby encourage further offending (e.g., Quayle,

2008). A further concern is that online pedophilic individuals will continue to gain social cohesion, positive reinforcement and validation for their identities whilst offending online (Brennan and Hammond, 2011). Finally, children may be able to access IIOC more easily (e.g., Koontz, 2004; Dombroski et al., 2007) which raises concerns for indirect victimization or desensitization to IIOC related themes.

Our aim has been to estimate the potential scale of the problem in the UK to help understand the need for continued targeted action. As our analysis stands we suspect that we may have underestimated rather than overestimated the scale of the problem. Whilst we acknowledge limitations with the assumptions underlying our estimates these figures are a starting point for future discussion. We encourage feedback from others about how we might develop our calculations.

## DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

## AUTHOR CONTRIBUTIONS

SG undertook literature searches and reviews, she conducted the economic analysis and prepared the paper for publication. LA identified the need for the research and worked with policing colleagues to help establish the review questions and contributed to various drafts of the paper. Both authors contributed to the article and approved the submitted version.

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**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Characteristics and Behaviors of Anonymous Users of Dark Web Platforms Suspected of Child Sexual Offenses

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International law enforcement have noted a rise in the use of the Dark Web to facilitate and commit sexual offenses against children, both prior to and since the start of the COVID-19 pandemic. The study presented here therefore aimed to investigate the characteristics and behaviors of anonymous users of Dark Web platforms who were suspected of engaging in the sexual abuse of children. Naturally-occurring data on 53 anonymous suspects, who were active on the Dark Web and had come to police attention in the United Kingdom (UK), were sampled. Analysis of the data yielded 462 features that could be coded reliably. Analysis of these features provided novel insights into suspects' characteristics, their motivations for using the Dark Web, the nature of the offending behavior they reported engaging in, their technical and security precautions, sexual interests, and the content of their interactions with one another. Findings are discussed in relation to theoretical and practical implications, as well as directions for future research.

**Keywords:** online (Internet) child sexual abuse, Internet sex offending, offender characteristics, TOR, dark web

## INTRODUCTION

Internet technologies have been purported to serve various functions for individuals with a sexual interest in children and/or those who engage in the sexual exploitation and abuse of children (hereafter CSEA<sup>1</sup>). Online communities that are geared toward users with an interest in CSEA provide access to: (i) material depicting child sexual abuse (Quayle and Taylor, 2001); (ii) an opportunity to communicate with like-minded individuals (Durkin, 1997; Europol, 2014); (iii) a sense of belonging and acceptance (Quayle and Taylor, 2002; Holt et al., 2010); and (iv) an environment in which sexual fantasies can be shared, verified and gratified (Davidson and Gottschalk, 2011). The latter is very reinforcing given that CSEA is self-/other-justified (Quayle et al., 2000; Quayle and Taylor, 2003; Holt et al., 2010). Clearly, expressing such thoughts and behaviors would be highly stigmatizing in society outside of such communities.

<sup>1</sup> A range of terms are used to refer to the sexual exploitation and abuse of children. For the purpose of this paper, we will use the term 'child sexual exploitation and abuse,' in line with its usage by WeProtect (n.d.) and the United Kingdom Government (Home Office, 2019).



Online communities of individuals with a sexual interest in children have existed on the Surface Web for some time and several reviews of the literature regarding the characteristics of online child sex offenders have been conducted (e.g., Babchishin et al., 2011; Seto, 2013; Kloess et al., 2014; Ly et al., 2018). For example, in a meta-analysis by Babchishin et al. (2011), the authors compared studies on online sexual offenders (who used the Internet to facilitate their offending) to those on offline offenders (who committed contact sexual offenses), and found that online offenders were more likely to be younger and of an ethnic minority. They were also found to be less likely to have a history of physical abuse, report fewer cognitive distortions, including less emotional congruence with children, and present with less socially desirable responding. Compared to offline offenders, they scored higher on sexual deviance and victim empathy. When compared to the wider population, they were more likely to report having experienced physical and sexual abuse, and being unemployed, as well as less likely to be, or have been, married.

More recently, international law enforcement has recorded a rise in the use of the Dark Web by individuals for the purpose of engaging with the topic of CSEA and related material (Europol, 2014, 2016, 2020; National Crime Agency, 2018). The Dark Web refers to “content on the World Wide Web that is not indexed by standard search engines” (Weimann, 2016, p. 175). In 2016, Europol reported that both the number of Dark Web forums dedicated to pedophilia and CSEA, and the volume of material being exchanged thereon, had been increasing. This includes both ‘known’ and first-generation (i.e., new) CSEA material. Similarly, Owen and Savage (2015) collected data on the Dark Web over a period of 6 months, and found that ‘abuse sites’ were by far the most popular (represented by 80% of the total number of requests). Since the outbreak of COVID-19, Europol (2020) have seen a further rise in activity on Dark Web forums dedicated to CSEA. Alongside the rise in frequency, the content depicted in CSEA material has become increasingly more extreme and violent (Europol, 2014).

Membership of Dark Web forums dedicated to CSEA is not insignificant. Web-Iq (2018) reported that within seven such forums they indexed, there were more than two million unique user IDs. While some users register on multiple forums, it was estimated that this number equates to between 300,000 and 1 million users across the seven forums. In light of these findings, enhancing law enforcement’s understanding of the threat posed by users on these forums has been identified as a key priority, as has the prioritization of users suspected of engaging in CSEA for the purpose of identifying them and disrupting offending behavior (Europol, 2016). We cannot assume that behavior displayed by users on the Dark Web is the same as behavior displayed by users on the Surface Web – further research into this is therefore needed in order to ensure that law enforcement efforts are underpinned by a relevant evidence base.

While CSEA offenders who utilize Internet communication platforms on the Surface Web as part of their offending behavior have been studied for some time, there is limited knowledge around and understanding of the behavior of CSEA offenders who make use of such platforms on the Dark Web. By the sheer

nature of these platforms on the Dark Web, including TOR<sup>2</sup>, they are spaces of the World Wide Web that are not stumbled upon accidentally. For some forums and other restricted areas, vetting of a potential member is required, which involves them having to supply new CSEA material for entry and on an ongoing basis in order to retain membership (Europol, 2014). As a result, one might expect that members of such forums, and/or other restricted areas, are highly motivated to offend, given the effort expended to access them. Restricted areas are associated with discussions and material that are of a more violent and sadistic nature (Europol, 2014), and the Dark Web is home to bulletin boards for niche sexual interests, including CSEA that involves very young children and sadism (Europol, 2020). Individuals who utilize the Dark Web for the various purposes related to CSEA may therefore present with more deviant sexual interests, for which they are less likely to find a suitable outlet on the Surface Web.

Historically, individuals operating on the Dark Web would have required a certain level of technological expertise. However, Internet communication platforms on the Dark Web are becoming increasingly more accessible (Europol, 2016), meaning that less technologically-sophisticated users are now able to join the various online communities available. Balfe et al.’s (2015) review of the precautions employed by Internet child sexual offenders found that the security measures they employed varied depending on their age and level of experience, with those who were younger and less experienced taking fewer precautions. Overall, across the sample, very few offenders adopted security measures, although it should be noted that while the study sampled 11 years of empirical research (from 2000 to 2011), this would now be considered dated. In addition, the offenders in the samples from the studies that were included in the review had all been apprehended, which is likely to have occurred as a result of their low level of technical sophistication, and the precautions they took (if any). Our paper, in part, responds to the call by Balfe et al. (2015) for further research on the precautions taken by online CSEA offenders, by studying a recent sample of anonymous online CSEA offenders who used Dark Web platforms, *in situ*, and who were undetected at the time of data collection (i.e., their offline identities had not been resolved).

As well as studying the security precautions taken by online CSEA offenders, researchers have considered the types and nature of interactions between members of these online communities in the Surface Web. Holt et al. (2010) note that such communities are self-policing in that members police one another’s behavior to avoid security breaches. Security measures and avoiding detection are therefore a common discussion topic in such communities on the Surface Web (see also Quayle and Taylor, 2001; Davidson and Martellozzo, 2008; Europol, 2015). Members also offer advice, and share ‘tips’ with one another, on accessing victims (Quayle and Taylor, 2001; Davidson and Martellozzo, 2008; Europol, 2014, 2015; Web-Iq, 2018).

<sup>2</sup>TOR (The Onion Router) is software which enables anonymous communication via a free open network with multiple encryption layers (Huang and Bashir, 2016); use of TOR increases the difficulty of tracing internet usage by an individual.

O'Halloran and Quayle's (2010) study of a support forum for 'boy lovers' focused on the justifications used and the excuses given by self-identified pedophiles who were members of the forum (sometimes in response to members who were anti-pedophilia). Justifications focused on denying harm or injury to the child as a result of the abuse, claiming that the abuse actually benefitted the child, and that the child deserved or attracted sexual advances from the adult(s) (i.e., denial of victimhood). While not the primary focus of their study, O'Halloran and Quayle (2010) also reported on the purpose of other communications between members. Like the studies above, these included: (i) policing the forum to prevent infiltration (e.g., by law enforcement), (ii) protecting one another (by giving advice), and (iii) setting ground rules regarding what were and what were not the purposes of the forum. Communications that acknowledged the causation of harm to a child were very rare.

The range of forums available on the Dark Web include those that are similar in focus to the ones included in O'Halloran and Quayle's (2010) study on the Surface Web. We can therefore expect communities on the Dark Web to display similar behaviors. However, within the Dark Web, there are forums and bulletin boards that are specifically dedicated to CSEA that is of a sadistic nature, which is very different given its explicit focus on causing harm through both physical and psychological means (Europol, 2014, 2020). Here, discussions centered around sexual offenses committed against children would likely be characterized by entitlement, indifference to victims' suffering, and a lack of remorse (Beech et al., 2005; Mokros et al., 2011).

In summary, while we can hypothesize what similarities and differences there might be in terms of the characteristics and behaviors of individuals who use the Surface Web or the Dark Web (for the purpose of committing offenses relating to CSEA), to date, there has been no study that has examined in depth what these look like on various platforms on the Dark Web<sup>3</sup>. Our study was therefore exploratory and aimed to document, in detail, the characteristics and behaviors of these suspects. Such a study is needed because existing literature on suspects who operate on CSEA sites on the Dark Web neglect to report their methodology (e.g., Web-Iq, 2018), or their findings are based on surveys of law enforcement professionals' perceptions of the threat (e.g., Europol, 2015). In addition, much of the previous research on Internet child sexual offenders has derived findings from convicted, and therefore apprehended, offenders [see Seigfried-Spellar's (2014) study of Internet child pornography consumers for an exception].

Users encountered by law enforcement on Dark Web platforms are anonymous. As such, their offline identities are not (yet) known, and they have yet to be apprehended. While sampling apprehended offenders makes sense when using research findings to inform risk assessment procedures and psychological interventions, it is more problematic to use such

samples to inform the policing of offenders who have not yet been identified. This is because their characteristics and behavior may be related to the reason(s) for their apprehension, and as such differ in important ways to those who remain unapprehended (e.g., Bennell and Canter, 2002; Neutze et al., 2012). For example, apprehended child sexual offenders may show greater stability in their offending behavior and patterns than those who are unapprehended; this would be similar to findings that unapprehended serial rapists have higher levels of polymorphism than those observed in apprehended serial rapists (Lovell et al., 2017). In addition, research on unapprehended child sexual offenders has found that they differ from those who have been apprehended in terms of their level of sexual preoccupation, breadth of paraphilic interests, coping styles, sexual abuse victimization, education, as well as employment (Neutze et al., 2012). When law enforcement personnel are interacting with suspects of CSEA online, whether assuming the identity of a child or an adult (Wortley and Smallbone, 2012; Martellozzo, 2015), it is important that they are aware of the current knowledge base regarding this group of users, and for this, as well as related research findings, to be incorporated into relevant training.

## MATERIALS AND METHODS

### Ethics Statement

The research project was granted full ethical approval by the Science Technology Engineering and Mathematics Ethics Committee at the University of Birmingham [ERN\_14-1435E], and the Psychology Research Ethics Committee at the University of Bath. Written informed consent from the participants was not required to participate in this study in accordance with national legislation and the institutional requirements. All members of the research team received security clearance to undertake research within a United Kingdom police force. The research project also received scrutiny from the United Kingdom's Information Commissioner's Office and the Office for the Surveillance Commissioner, now the Investigatory Powers Commissioner's Office.

### Sample/Participants

Our sample constituted 53 anonymous individuals who were active on the Dark Web between October 2014 and November 2016, and by virtue of the nature of the platform they were using, had come to the attention of a large United Kingdom police force. Based on the information the individuals had disclosed to others in the Dark Web, they were suspected by the police of committing or having committed a contact sexual offense involving a child and/or an offense relating to CSEA material (i.e., possession, distribution, and production). At the point of data collection, none of the suspects were subject to a formal police investigation. Some became the subject of a formal police investigation at a later stage, but this was not the case for all of them. The 53 suspects were members of and contributed to one of four different TOR forums (geared toward CSEA) that were under surveillance by the United Kingdom police force at the time the research was being

<sup>3</sup>This is not to suggest that suspects who use platforms on the Dark Web are a special type of offender, and we acknowledge that such individuals are likely to use the Surface Web too (e.g., Kokolaki et al., 2020).

conducted ( $n = 27$ ; 51%), alternatively using Internet Relay Chat<sup>4</sup> (IRC,  $n = 19$ ; 73%), TOR chat ( $n = 6$ ; 23%), or a peer-to-peer file sharing network<sup>5</sup> ( $n = 1$ ; 4%).

In terms of the nature of the four forums, seventeen suspects were members of a forum which presented children as sexual beings with whom to have a loving relationship, and condoned material depicting the sexual abuse of babies and toddlers (i.e., Forum 1). Eight suspects were members of a second forum, which was the largest forum on the Dark Web at the time of data collection (i.e., Forum 2). Members of Forum 2 varied in terms of sexual interest in age and type of activity, but torture and/or sadistic acts of abuse were not tolerated. One suspect was a member of a forum dedicated to the torture of children and sadism (i.e., Forum 3). A fourth forum, of which one suspect was a member, had varied content but was more focused on torture and sadism (including the killing of children) (i.e., Forum 4). All of the forums were invite-only, including specific criteria that had to be met when a suspect wished to apply for membership.

During data collection, all suspects were anonymous (i.e., their real-world identities were unknown to the police), however, 11 of the suspects' identities were subsequently resolved and the individuals behind the usernames were charged with having committed sexual offenses against children. Eight of the 11 offenders (73%) were charged with possession of CSEA material, and three (27%) were charged with committing a contact sexual offense against at least one child.

## Procedure

Data were collected on a secure police site. At the time of data collection, the researchers were kept blind to the type of investigation being conducted by the police, and the suspicions regarding the suspect, in order to avoid biasing the coding of data. The data used in the research project consisted of forum<sup>6</sup> postings and private emails/messages, as well as digital material in the form of images and videos that came from the main forum used by each suspect. These data were derived by means of extracting existing forum postings from networks on the Dark Web for the relevant usernames under investigation. Forum data was limited to the posts of the suspects under investigation rather than also including the posts of other forum members for reasons of privacy and proportionality. These data were not, therefore, interactive. For 26 of the 53 suspects (49%), data from IRC was available; this was interactive and represented interactions between the suspect and an undercover police officer, posing

as a suspect. CSEA material (i.e., in the form of both still and moving images) was included in the data of 21 suspects (40% of the sample), where it formed part of the interactions between suspects, or was the subject of forum postings. However, this material is not described further here, as it is not the focus of the analysis presented in the present article.

All of the data available for each suspect were included in the analysis; the data were the original contributions made by suspects, as recorded on the relevant Internet communication platform. The number of pages of available data per suspect varied and ranged from 1 to 12 transcripts ( $M = 4.63$ ,  $SD = 3.66$ ), and 1 to 411 pages ( $M = 25.82$ ,  $SD = 73.76$ ) respectively, resulting in a total of 1265 pages (single-spaced format, font size 12) of data.

## Data Analysis

The transcripts of forum postings and private emails/messages were formatted to enable their importing into MAXQDA12, a professional software package, to facilitate the process of qualitative data analysis. The purpose of the coding was to identify features that described the online activity and behavior of the suspects. As features were identified, they were recorded in the coding scheme as a code using a descriptive label. The textual data was annotated with the relevant code by highlighting the relevant area of text and linking it to the corresponding codes or sub-codes in the coding framework. The coding and qualitative analysis was completed by the second author on a line-by-line basis. An inductive, content-driven approach was taken in order to allow for the identification of any key information, trends, themes or ideas apparent across the data (Guest et al., 2012).

Additional codes were developed as new features were identified, while reappearing elements were assigned codes that already existed within the coding scheme. Codes and sub-codes were grouped in order to form superordinate codes relating to the key concepts under investigation. A hierarchical grouping style facilitated the organization of codes and sub-codes according to their similarity and relationship with each other within these key concepts.

Throughout the analysis, an iterative approach was employed by revisiting and adjusting existing codes and sub-codes, as well as revising them, where appropriate. Additionally, textual data within codes and sub-codes were re-examined to ensure that codes described the information within them accurately. Transcripts were re-read and segments of text re-coded, where necessary. If new information or insight was gained, the coding scheme was modified to further develop and refine it. The descriptions of codes and sub-codes were developed throughout, as well as verified and revised through discussions with the research team.

In order to determine whether the data could be coded reliably using the coding scheme, inter-rater reliability was assessed once an initial coding scheme had been developed. This coding scheme contained 479 variables (codes). All coding was conducted by the second author, with a second researcher coding 10% of the data derived from the first five cases (i.e., 10% of the textual data available for each of the first five cases). This researcher was employed on the research project for the purpose of analyzing

<sup>4</sup>Internet Relay Chat: IRC was created in 1988 and enables real-time text messaging between internet-connected computers. It is mainly used for group discussion in chat rooms but can also be used for private message exchange between two users (Radware: [https://security.radware.com/ddos-knowledge-center/ddospedia/irc-internet-relay-chat/#:~:text=IRC%20\(Internet%20Relay%20Chat\)%20is,side%20and%20client%20side%20commands](https://security.radware.com/ddos-knowledge-center/ddospedia/irc-internet-relay-chat/#:~:text=IRC%20(Internet%20Relay%20Chat)%20is,side%20and%20client%20side%20commands)).

<sup>5</sup>Peer-to-peer file sharing is the distribution and sharing of digital media using peer-to-peer (P2P) networking technology. P2P file sharing allows users to access media files, using a P2P software program that searches for other connected computers on a P2P network to locate the desired content.

<sup>6</sup>An Internet forum, or message board, is an online discussion site used by users to hold conversations in the form of posted messages. Some forums have an option for exchanging private messages.



**TABLE 1** | Inter-rater reliability values across cases.

	Case 1	Case 2	Case 3	Case 4	Case 5
% agreement	0.96	0.99	0.98	0.99	0.99
Kappa	0.77	0.62	0.79	0.73	0.69

CSEA material (which is the focus of another article, and will therefore not be presented here). Both coders were experienced in conducting qualitative data analysis. For the purpose of assessing inter-rater reliability, each coder recorded for each variable whether it was present or absent in the material. The level of agreement between the two coders was evaluated using percentage agreement and Cohen's Kappa. Percentage agreement is a simple indicator of reliability; in contrast, Kappa is a conservative measure of inter-rater reliability, used to assess the reliability between two coders with categorical or ordinal data, and with the added benefit that it corrects for chance agreement. There can be a Kappa Paradox, where the percent agreement is very high, but the Kappa is very low; this tends to occur when almost all cases fall into one category. These measures of inter-rater reliability were calculated on a case-by-case, as well as variable-by-variable, basis. **Table 1** presents the  $\kappa$ -values for the case-wise analysis. All statistics were in the acceptable range, namely  $\geq 80\%$  for percentage agreement (Hartmann, 1977), and  $\geq 0.61$  for Kappa (Landis and Koch, 1977).

When reliability was assessed on a variable-by-variable basis, 60 of the 479 variables achieved a kappa of 1.00, and percentage agreement of 100%. 377 variables achieved 100% percentage non-occurrence agreement (i.e., both coders agreed that the variable was not present in any of the five cases), and 31 variables achieved 80% percentage non-occurrence agreement. Seven variables achieved a Kappa of less than 0.60 (i.e., 0.55), but did achieve an acceptable level of percentage agreement (i.e., 80%). Only four remaining variables achieved both an unacceptable Kappa value, and a percentage agreement of less than 80%. Inspection of the occasions of coding where there was disagreement revealed no clear pattern of disagreement; instead, they were genuine coding errors on the part of the second coder. The initial coding completed by the primary coder (the second author) for these five cases was therefore retained.

Having established inter-rater reliability, the remaining case material was coded by the second author. As is to be expected with data of this nature, the coding scheme continued to be refined, and expanded upon, as new information became apparent, and new features were identified. This resulted in a final coding scheme of 462 variables (codes). The development of the coding scheme, and the coding of the 53 cases, took the duration of the research project (i.e., 18 months). The length of time taken per case was highly variable, and depended on the amount of data available per case.

## RESULTS

A wealth of information was identified in the textual data. While our main focus lay with the behaviors and

characteristics displayed by suspects as part of their online communication/interactions, a range of features were coded. These related to (i) the suspects' demographics (e.g., gender, relationship status, and employment); (ii) their self-reported motivations for and use of various Internet communication platforms (e.g., accessing CSEA material, chatting, forums, and P2P file sharing network); (iii) security measures and precautions suspects reported taking (e.g., not using a webcam/not showing their face); (iv) their self-reported sexual interests and likes; (v) their behaviors on the relevant Internet communication platform (e.g., discussing/sharing *modus operandi*, encouraging other users to contribute to the forum and share material, requesting information and/or material); as well as (vi) the various topics contained within posts on the forum (ranging from advice about how to approach and interact with children to how to avoid detection, to various different materials related to CSEA). Key findings are reported below under common themes. Unless otherwise stated, percentages cited are a proportion of the overall sample of 53 suspects.

## Suspects' Demographic Characteristics

Based on suspects' self-reported gender, all except one were male. The exception refers to what appeared to be a female suspect – this assessment was based on their username, and the type of offending behavior and descriptions of abuse reported by them. As defined on the forum, 13% ( $n = 7$ ) of suspects self-reported holding a senior position on the main forum (from which their data was derived) (i.e., owner, administrator or moderator). 28% ( $n = 15$ ) of the suspects reported having biological children of their own. Two of these suspects (13%) also reported having access to other children, and a further three suspects (6%, who did not disclose having biological children) reported generally having access to children (e.g., extended family members). In total, therefore, 34% ( $n = 18$ ) of our sample reported having regular access to children.

## Technical and Precautionary Behavior

As part of their forum posts, or during conversations/interactions with others, suspects explained why they were using the platforms they did. For some, it was accessing CSEA material (32%;  $n = 17$ ), and for others, it was conversing with like-minded users (23%;  $n = 12$ ). Eight suspects (14%) self-reported producing CSEA material, and 11 suspects (21%) self-reported being in possession of CSEA material.

The suspects took a range of precautions in order to avoid detection, and to maintain their anonymity. These included: (i) cautioning one another about their behavior (23%;  $n = 12$ ); (ii) keeping personal information concealed (e.g., face, identifiers, location) (9%;  $n = 5$ ); (iii) informing one another about legislation (6%;  $n = 3$ ); (iv) informing one another about major legal cases; (v) using encryption software and TOR (9%;  $n = 5$ ); and (vi) not distributing material (11%;  $n = 6$ ). The majority of suspects' usernames (89%,  $n = 47$ ) were not related to a sexual interest in children/an interest in CSEA.



## Reported Engagement in Child Sexual Abuse

The 53 suspects in our sample self-reported engaging in a range of sexual behaviors against children. For 76% ( $n = 40$ ) of the suspects, there was evidence of the possession and collection of CSEA material. For 21% ( $n = 11$ ), there was evidence that they had or were inciting another person to sexually abuse a child. Nine percent ( $n = 5$ ) of the suspects self-reported sexually abusing a child via Internet technologies (e.g., by means of Internet communication platforms, including a webcam). For 64% ( $n = 34$ ), there was evidence that they had or were engaging in the sexual abuse of a child in person (i.e., committing a contact sexual offense). While none of the offending behavior engaged in by the sample of 53 suspects resulted in the death of a child, at least for some, their described actions reportedly involved the physical abuse of a child (15%;  $n = 8$ ), or clearly fulfilled the function of a sadistic sexual interest (13%;  $n = 7$ ).

In terms of cross-over of offending behaviors, for 8% ( $n = 4$ ) of the 53 suspects, there was evidence that they were sexually exploiting and abusing children both online and in the physical world. For 43% ( $n = 23$ ) of suspects, there was evidence that they were in possession of and/or collected CSEA material, as well as committed sexual offenses against children in the physical world.

## Topics Posted

We analyzed the nature of posts made by suspects on the relevant forums to which they belonged. This is presented as a separate subsection from our other results because posting to a forum is less interactive than conversing with other offenders, with some suspects solely engaging in posting behavior rather than interacting with other users. Thus, it was important to capture content across all the suspects.

A broad range of topics were identified, some of which were merely mentioned by a few suspects (i.e., 2–10%), while others were more common. These were predominantly related to sexual acts (40%;  $n = 21$ ) (including various forms of penetration, such as anal, oral, and digital), and deviant sexual interests (38%;  $n = 20$ ), such as bestiality, breast-feeding, incest, female genital mutilation, feces and sadism, with the latter being one of the most prevalent (i.e., 30%,  $n = 16$ ). Some of the posts were about a particular age group of victims (e.g., babies [15%;  $n = 8$ ]). Issues related to security measures and precautions, with a view to avoiding detection, were also frequently posted, including updates on law enforcement activity (23%;  $n = 12$ ). Posts also related to discussions that contrasted individuals with sexual interests in children of different ages (11%;  $n = 6$ ), as well as predilections for inflicting pain vs. sexual abuse (6%;  $n = 3$ ). Finally, some posts related to the rules of the group and expected conduct, including topics that were out-of-bounds (21%;  $n = 11$ ).

## Sexual Interests

Suspects were recorded as presenting with a sexual interest in a particular topic or subject matter if they self-disclosed it as part of forum postings, conversations or interactions, or where they (re-) posted content/material in a manner that was endorsing rather than critical of it. Whether they were sexually

interested in a topic was clear from the statements and/or postings they made (e.g., “I find X a real turn-on”). Of the 53 suspects, 19 (36%) self-disclosed a liking/interest in one or more different types of sexual interest. Sadism (26%;  $n = 14$ ) and incest (17%;  $n = 9$ ) were the sexual interests self-reported by most suspects. The other sexual interests self-reported by suspects in order of frequency were: bestiality (8%;  $n = 4$ ), urination (8%;  $n = 4$ ), nappies/diapers (6%;  $n = 3$ ), dressing-up (6%;  $n = 3$ ), child dolls (6%;  $n = 3$ ), and feet (4%;  $n = 2$ ). All references to a sexual interest in sadism and urination were specifically related to children (as opposed to adults). References to incest were clearly in relation to children for four suspects, however, this could not be conclusively verified for the remaining five suspects (although it very likely related to pre-pubescent children due to the nature of the forum in which the material was posted). In terms of the association between the remaining sexual interests and children (as opposed to adults, or this being unspecified), the representation was as follows: dressing up (4%;  $n = 2$ ), nappies (4%;  $n = 2$ ), feet (2%;  $n = 1$ ), and bestiality (2%;  $n = 1$ ).

Where disclosures of sexual interests were made by suspects ( $n = 19$ ), the number of different types self-reported across suspects ranged from one to six: one (47%;  $n = 9$ ), two (26%;  $n = 5$ ), three (2%;  $n = 1$ ), four (4%;  $n = 2$ ) and six (4%;  $n = 2$ ). While it would have been interesting to examine in more detail any associations between a suspect's type of sexual interest, as well as the gender and age (child and/or adult and/or stage of sexual development) of the focus of their sexual interest, there were insufficient cases to facilitate this.

For 36 suspects, we were able to record their sexual interests in terms of gender, age, and/or stage of sexual development. Clearly, all 53 suspects were operating on Internet communication platforms that were geared toward users with an interest in CSEA, and as such it is unsurprising that 35 of the 36 suspects (97%) specifically disclosed a sexual interest in children. Of these 35, four (11%) also self-reported having a sexual interest in adults. A further one suspect (2%) specifically disclosed a sexual interest in adults only. For the remaining 17 suspects (32%), there was no explicit disclosure of sexual interest relating to age.

In terms of sexual interests around children's gender, seven of the 35 suspects (19%) disclosed a sexual interest in children of both genders, seven (19%) disclosed a sexual interest in female children, and six (17%) disclosed a sexual interest in male children. The remaining 15 out of the 35 suspects (43%) who disclosed a sexual interest in children did not specify any particular interest in terms of the gender of a child. Twenty-nine suspects expressed a sexual interest related to the stage of sexual development of a child. Ten suspects (34%) expressed a sexual interest in children under 5 years of age. The reference to ‘under 5 years’ is not a category created by the researchers, but is used by the suspects themselves to specifically refer to children under the age of 5 years. Thirteen (45%) expressed a sexual interest in pre-pubescent children, nine (31%) in early-pubescent children, and four (14%) in pubescent children. ‘Pre-pubescent’ refers to children whose body shows no sign of any development of secondary sex characteristics; ‘early-pubescent’ refers to children whose body shows initial development of

secondary sex characteristics; ‘pubescent’ refers to children whose body shows development of secondary sex characteristics.

Regarding polymorphism (i.e., cross-over in sexual interest), four of the 36 suspects’ (11%) self-disclosures implied this for age (i.e., child/adult), seven for gender of child (19%), and five suspects self-disclosed a sexual interest in children spanning different developmental stages (14%), predominantly the two youngest categories (i.e., under 5 and pre-pubescent). In the under-5 years and pre-pubescent categories, there was a mix of suspects sexually interested in females, males and also both genders (where gender was specified by the suspect).

## Suspect-Suspect Interaction Behaviors

The way in which the suspects interacted with one another was varied. Given the nature and focus of the forums (from where most data were derived), it is unsurprising that the topic of CSEA featured in most of their interactions. This went beyond merely reporting engagement in CSEA; for example, suspects discussed their experiences of committing sexual offenses against children (15%;  $n = 8$ ), their own victimization as children (6%;  $n = 3$ ), and the sharing of their biological children for sexual abuse by others (4%;  $n = 2$ ). They exchanged CSEA material (6%;  $n = 3$ ), and engaged in promoting and selling it (2%;  $n = 1$ ).

Communication between suspects, however, was not solely related to CSEA, but included general chat and conversation-making, as well as sexually explicit chat. The occurrence of general chat was more frequent in Dark Web communities than on IRC. Forensic linguistic research recognizes the process of the creation of communities of practice, including in Dark Web forums (Grant and MacLeod, 2018; Chiang, 2019). Within our dataset, group identity was apparent through the explicit welcoming of new members ( $n = 11$ ). In addition, suspects supported each other by offering advice and suggestions around (i) ‘finding’ victims and particular material; (ii) *modus operandi*; (iii) security measures and precautions (e.g., safeness of payment services and software programs) in order to avoid detection; and (iv) how to interact and behave both online and offline if presenting with a sexual interest in children. As far as we could determine, there appeared to be different motivations for such demonstrations of expertise, with some suspects engaging in posturing and attempting to show superiority. For others, it appeared to be shared interests, and the potential for creating new material.

Acts of dominance were also exhibited, whereby some suspects challenged the behavior and contributions of others. This included challenging the correctness of information posted (8%;  $n = 4$ ), the quality of material shared (with regard to the material’s realness, newness and content in terms of the age of the child depicted) (26%;  $n = 14$ ), the feasibility of the abuse claimed to have been perpetrated (11%;  $n = 6$ ), as well as making accusations that the material had been stolen (4%;  $n = 2$ ). In addition, suspects expressed disapproval (26%;  $n = 14$ ), disappointment (15%;  $n = 8$ ), and dislike of one another (4%;  $n = 2$ ). On being challenged, some suspects responded by apologizing (13%;  $n = 7$ ). Positive endorsements of one another’s behavior were also seen in the form of (i) thanking others for positive comments (8%;  $n = 4$ ),

(ii) sharing material (26%;  $n = 14$ ), (iii) responding positively to material (74%;  $n = 39$ ), and (iv) re-posting posts (13%;  $n = 7$ ).

In our sample of 53 suspects, five (9%) suggested arranging a physical meeting with another suspect, and two (4%) offered their contact details to other users. As might be expected, there was a relatively high occurrence of statements made by suspects that sought to (i) normalize and minimize the physical and psychological harm suffered by children in the context of CSEA (34%;  $n = 18$ ); (ii) support and advocate for child sexual abuse (17%;  $n = 9$ ); and (iii) objectify children (i.e., referring to children as existing to serve the sexual needs of others, and being ‘deserving’ of abuse) (30%;  $n = 16$ ).

## DISCUSSION

Given the increasing use of the Dark Web by individuals to engage with CSEA material, and interact with like-minded users on forums that are dedicated to CSEA, it is important to establish an evidence base on how such individuals operate on Dark Web platforms. Our study is novel in terms of its in-depth examination of the characteristics and behaviors of 53 suspects of CSEA who used a number of different Dark Web platforms for various purposes related to CSEA. Furthermore, by studying unapprehended suspects and their behaviors *in situ*, through the use of naturally-occurring data, the present article makes an original contribution to the literature on Internet child sexual offending in general, and responds to calls for more research of unapprehended suspects in particular (O’Halloran and Quayle, 2010).

The dataset comprised 53 cases identified from various Internet communication platforms on the Dark Web, which were active at the time of the study, providing conversational data in the form of forum postings, chat and private messages that were derived from interactions between suspects and with undercover police officers. For those suspects who were members of forums, they held positions of varying authority (i.e., some were owners, and some were administrators and moderators). They also varied in how much they contributed to the forum of which they were a member.

Regarding our findings of self-disclosed demographic characteristics, like most studies of perpetrators of online CSEA, whether apprehended or unapprehended (Beier et al., 2009; Aslan and Edelmann, 2014), the vast majority of our suspects were male. 34% reported having access to children who were their own/biological children or extended family members. This compares to Long et al.’s (2016) figures of 42%, and 46% respectively, Beier et al.’s (2009) figures of 28–37%, and Shelton et al.’s (2016) figure of 27%, in terms of offenders having access to and sexually abusing their own children.

Many studies of online child sex offenders have focused on individuals convicted or charged with possession and distribution of CSEA material (i.e., indecent images of children, sometimes known as “child pornography”), with a smaller number including within their sample offenders who engaged in the sexual grooming of children (Babchishin et al., 2011). However, online child sex offending behavior is broader than this

(Clevenger et al., 2016), and this breadth of behavior was evident in our Dark Web sample. The majority of our sample were in possession and/or collected CSEA material. In addition, most suspects reported that they were (or had previously) engaged in the sexual abuse of a child in the physical world (i.e., a contact sexual offense). With the advent of digital devices and computers, it is also possible for offenders to commit very serious sexual offenses against a child via Internet technologies (including a webcam and recording facilities; Whittle et al., 2013a; Kloess et al., 2015), which have been found to be just as harmful as a traditional, offline contact sexual offense with regard to mental health outcomes and subsequent suicidal behavior (Hamilton-Giachritsis et al., 2017, 2020). As such, it was important to capture forms of CSEA that have previously been neglected by historic papers, or (inadvertently) trivialized through the use of dichotomies of 'contact-driven' and 'fantasy-driven' to describe offenders (Briggs et al., 2011). In our sample, a small number of suspects self-reported sexually abusing a child via webcam, and one-fifth were inciting others to sexually abuse a child.

The reasons suspects revealed for using the Dark Web echo the assertions by Durkin (1997), and those reported in studies of other child sexual offenders (e.g., Shelton et al., 2016), with regard to using the Internet for purposes related to CSEA: (i) to access CSEA material, (ii) to converse with like-minded individuals, and (iii) to share self-generated material of CSEA with others. The efforts required from the suspects in our sample in terms of accessing the relevant forums, or in obtaining material from other suspects, gives an indication of their motivation to engage in this type of offending behavior.

Risk assessment and risk management by suspects is critical to their 'safe' use of the Internet to facilitate their engagement in CSEA, whether that be the 'grooming' of children for CSEA (Whittle et al., 2013b; Kloess et al., 2015; Kloess et al., 2019), or maintaining the security of an online community (Holt et al., 2010; O'Halloran and Quayle, 2010). Risk management and security measures/precautions were also a notable focus in the suspects' communications we sampled. Advice and discussions centered around maintaining anonymity by concealing personal identifiers (e.g., face and name), rules of conduct within the online community, what to say to victims to avoid detection by others, advice on technical means of avoiding detection (e.g., use of encryption software or TOR), not distributing CSEA material, and updating one another on legislation or new major police/legal cases. These topics relate to precautionary features of models of 'grooming,' particularly overcoming external inhibitors (Finkelhor, 1984), grooming the environment and others (Craven et al., 2006), and preventing discovery (Sullivan, 2009).

Despite existing studies citing the employment of usernames associated with CSEA by online child sexual offenders (O'Connell, 2003), the majority of suspects' usernames in our sample were not related to a sexual interest in children/CSEA more broadly. Whether these differences between studies stem from variations in sample composition (e.g., heightened security awareness in our sample given their use of the Dark Web), or a change over time in choices regarding usernames (possibly in response to law enforcement activity), is unclear.

As noted, a small minority of suspects were explicit about having a sexual interest in adults, in addition to a sexual interest in children. Where it was stated, the number of suspects with a sexual interest in one gender of children, versus a sexual interest in both genders, was comparable. This contrasts with Neutze et al. (2012), where a larger proportion of the sample showed a gender preference (i.e., 94–96%); however, it should be noted that self-disclosures about gender-related sexual interests regarding children were not made by more than half of the sample and, as such, it is unknown whether they had any.

Within our sample, some suspects self-disclosed specific sexual interests in and preference for types of CSEA material in their discussions and postings (e.g., "I don't mind boys or girls, but girls under 5 really do it for me"). Most of these suspects merely self-disclosed one sexual interest, while other suspects self-disclosed a sexual interest in a wide range of types (e.g., sadism, incest, bestiality, defecation, and urination). The types of CSEA material most frequently mentioned by suspects were sadism and incest. This echoes reports from Europol (2014, 2020) of the Dark Web as an enabler for those with sadistic and other niche sexual interests. In line with Lanning (2012), there was a subset of suspects who presented with diverse sexual interests, whether this was in terms of the nature of the material or the type of victim they expressed an interest in. Lanning (2010) also reported a relationship between developmental stage/age and gender of victim, whereby the older and more sexually developed the child, the more likely it was that the offender had a strong preference for gender<sup>7</sup>. While our data suggest that those who disclose no preference in terms of gender do express a sexual interest in younger, pre-pubescent children, some of the suspects did not fit this pattern.

Suspect-to-suspect behaviors displayed as part of their online conversations and interactions, as well as topic postings, gave a clear impression of a community of individuals. New members were welcomed, and there was general conversation-making alongside discussions of CSEA. There were examples of cooperative behaviors, such as providing assistance and expert advice, as well as problem solving. Much like in other online communities, posts were 'liked,' and assistance or sharing was acknowledged through thanking. There also appeared to be examples of dominance being enacted through speech acts such as directives (Leech, 1983), which varied in their directness from suggestions around the next stage of abuse against a specific child to giving orders to others. The use of a similar range of directives has been seen within interactions of groups who engage in sexual offending in the physical world (Woodhams et al., 2012). Other acts of dominance included challenging and/or disapproving of other others and their actions.

Within the textual data, there was evidence of suspects making pro-child sexual abuse statements, normalizing and minimizing the harm caused to children as a result of sexual abuse experiences, as well as referring to children as sexual

<sup>7</sup>Lanning's (2010) publication is based on a database of cases that he has collated during his 27 years in practice. The exact size of the database is unclear with him referring to it as containing "thousands" of cases (p. 3). While he comments on a relationship between gender preference and age of child, no statistical output is provided.



beings. These assertions about the sexual abuse of children are similar to those observed by O'Halloran and Quayle (2010) in their study of interactions among users on a 'boy-lover' website on the Surface Web. In addition, there were almost as many suspects who referred to children as objects whose purpose was to serve the sexual needs of others, and, in some cases, as being 'deserving' of the abuse. Such statements are not surprising given the sadistic nature of some of the content presented within the forums, as well as the sexual interests of some of the suspects in our sample, who are likely characterized by entitlement, and a lack of empathy and remorse (Beech et al., 2005; Mokros et al., 2011). These assertions and justifications will be discussed in more detail as part of a separate article.

## Limitations

While this paper makes an original contribution to the literature on Internet child sexual offending, and the less well-known features of those suspects who operate on platforms on the Dark Web, it has a number of limitations that need to be highlighted in order to inform the design of future research studies. While an advantage of our data is that they were naturally-occurring, one limitation is that we merely have coded information for suspects/cases where the relevant features were present. There is therefore no way of obtaining a complete dataset for all suspects/cases across the entire coding scheme. Analyses of some features (e.g., sexual interests) were therefore based on a small number of suspects/cases, and should be interpreted with caution. By sheer nature of using naturally-occurring data, our data are less likely to be distorted by impression management that is often observed in qualitative interviews with apprehended offenders, whose future outcomes are likely affected by the way they present themselves. However, it is also important to note that impression management is very relevant within Dark Web communities, where it would influence one's standing within the group, and the likelihood of receiving new material from other members. Our dataset comprised of a small sample of 53 individuals who had come to the attention of law enforcement due to intelligence that suggested that they were engaging in the sexual abuse of children. It is therefore unlikely that our sample is representative of all suspects and/or users who present with a sexual interest in children, and are operating on platforms on the Dark Web. This selection criterion may well have introduced bias into our findings, and would therefore benefit from further exploration as part of future empirical research. It is important for such research studies to assess the generalizability of our findings with other samples, including those derived from platforms with a different focus. Finally, inter-rater reliability was assessed using 10% from each of the first five cases included in the dataset, once the coding of these had been completed. This was to ensure that the coding scheme could be used reliably before coding was continued. Inter-rater reliability was therefore assessed early on in the analytic process, rather than once all cases had been analyzed, with the coding scheme evolving and being further developed by the second author as they progressed through the analysis of the remaining cases.

## CONCLUSION

The use of the Dark Web for purposes related to CSEA is growing; the study presented here is therefore timely in its investigation of the characteristics and behaviors of a subset of individuals who operate on platforms on the Dark Web that are geared toward CSEA. Our findings are relevant to law enforcement efforts in combating such offending behavior (e.g., by informing their training and methods of investigation), providing the first description of a subset of individuals, more of whom will be entering correctional and rehabilitative services, and coming onto caseloads of forensic psychologists and other practitioners in the future.

## DATA AVAILABILITY STATEMENT

The datasets generated for this study are not readily available because the data are owned by the police force who collaborated on the study. Any access to the data would require their explicit permission. Requests to access the datasets should be directed to JW, j.woodhams@bham.ac.uk.

## ETHICS STATEMENT

The research project was granted full ethical approval by the Science Technology Engineering and Mathematics Ethics Committee at the University of Birmingham (ERN\_14-1435E) and the Psychology Research Ethics Committee at the University of Bath. Written informed consent from the participants was not required to participate in this study in accordance with national legislation and the institutional requirements.

## AUTHOR CONTRIBUTIONS

JW and CH-G designed the original study. JW, CH-G, and BJ sought and secured multiple funding streams for the project. JW and CH-G sought and obtained ethical approval for the study. They supervised the researchers employed on the project (including JK). JK was the primary developer of the coding scheme which forms the basis of the results. The development of the coding scheme was also informed by and refined following contributions from CH-G and JW. JK conducted the coding of the 53 cases. BJ conducted research to provide outcome data for the study. JW assessed the inter-rater reliability of the coding, and conducted the statistical analyses of the data reported in this article. JK produced the Method section. JW is the primary author of this article. JK and CH-G also contributed to the writing of the present article. BJ reviewed and provided feedback on the article. All authors contributed to the article and approved the submitted version.



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# Obstacles in the Process of Dealing With Child Sexual Abuse—Reports From Survivors Interviewed by the Independent Inquiry Into Child Sexual Abuse in Germany

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Obstacles in dealing with child sexual abuse (CSA) can hinder survivors in the process of coming to terms with their experiences. The present study aims to identify and analyze factors that may pose obstacles in the long-term process of dealing with CSA. It is part of a larger research consortium “Auf-Wirkung,” funded by the German Federal Ministry of Education and Research, and was conducted in cooperation with the Independent Inquiry into Child Sexual Abuse in Germany (IICSAG). The IICSAG was appointed by the Independent Commissioner for Child Sexual Abuse Issues and the German Federal Ministry for Family Affairs, Senior Citizens, Women, and Youth in 2016. To determine responsibilities, recognize injustice, and further acknowledge the survivors of CSA in the Federal Republic of Germany (FRG) and the German Democratic Republic (GDR), the Independent Inquiry has held 1,303 private sessions with survivors of CSA by Oct. 17th, 2020. The present study focuses on exploring reoccurring problematic experiences reported by survivors in private sessions regarding the long-term process of dealing with experiences of CSA. A total of 30 transcripts of private sessions, conducted by members and appointees of the IICSAG between September 2016 and June 2019, were analyzed using qualitative content analysis. Attendants of private sessions described a variety of obstacles, including negative social reactions to disclosure, institutions’ unwillingness to elucidate occurrences of CSA within their midst, as well as general financial difficulties, and those linked to redress claims. Manipulative grooming by perpetrators and limited access to adequate psychotherapy were perceived as obstructive by survivors dealing with CSA. In the context of criminal proceedings, survivors reported long durations of court proceedings and negative experiences in connection to credibility assessment. Results will be discussed to better support survivors of CSA in the process of dealing with their experiences in the future.

**Keywords:** child sexual abuse, dealing with abuse, public inquiries, Independent Inquiry into Child Sexual Abuse, qualitative research and analysis

## DEALING WITH EXPERIENCES OF CSA

Dealing with experiences of CSA is a continuous and lengthy process for survivors that often accompanies them throughout their lives and during which many face a variety of challenges and obstacles. Researchers have proposed a variety of empirical and theoretical models to describe and conceptualize the process of dealing with experiences of sexualized violence, with many postulating 3 or 5 different phases in which coping can occur (Horowitz, 1986; Kleber and Brom, 1992; Roth and Newman, 1993; Figley, 2013; Fischer and Riedesser, 2016). Many models see the integration of an incomprehensible experience into one's understanding of self and the world as the most meaningful part in the process of dealing with CSA. According to Figley (2013), however, "adaptation" (the last stage) can only be achieved if adequate resources (personal, social, and financial) are available. Herman (1994) agrees and claims that restoring a sense of security is of fundamental importance to survivors, including pragmatic aspects, like ensuring basic needs such as financial security. For Fischer and Riedesser (2016) the social dimension of dealing with CSA is in the foreground since the authors assume that traumatic experiences cannot be dealt with by an individual alone. Many aspects of the described models were also picked up and further developed by Gahleitner (2003). Like Fischer and Riedesser (2016) the author emphasizes the processual nature of dealing with CSA in a three-phase model. Similar to Figley (2013) she concludes that the integration of the traumatic experiences into the self-concept may only succeed with a minimum of relative security and support of at least one sustainable relationship. This conclusion is further supported by Draucker et al. (2011). Their model includes four stages (grappling with the meaning, figuring out the meaning of CSA, tackling the effects of the CSA, laying claim to one's life), five domains of functioning (life patterns, parenting, disclosure of CSA, spirituality, altruism) and six enabling factors to progress from one stage to the next. These six were contextual factors like receiving affirmative messages, having ongoing support, and experiencing a critical life event and personal factors like personal agency, personal resolves, and commitment to transcend from CSA.

In summary, giving meaning, regaining control, and being able to integrate the abuse is most relevant for survivors of sexualized violence (Horowitz, 1986; Kleber and Brom, 1992; Frazier et al., 2004; Walsh et al., 2010; Draucker et al., 2011). Conversely, the absence of enabling factors as well as any form of social and societal forms of support may hinder these relevant goals and therefore the process of dealing with CSA (Birck, 2001; Gahleitner, 2003; Draucker et al., 2011).

**Abbreviations:** IICSAG, Independent Inquiry into Child Sexual Abuse in Germany; CSA, Child Sexual Abuse; FRG, Federal German Republic; GDR, German Democratic Republic; OEG, Opferentschädigungsgesetz (victims' compensation law).

## OBSTACLES IN DEALING WITH EXPERIENCES OF CSA

Obstacles in dealing with experiences of CSA are often related to factors or experiences which aggravate the symptoms and effects of the traumatic experiences, which, according to the Traumagenic Dynamics Model of Child Sexual Abuse are traumatic sexualization, betrayal, stigmatization, and powerlessness (Finkelhor and Browne, 1985). Past research was able to identify some evidence for obstacles in the process of dealing with CSA. For example, the way the social peer group or environment reacts to the disclosure of experiences of sexualized violence is important to the process of dealing with CSA. Research on the topic suggests that disclosure might be the first step in the healing process even for some individuals to regain control and to pave the way for meaning and integration of the abuse experience (Birck, 2001; Chouliara et al., 2014). Active or passive inhibition of disclosure, therefore, poses a potential obstacle in dealing with CSA. Research consistently suggests that negative reactions to disclose attempts have a lasting adverse impact on the coping process of survivors (Birck, 2001; Filipas and Ullman, 2001; Ullman et al., 2007; Ullman and Peter-Hagene, 2014). Thus, negative social reactions from a trusted or formal source are associated with greater PTSD symptoms, the relationship is mediated by maladaptive coping (Ullman and Peter-Hagene, 2014), and it reduces the likelihood that survivors will seek support (Birck, 2001). Wyatt and Mickey (1987) indicate, that a negative immediate and long-term reaction to disclosure of CSA may mediate adverse effects of the initial abuse in survivors. This may be since a person or group not believing them can be seen as a betrayal and increase the feeling of powerlessness associated with the abuse itself (Finkelhor, 1987). Consequently, negative reactions to disclosure undermine survivors' attempts to regain control and act in a self-effective way. Furthermore, social support, in general, seems important – short-term and long-term – as it may mitigate negative outcomes and lower symptomology (Murthi and Espelage, 2005).

Manipulative perpetrator behavior also called grooming, may similarly hinder the process of dealing with CSA. Wolf and Pruitt (2019) examined the effects of grooming, namely verbal coercion, grooming that used drugs/alcohol, as well as threatening/violent grooming, and found that in a linear regression model grooming categories predicted trauma symptom severity, with threatening or violent tactics having the most severe effect on survivors psychological well-being. The authors conclude that the isolation and normalization of sexually abusive interactions may aggravate the trauma and therefore hinder the healing process. These findings were supported by Chouliara et al. (2014). The authors interviewed 22 adult survivors of CSA using qualitative analysis and identified four relevant themes, amongst others "Factors hindering Recovery" and "Hurdles of Recovery." Survivors reported that they felt insufficiently supported by family members, who oftentimes refused to address the abuse further when confronted. Furthermore, survivors feared stigmatization, especially regarding issues of mental health. Social inviolability



of the perpetrator due to his or her position enabled longer abuse and prevented exposure or disclosure. Survivors reported their credibility being called into question as well as grooming and other manipulative perpetrator behavior.

Adequate psychotherapy may reduce psychological distress caused by experiences of CSA and improve the overall functioning and well-being of survivors (Price et al., 2001; Sánchez-Meca et al., 2011). Unfortunately, many survivors report a lack of access to appropriate psychological treatment options in Germany with the average waiting time for a place in a psychotherapy program being three months in larger German cities and six months in more rural areas (Pawils et al., 2017; Unabhängige Kommission zur Aufarbeitung sexuellen Kindesmissbrauchs, 2019). Additionally, Sommer (2016) illustrated the situation for individuals with complex PTSD in Germany, showing that programs and therapies often fail to successfully stabilize patients, mostly due to a lack of expertise in professionals treating survivors with these specific needs. The lack of access to adequate and efficient psychotherapy can therefore be seen as a factor hindering the process of dealing with CSA.

A factor whose influence on processing experiences of CSA has not been investigated more thoroughly are obstacles in the context of criminal investigations (Walsh et al., 2010; Görden et al., 2012; Volbert, 2012). Some research indicates, that long-duration of court proceedings, as well as the anticipation to make a statement in front of a court (in presence of the accused perpetrator), may lead to a short-term negative influence on well-being and slower recovery of the damage caused by the crime (Runyan et al., 1988; Volbert, 2012). Furthermore, doubts about testimony or the severity of the abuse impact can be challenging for survivors, especially if there is no other “objective” evidence (Volbert, 2012). Stressful as court proceedings may be, going through with it may be associated with increased self-efficacy and restoration of control long-term (Volbert, 2012).

The present study aims to identify and analyze different obstacles in the process of dealing with CSA. It explores these reoccurring problematic experiences reported by adult survivors in the context of private sessions held by the IICSAG using openly designed interviews to encourage spontaneous statements. In this study, we focus on the analysis of contextual obstacles that survivors report in interaction with others (persons, state actors, institutions). The goal is to apply the findings to better support survivors in dealing with experiences of CSA in the future.

## MATERIALS AND METHODS

### Study Design

This study was conducted in cooperation with the Independent Inquiry into Child Sexual Abuse in Germany (<https://www.aufarbeitungskommission.de/english/>). The Inquiry was appointed by the Independent Commissioner for Child Sexual Abuse Issues and the German Federal Ministry and consists of seven volunteer members of different subject-related fields and professions. Starting in January 2016 the Independent Inquiry called on survivors and contemporary witnesses of CSA in the GDR or FRG to contact the Inquiry staff to tell their story in

form of a private session or a written report. Private sessions, with a total of 1,303 by Oct. 17th, 2020, were held in 12 different major cities by members of IICSAG and qualified representatives of the Inquiry, providing a safe space for survivors to share their experiences. Interviewers used a set of semi-structured guidelines, containing 10 topics related to the subject, including immediate and long-term consequences of CSA, disclosure, seeking support, and experiences with religious and government institutions (see **Supplementary Material**). The interview guidelines served primarily as a narrative-generating aid for the interviewers, intending to encourage and enable survivors to shape the pace and direction of the conversation and report as freely as possible on their experiences.

This project is funded by the German Federal Ministry of Education and Research and is part of the larger research consortium “Auf-Wirkung,” which aims to accomplish a comprehensive and extensive investigation of structural conditions in connection with sexualized violence against children and adolescents. The current study presents the first results of sub-project three, which examines recurring experiences of survivors, which may hinder the process of dealing with experiences of CSA.

### Data Selection

A set of 100 summaries of transcripts, selected by the Inquiry according to general thematic overlap, were made available to the project's research assistants. Each sub-project of “Auf-Wirkung” received 25 summaries which were then sorted according to descriptive as well as key data points and organized using excel, providing a basis for further selection. From this, 30 transcripts were chosen according to thematic overlap with the specific research questions at hand. The selected material, therefore, represents a nonprobability “convenience sampling,” meaning data was included due to availability (Robinson, 2014). Before data analysis, the research consortium “Auf-Wirkung” and each sub-project were approved by the Ethics Committee of the Department of Education at Goethe University Frankfurt.

### Data Analysis

A qualitative content analysis of 30 transcripts was conducted following Kuckartz (2018) using the qualitative data analysis software MAXQDA version 18.2.4 ([www.maxqda.de/](http://www.maxqda.de/)). Included private sessions were held by members of the IICSAG between September 2016 and August 2019, transcribed verbatim by a collaborating company, and made available by the Inquiry's corresponding office.

The analytic procedure of the content structuring content analysis (Kuckartz, 2018) comprises a seven-step deductive/inductive process. Firstly, the entire material was read by two researchers separately, significant text passages were marked, and thoughts were recorded in memos. Data was then structured by developing thematic main categories, based on research questions on the one hand (deductive) and on topics that emerged directly from the material (inductive) on the other (Kuckartz, 2018, p. 101–102). Using these main categories, the material was then coded sequentially by the two researchers independently, whereby multiple coding of

individual text passages was possible (Kuckartz, 2018). In the next step, sub-categories were determined using inductive category development (Kuckartz, 2018, p. 72–86). For this, all text passages coded with the same main category were compiled and arranged systematically to identify recurring aspects and themes relevant to survivors in the process of dealing with CSA which had not been considered previously. Additionally, definitions for all main and sub-categories were formulated for better comprehensibility in the further course of analysis (Kuckartz, 2018). Using the resulting category system, the entire material was once again coded. After 30% of the material was coded this way, the categories were re-evaluated, revised, and definitions concretized, if necessary until the categories adequately reflected the data. The remaining material was then coded. Finally, the coded material was analyzed along with the main categories, giving an overview of all themes that emerged during the conversations regarding potential barriers in dealing with CSA (Kuckartz, 2018, p. 118). Furthermore, we explored relationships of subcategories within the main category as well as relationships between the main categories by focusing on the proximity of certain subcategories and themes within and across main categories (Kuckartz, 2018, p. 118–119). By exploring sub-categories that were often mentioned simultaneously or in proximity, we aimed to identify more complex associations between relevant themes.

## RESULTS

### Sample and Data

The present study included 30 transcripts of private sessions held by the Independent Inquiry into Child Sexual Abuse in Germany with survivors, who report having experienced CSA in the FRG or the GDR between the 1950s and early 2000s. **Table 1** displays socio-demographic and abuse context-related information. Most participants were female, 54 years on average, and half of them had children. At the time of the first abuse experience, survivors were between 7 and 13 years old on average, with one person reporting sexual abuse before age of one.

All 30 survivors reported long-term effects on their physical or mental health in some way or form. Pathological somatic phenomena were described most frequently including sleep disorders, pain disorders (e.g., migraine), diseases of the gastrointestinal tract, and obesity. Reports of mental health issues ranged from precise diagnoses, ascribed by survivors themselves or by clinical professionals, to implicit descriptions of general psychological discontentment. Substance abuse, anxiety, PTSD, and depression were reported frequently. Eating disorders and self-harming behavior were reported as direct or long-term consequences of the abuse. Suicidal thoughts or suicide attempts were reported by 19 out of 30 survivors and arose either while the abuse was still ongoing or as a long-term consequence within the coping process.

### Main Categories

Contextual obstacles in dealing with experiences of CSA have been organized around disclosure, how others deal with CSA,

**TABLE 1 |** Descriptive data: demographics and contexts of abuse ( $N = 30$ ).

	<i>n/M</i>	<i>%/SD</i>	$\Sigma = 67$
<b>Demographics</b>			
Male ( <i>n, %</i> )	8	26,7	
Female ( <i>n, %</i> )	22	73,3	
<b>Age in years</b>			
<i>M (SD)</i>	54,6	(11,0)	
Missing ( <i>n, %</i> )	1	0,03	
<b>Abuse experience</b>			
Repeated/Multiple ( <i>n, %</i> )	26	86,7	
Once ( <i>n, %</i> )	4	13,3	
<b>Germany</b>			
FRG ( <i>n, %</i> )	2	6,7	
GDR ( <i>n, %</i> )	10	33,3	
Both ( <i>n, %</i> )	1	3,3	
Missing ( <i>n, %</i> )	17	56,7	
<b>Contexts of abuse*:</b>			
Family			17
Religious:			13
Catholic			8
Protestant			4
Jehovah's Witnesses			1
Federal Institutions			21
Recreational Activities			3

*n.a., not applicable; M, mean value; SD, standard; \*multiple entries possible.*

**TABLE 2 |** Main- and subcategories of contextual obstacles in dealing with CSA.

Main categories	Subcategories
1. Disclosure	<ul style="list-style-type: none"> <li>• Negative social reactions to disclosure</li> <li>• Negative consequences of disclosure</li> <li>• Factors enabling disclosure</li> <li>• Factors hindering disclosure</li> </ul>
2. How others deal with CSA	<ul style="list-style-type: none"> <li>• How the family of origin deals with CSA</li> <li>• How the institution deals with CSA</li> <li>• How society deals with CSA</li> </ul>
3. Grooming	<ul style="list-style-type: none"> <li>• Grooming the victim</li> <li>• Grooming the environment</li> </ul>
4. Obstacles in state legal and mental health care system	<ul style="list-style-type: none"> <li>• Obstacles in the mental health care system</li> <li>• Obstacles in criminal and civil law</li> <li>• Financial and organizational hurdles</li> </ul>

grooming, and obstacles in state legal and health care systems (see **Table 2**).

### Disclosure

Survivors described disclosing their experiences as a turning point in the process of dealing with CSA, either positively or negatively. Many reported a variety of immediate *negative social reactions* to their disclosure attempts, which then influenced how they continued to deal with their abuse experiences. Thus, inadequate responses to disclosure affected further disclosure attempts and therefore survivors' long-term coping process in

general. Survivors especially suffered when a trusted person did not believe them.

“I then confronted her [...], and asked whether she knew about it. Until the end she said that I imagined it and that I only ever caused her trouble, anyway.”

Besides immediate inadequate social reactions some survivors experienced continuing and longer-lasting negative (social) *consequences of disclosure* for example resentment and hostility from their family or social peers. Some even connected this continued distress to an aggravation of psychological symptoms.

From the reports of the participating survivors, some *factors enabling disclosure* emerged, including a change in family dynamics, seeking support from a medical or psychological professional, networking with other survivors, increasing media coverage of the topic, or the death of the perpetrator. The reports furthermore contained descriptions of *factors hindering disclosure*, including an existing difficulty or inability to put the experience into words, fear of destabilizing the family or social environment.

Or as one participant put it:

“About the family climate, I would like to tell you something briefly. In our family, the language of violence prevailed. All that was left was... silence.”

## How Others Deal With CSA

The second theme survivors addressed was how others, more specifically the family of origin, state or church institutions, and society, deal with experiences of CSA in their midst. Survivors reported various negative ways in which *the family of origin dealt with CSA*. For example, family members ignored specific changes in the behavior of survivors, which the victims attributed to the abuse. Repressions, reinterpretations of events, or even punishments were also described. Some survivors described being blamed for the abuse by family relatives. One participant described this incident:

“And then my sister-in-law came in and saw him abusing me, [...] And then [...] she didn't offer help, but instead she threw him out of the apartment and accused me... I seduced him, so to speak.”

These descriptions often were connected to reports of family members trying to protect the perpetrator and his/her reputation, legacy, or career by instructing the victim not to talk about the abuse in front of other family members or friends.

“And I was instilled, ‘You don't talk about it, it's something very, very bad, something unbelievable that God doesn't want.’ And you don't destroy the future for the\*(perpetrator) either. And you just don't tell your grandparents.”

As seen in the quote above, survivors reported being shamed by relatives – sometimes by using god as a means to impose guilt on survivors.

Survivors reported in-depth *how institutions dealt with CSA*. From their perspective, several insufficiencies regarding actions not taken by institutions occurred. In some cases, neither any form of recognition nor adequate compensation was pursued by the institution concerned. Admissions of guilt were seldomly made. Survivors reported a general lack of transparent communication about misconduct on the part of the institution, as well as perspectives on how future protection can be secured. Moreover, survivors frequently described that they did not know whom they could have turned to for help after the experience of abuse because corresponding contact points either did not exist or were not sufficiently declared. Lastly, some survivors criticized a general lack of debate around the issue of CSA in institutions.

Survivors reported that some religious and state institutions installed structures that allowed for internal handling of allegations of abuse. It is reported how these structures were authorized by the institutions and in some catholic church institutions even replaced state or secular criminal prosecution. Within these structures, specially defined values and legal concepts prevailed and determined the respective handling of the abuse allegations, which often resulted in the protection of the perpetrator and the moral conviction of the survivors. According to survivors one goal behind this procedure was to protect the reputation of the institution at any cost.

Furthermore, survivors reported no access to appropriate sex education in childhood or adolescence and that this hindered them from disclosing their experiences. This lack of knowledge made it more difficult for survivors to recognize the abuse as an injustice at the time, which in turn reduced effort or ability to turn to other adults in search of help.

A special mention should be made about religious institutions. Some survivors denounced the taboo approach toward sexuality and sex education of catholic institutions. Survivors suspected that the taboos around sexuality contributed to a further internalization of shame and guilt regarding the experience of CSA in religious institutions. Part of this was a demonization of sexuality (outside the institutionalized framework of “marriage”), punishment systems, and corresponding induction of guilt were described.

Survivors described various barriers regarding *how society deals with CSA*. Due to a general lack of visibility of the topic within the public eye, survivors of CSA reported feeling that their experiences and interests are insignificant and irrelevant to other members of society. This lack of recognition and the feeling of being overlooked is amplified by concerns about social stigmatization.

“I always had the feeling that I had a stamp on my forehead that said: sorted out. And it took me a very long time to somehow develop a certain self-confidence where I said, ‘This is interesting... this is nobody's business.’”

Survivors described tangible situations in which they felt discriminated against and recounted prejudiced encounters as well as generally insensitive behavior toward them by employees of government service agencies. Another aspect of this experience was that survivors often had their credibility questioned – either

in an official or social context, which consequently led survivors to form the impression that nobody believes them in general.

### Grooming

Another theme that emerged during the analysis of the reports was manipulative perpetrator behavior—also known as grooming. Passages were coded only when survivors themselves described the perpetrator's behavior (subsequently) as manipulative. This included all behavior that was initiated by perpetrators to enable and facilitate abuse as well as to prevent exposure and was aimed at the child concerned or its environment. The subcategories, therefore, are “Grooming the Victim” and “Grooming the Environment,” a distinction also used by Craven et al. (2006).

In *grooming the victim* several survivors reported experiences of manipulative perpetrator behavior before, during, or in the aftermath of the abuse. Survivors described violent and non-violent types of grooming that appear to belong to a set of reoccurring strategies that perpetrators used in different phases of the abuse and with various goals.

Before the abuse, some survivors described being “selected” by a perpetrator, for example by exploiting their vulnerabilities and emotional needs.

“In retrospect, [...] I think he, the \*(perpetrator), was always selecting, which boys were suitable for later sexual abuse. I'll say now, that he probably noticed from the start: ‘Oh, the \*(survivor), he is probably predestined or suitable.’”

Furthermore, perpetrators were described to deliberately form an interpersonal bond with children accompanying the abuse in some cases. Strategies described to strengthen this relationship were “payment” in form of money, gifts, or affection, treating the victims like “adults” and making alcohol, drugs, and pornographic material available. Another means used to enhance the relationship between perpetrator and survivor was the gradual isolation of the survivor from other close relatives or peers. This targeted attention led some survivors to feel a calculated increase in self-worth.

“So he kind of made sure that I was the predestined boy. And that also made me feel like I was special. So it was actually pretty... pretty ingenious, that system.”

During periods of abuse, some survivors reported being intoxicated by perpetrators to facilitate the abuse or establish compliance. Furthermore, some perpetrators normalized the abusive behavior to offer patterns of explanation that trivialized the abuse or made it seem without alternatives. Violent manipulation was also reported. Some used emotional blackmail to put pressure on survivors.

“[...] he always told me, and that was the worst thing for me, that he pressured me so much that I had to have sex with him. I understood what sex was because he loves me so much. And if I don't do that, then he will take his own life, and then my sister will be left alone with the three kids, and I can't be responsible for that and... I think that was one of the worst things for me, that I felt responsible and then I gave myself to it.”

In the aftermath of the abuse as well as during, some survivors reported that perpetrators made them take an oath of secrecy to prevent disclosure or exposure. Besides this, the use of blackmail, threats, and other forms of violent manipulation was reported.

“He said that something would happen to me if I talked. And I believed him.”

Bribery through gifts as “rewards” were also used in some instances. There are also reports of targeted induction of shame and guilt, which gave survivors the feeling that they are partially or fully responsible for the abuse because they did not signal their unwillingness earlier. Some perpetrators insisted that survivors were the initiators of the abuse in the first place.

As well as this, the threat of punishment and consequences for the perpetrators in some cases led to the cover-up of the abuse, especially in case of partly positive emotional attachment. Additionally, perpetrators justified their behavior in religious abuse contexts by shaming victims and making them believe that perpetrators were only acting on or fulfilling “Gods will”

“And he always justified the whole thing by saying that God sees everything but can't punish everything, and that he was sort of made to do it, and that he just had to do it so that we wouldn't become evil people.”

One survivor was told that she was chosen by a higher power.

“Like, yeah, that I am chosen and will be liberated through suffering. And... through the pain I become free from sin and stuff, right? And they contribute... They contribute to that. Right.”

Apart from grooming the victim, survivors described instances of perpetrators *grooming the environment* by integrating themselves into the social environment of the survivor or deploying their societal status (e.g., chaplain, teacher, city mayor) purposefully. This sometimes led to family members protecting the perpetrator willingly or not believing the victim as illustrated in the cross-category analysis.

### Obstacles in the State Legal System and Mental Health Care

Finally, topics that emerged from the transcripts were hurdles and obstacles regarding the state legal system and mental health care. Many survivors reported *obstacles in the mental health care system*, especially regarding psychotherapy or other counseling services like self-help groups, and the youth welfare office. Most commonly, survivors described experiencing a lack of expertise and/or sensitivity by professionals working in these areas or institutions.

Many survivors reported a lack of access to adequate psychotherapy within Germany. Furthermore, if they managed to secure a spot, some mentioned being confronted with a lack of specific qualifications of the therapist concerned, which in some cases led to a misdiagnosis or therapy that didn't fit a survivor's specific needs.



In addition, many participants described *financial and organizational hurdles*, e.g., struggles with basic income, since many survivors were unable to work due to long-term consequences of CSA and therefore needed to seek long-term financial support. In some cases, this then led to poverty, which, due to insufficient pension payments, continued into old age and meant an additional psychological burden to these survivors.

Many survivors sought financial support in the form of victim compensation, covered by the victim's compensation law (Opferentschädigungsgesetz, OEG). Almost all survivors who applied for support from the OEG reported structural problems or organizational hurdles in the application process of the procedure. Amongst other things, survivors had to undergo a variety of assessments and evaluations as part of the process. Survivors reported not being able to prove beyond a reasonable doubt that their suffering is the result of experiences of CSA or even that the abuse took place (Plausibility Check). However, this is a requirement to get support from the OEG.

Other obstacles in dealing with CSA included administrative resistance, bureaucratic hurdles, and a lack of information and support from governmental institutions and offices. Above all, this included reports on overcomplicated forms to be filled out, impenetrable bureaucratic processes, lack of networking of various official apparatus, missing information for survivors on official websites, and a lack of support in finding the appropriate information.

Survivors reported costs that were not covered by health insurance and therefore had to be paid for out of pocket. This led to high financial burdens in some cases and the discontinuation of treatment, which then, in turn, hindered survivors in their further healing process.

*Obstacles in criminal and civil law* included the duration of court proceedings, the statute of limitations, and witness credibility assessment. Survivors reported lengthy criminal proceedings, which were described as particularly exhausting and demotivating. In some cases, due to the statute of limitations of the offense(s), no report could be made, ongoing criminal prosecutions were interrupted, or affected persons refrained from filing a complaint at all.

In terms of expert evaluations and assessments, survivors reported negative experiences in assessments conducted in the process of the application for the Victim Compensation Fund (Plausibility check) as well as with regards to witness credibility assessments in criminal court cases.

Regarding the latter, survivors' criticism can be divided into two different categories: In the first, survivors reported negative experiences that they attributed to the procedure itself. In the second, those that they associated primarily with the person conducting the procedure, i.e., the assessor. Some experiences can be classified into both categories.

Aspects criticized regarding the procedure itself include the lack of clarity and consequently misunderstanding of the use of the term "null hypothesis" in credibility assessments, which describes the assumption, that the witness's report is not based on genuine experiences. This hypothesis shall then be refuted in the process. This gave survivors the impression that their testimonies were not believed from the beginning.

Furthermore, survivors reported being questioned and assessed repeatedly (police, court, witness cred.) which was experienced as extremely stressful, wearing, and led to feelings of re-traumatization in some cases.

Additionally, survivors reported gaps and discontinuities in their memory being regarded as inconsistencies during witness credibility assessment.

"The problem is credibility. [...] There are always gaps in the... story, right? [...] There can't be a complete picture. But that's exactly why it's not a lie, that's exactly why. You just didn't have the happiest childhood."

Aspects criticized associated with the person conducting the procedure included lack of information regarding the procedure, insinuations of therapy-induced memories, stigmatization, and in some cases, evaluators appeared untrained or behaved insensitively.

"[...] Then she said, we have to conduct an expert evaluation. And I didn't even realize at that moment that this was going to be a credibility assessment, right?"

Additionally, negative experiences during the credibility assessment in some cases led to a general skepticism toward various official procedures, which then affected other areas in the process of dealing with CSA.

An important part was also that survivors felt they did not have any control over the process:

"And then, though, that loss of control, that's just that again, that loss of control, knowing exactly, I can't do anything, I'm standing there again, I can't do anything. I have to surrender to it."

Overall obstacles in the state legal system and mental health care were reported to negatively impact the process of dealing with experiences of CSA for survivors.

## Cross-Category Analysis

In addition to analyzing the main themes, we also examined the relationships between the different categories to provide a more contextualized and comprehensive picture of experiences and factors posing as contextual obstacles in the process of dealing with experiences of CSA. Doing this it became clear that most of the categories were interconnected and interacted in certain ways. For example, *how the family dealt with CSA* was highly related to *disclosure* and specifically, *factors hindering disclosure* and *consequences of disclosure*. Thus, many of the described negative behaviors by family members happened in the context of disclosure attempts, for example, the instructions to either never talk about the abuse or stop talking about it in the future.

"Then at some point she said, 'Stop stirring up old stories.' And, 'You need to lay these stories to rest now...'"

There is also an overlap between *how the family of origin deals with CSA* and *grooming the environment* since survivors on some

occasions reported family members being close to and friendly with the perpetrator or perpetrators blatantly and successfully discrediting the survivors' credibility in front of family members.

"And I wanted to clarify things, or at least understand them, and I caused a lot of turmoil in the family. And I was often told to stop now and [...] that I was the crazy one and that I should go to my therapy and finally stop digging around in the old story."

This also occurred in connection with *how institutions deal with CSA*. Through a high social status or institutionalized authority and the social prestige that goes along with it, perpetrators were in some cases protected from any consequences. Oftentimes perpetrators were more likely to be believed than the survivor and consequently acquitted of any guilt by the institution. Furthermore, to protect the reputation of the institution, criminal prosecution was sometimes waived.

*Grooming the victim* was also related to *factors hindering disclosure*. By inducing shame and guilt, using violent threats, or acquiring an oath of secrecy from survivors, perpetrators tried to prevent disclosure and exposure in some cases. The internalization of feelings of shame and complicity in some cases created an illusion of consensuality that perpetrators exploited. In summary, factors, and experiences that may hinder the process of dealing with CSA are located on many levels and interact with each other in a complex way.

## DISCUSSION

Using qualitative methods, the present study aimed to identify and analyze factors and experiences that may hinder the process of dealing with experiences of CSA. Four main themes which had 12 subthemes were analyzed in this study. Our analysis showed that the categories are mostly interconnected and interact with each other on various levels. Survivors of CSA reported being confronted with a variety of obstacles, throughout the process of dealing with their experiences with some obstacles occurring simultaneously, repeatedly or in a cumulative way.

To better understand how the experiences described by self-identified survivors may negatively influence the process of dealing with CSA it is useful to take a closer look at the Traumagenic Dynamics Model of CSA by Finkelhor and Browne (1985) as well as the CSA healing model by Draucker et al. (2011). The first provides a particularly suitable framework as to why the described experiences are perceived as problematic by survivors, while the second might explain how the identified factors may hinder the process of dealing with CSA.

Our results suggest that disclosure, or rather negative social reactions to disclosure attempts, pose an obstacle in dealing with CSA. This is mostly because survivors get discouraged to share their story with anyone else out of shame, after being confronted with resentment and disbelief by loved ones or formal sources (Birck, 2001). This seems to be because the internalized stigma and the utmost feeling of betrayal connected to the traumatic experience are relived in moments of these unsuccessful disclosure attempts (Finkelhor and Browne, 1985).

In their CSA healing model Draucker et al. (2011) postulate, that receiving at least one "affirmative message" from a trusted person or formal source can function as an important enabling factor and therefore help survivors to progress in the process of dealing with their experiences. These findings are supported by Ullman and Peter-Hagene (2014), who found that negative social reactions to disclosure of abuse were related to greater PTSD symptoms, with survivors perceiving less control over their dealing process. Furthermore, Sivagurunathan et al. (2019) identified feelings of shame, guilt, and self-blame, a higher social standing of the perpetrator as well as negative social reactions as obstacles affecting disclosure in male survivors of CSA. Our findings are also supported by Chouliara et al. (2014) who recognized disclosure as a major factor in enabling the healing process for survivors of CSA with negative social reactions posing as an obstacle. Apart from being confronted with continuing resentment and disbelief, survivors reported being shamed or humiliated by family relatives, who sometimes supported the offender rather than the survivor. This implies that survivors also relived stigmatization, betrayal, and also powerlessness in these situations (Finkelhor and Browne, 1985). Another enabling factor identified by Draucker et al. (2011) is "ongoing support," which according to the authors goes beyond a one-time affirmative message but describes the feeling of trusted persons being there for the survivor regardless. Our results are supported by a study by Schönbucher et al. (2014) which indicates that adolescents who experienced CSA wish for more support from their parents.

Our data further indicate that state and religious institutions frequently ignored survivors and didn't support them sufficiently. They seldomly took adequate action to elucidate cases of abuse in their midst or compensate survivors, which made survivors feel powerless and betrayed (Finkelhor and Browne, 1985). This is most likely connected to the power imbalance that often prevailed and still in some cases prevails in some institutions, summarized under the term clericalism by Dreßing et al. (2018) for catholic church institutions. This describes a hierarchical-authoritarian system that enabled priests in superior positions to dominate unconsecrated persons and promoted secrecy, cover-ups, and unsuitable reactions. Comparable structures and their connection to sexual abuse, as well as the use of additional repressive measures to ensure the silence of survivors, can also be found in children's homes and other state institutions in the FRG and GDR (Wazlawik et al., 2014; Hackenschmied et al., 2018; Sachse et al., 2018). Since many of the events reported by survivors took place a long time ago, it can be assumed that the circumstances in some institutions have changed considerably, while other institutions (e.g., those in the GDR) no longer exist. Nevertheless, Nagel et al. (2021) point out, that important insights can be drawn from reports of survivors which should be taken into account in the development of institutional prevention programs today.

Manipulative perpetrator behavior may also pose as an obstacle in the process of dealing with CSA, mainly by delaying or hindering disclosure. Our findings implicate that perpetrators used a variety of violent and non-violent strategies to facilitate abuse and prevent exposure. Besides, perpetrators induced shame

and guilt by creating an illusion of consensuality, instilling in victims the feeling of being actively and willingly involved in the abuse. This shame and guilt oftentimes kept survivors from disclosing and regaining self-worth, self-efficacy, and restoration of self-confidence, thus aggravating the feeling of powerlessness and stigma (Finkelhor and Browne, 1985). These findings are supported by Schröder et al. (2020b) who found that perpetrators used similar strategies to prevent exposure in the context of organized and ritual CSA. In addition, Wolf and Pruitt (2019) found that especially violent grooming in form of threats predicts higher trauma symptoms, anxiety, depression, sleep problems, and dissociative issues in survivors of CSA. Draucker et al. (2011) describe “personal agency” as another factor enabling survivors to eliminate shame and guilt by acknowledging that what happened to them was wrong and that they are not at fault. A feeling of personal agency therefore could help survivors to regain controllability and to fight the feeling of powerlessness (Finkelhor and Browne, 1985; Frazier et al., 2004; Draucker et al., 2009).

Lastly, survivors reported several obstacles regarding the state legal system and mental health care in Germany. The most pressing issues being a lack of access to adequate (psycho)therapy, financial burdens, duration of court proceedings, and witness credibility assessment as well as plausibility checks. These findings are consistent with research by Görgen et al. (2012) who showed, that apart from the better documented psychological and physical long-term effects of CSA financial burdens and other long-term economic consequences may play a substantial role in the process of dealing with CSA but haven’t been examined in detail yet. In line with this Herman (1994) as well as Figley (2013) stated that financial, just as much as social and personal resources, are necessary for survivors to rebuild a safe environment for themselves and help them integrate their experiences in self and world. Our data illustrate how financial burdens acted as a direct obstacle, as they prevented survivors from regaining their sense of security (Herman, 1994; Gahleitner, 2003; Figley, 2013), and as an indirect obstacle, as they e.g., hindered survivors from accessing suitable psychotherapy.

Despite several measures taken to better support survivors in recent years, negative experiences in court proceedings were reported by survivors. This finding is supported by the results of a study by Dreßing et al. (2018) in which survivors from a wider age range also reported experiencing stress and discomfort as well as long-term dissatisfaction with the court proceedings and judicial outcome in some cases. This may be due to measures not being implemented properly in practice, measures not being communicated by victim representatives, or victim-oriented discussion awakening expectations in survivors that cannot be fulfilled (Volbert, 2012). The author concludes that many obstacles and hurdles often reported by survivors of CSA describe factors that are inherent to the legal process and therefore cannot be eradicated easily.

Nevertheless, it seems important to point out, that not being able to control the legal process may enhance the feeling of powerlessness in survivors (Finkelhor and Browne, 1985). Regaining control as part of personal agency therefore might also play an important role in assessment or evaluation situations

(witness credibility assessments, plausibility check) (Draucker et al., 2011). Survivors frequently described these experiences as reinforcing the belief that they are not believed, accompanied by a deep-rooting feeling of loss of control. They feared being unable to influence the alleged “outcome” of the process, which in combination with missing information about the procedure and partial insensitivity by experts led to severe stress for these survivors (see also Schröder et al., 2020a). Furthermore, the procedure of witness credibility assessment in Germany has been criticized over the years, some authors suggest evaluating the procedure for a diverse group of survivors and specific circumstances (Schoon and Briken, 2019).

Our cross-category analysis showed that many of the identified factors interact with each other in a layered and complex way. Most notably many themes interact with factors hindering disclosure. This result is supported by Alaggia et al. (2019) who analyzed 33 studies between 2000 and 2016 examining factors influencing disclosure of CSA and found that amongst other things a close, family-like relationship to the perpetrator, shame, self-blame, fear of negative consequences, and stigma, dysfunctional family communication and a general lack of discussion about sexuality within society are obstacles for disclosing experiences of CSA at any given point. Similar results have been shown by Birck (2001) who interviewed 22 women who had experienced “sexualized violence in the context of a relationship of trust” in their childhood and who had completed psychotherapy as adults. She could show that disclosure was often followed by denial responses (disbelief, defensiveness, blaming the victim) by the family of origin especially. Nevertheless, disclosing their experiences was perceived as liberating and empowering by survivors, especially in the long-term perspective. Birck (2001) concludes, that disclosure is an important milestone in the process of dealing with CSA. Especially since the reactions to disclosure, positive or negative, influence the further process in a significant way. Thus, those who received an affirmative message were more likely to seek therapeutic help while those who experienced negative reactions often decided never to talk about it again. This matches the enabling factors “affirmative message” and “ongoing support” identified by Draucker et al. (2011).

All obstacles identified in this study contain aspects of the traumatic experience (traumatic sexualization, stigmatization, powerlessness, and betrayal) and thus a reliving of it (Finkelhor and Browne, 1985). They may thus prevent survivors from integrating the traumatic experiences into their self-concept and moving forward in the process of dealing with experiences of CSA (Gahleitner, 2003; Draucker et al., 2011). All this could be an explanation for why survivors of CSA often report that the experiences following the abuse were at least as bad as the abuse itself (Birck, 2001).

## LIMITATIONS

The material used in this study represents a cross-sectional sample and was not primarily collected for scientific purposes. This poses a methodological challenge. Nevertheless, it enables



an impartial approach to experiences of sexualized violence from the perspective of survivors in a unique way.

Additionally, the current sample “suffers” from selection bias on different levels. Firstly, survivors who responded to the Commission’s call to tell their story to the Independent Inquiry in a private session might differ from those who did not. Whether a survivor decided to share their experiences using one of the available formats might be linked to numerous and heterogeneous motives we can neither identify nor anticipate in hindsight.

Furthermore, the sample might be prone to gender bias as well. Up to this point, 83% of the survivors who shared their story with the IICSAG were female and 16% male. However, this is not representative. We have twice as many female survivors as male survivors in our sample. We did not address potential gender differences regarding obstacles. Additionally, participants in our sample were 54 years old on average. This means that in most cases experiences of CSA go back up to 45 years and therefore relate to structures and circumstances that no longer exist today. Nevertheless, our results implicate that many obstacles and hurdles survivors reported still exist today and are encountered by survivors of diverse contexts in a reoccurring pattern in the process of dealing with experiences of CSA.

Besides, the study included only a small sample out of 1,303 private sessions due to the scope of the framework of the research consortium “Auf-Wirkung.” Furthermore, the sample was not picked randomly, since only a fraction of the private sessions has been transcribed verbatim. The data therefore cannot be regarded as representative and generalized conclusions are not possible. Furthermore, due to the sensitivity of the subject, we were able to get permission to quote only from a few participants.

Among other reasons the open question format and the unstructured interview style, have ensured that only a superficial exploration of what survivors may themselves interpret as hindering has taken place. On the other hand, the detailed description of a variety of obstacles implies a high relevance of these issues for the survivors interviewed in this setting.

## PRACTICAL IMPLICATIONS

Our findings suggest that creating safe spaces and opportunities for disclosure could be helpful in more than one way for survivors in the process of dealing with experiences of CSA (Chouliara et al., 2014). In the case of state and religious institutions this could be achieved for example by these institutions ensuring that, as part of prevention programs, suitable contact persons are available for potential victims of sexualized violence. Furthermore, given the replicated reports of lack of access to therapy a potential expansion of the availability of suitable therapy places for survivors of CSA in Germany could be discussed (Görge et al., 2012). Focusing on low-threshold offers and specific expertise could be helpful (Pawils et al., 2017; Alaggia et al., 2019). Insights and research regarding obstacles in the process of dealing with CSA and their meaning for survivors could be part of targeted training for clinicians. Institutions willing to process cases of child sexual abuse in the past are recommended to ensure the participation of survivors as a part of recognition (Kavemann et al., 2019).

It should be noted that in recent years there have been several studies examining specific structures enabling abuse in individual institutions also formulating recommendations for the further handling of reprocessing (Keupp et al., 2017; Dreßing et al., 2018; Rau et al., 2019). Our results suggest that it could further be useful to provide information about grooming strategies and their long-term effects on survivors as part of prevention and rehabilitation processes as well as include these in training programs of clinicians. Service providers and governmental agencies also play a role in supporting and guiding survivors in the process of dealing with experiences of CSA. Therefore we agree with Sivagurunathan et al. (2019) and believe it useful to educate personnel accordingly. Concerning witness credibility assessment, our findings suggest that educating evaluators about the aspects of the evaluation process survivors describe as obstacles and needs of survivors could be helpful. Potentially, a uniform certification of credibility assessors in Germany could also be discussed after further researching this specific topic.

## CONCLUSION

Our findings are consistent with prior research on the topic and first and foremost support the assumption that survivors of CSA in Germany encounter a variety of obstacles in the process of dealing with their experiences. These obstacles may actively or passively hinder survivors to integrate their experiences in their concept of self and world and reestablish controllability over their lives. Regaining control is a counterpart to experiences and feelings of persistent powerlessness and therefore significant in the recovery process of survivors of CSA. While some of the findings can be supported by existing research, others have not been investigated thoroughly, yet. Among these are financial obstacles, lack of access to adequate psychotherapy, aspects regarding the (German) legal state system (e.g., duration of judicial court proceedings, witness credibility assessment). All the factors and recurring experiences identified in this study can be viewed individually, but their influence on the process of dealing with CSA becomes clear when they are considered in their complexity. Future research may focus on survivors with a wide range of backgrounds in contexts, using a structured interview potentially asking specifically about obstacles in dealing with experiences of CSA.

## DATA AVAILABILITY STATEMENT

The dataset consists of transcripts with survivors of child sexual abuse. Only the project researchers are allowed to view and analyze the data. The Data set can not be made available to anyone outside the research team. Questions regarding the datasets should be directed to w.schoon@uke.de.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Committee of the Department of Education at Goethe University Frankfurt. The patients/participants



provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

PB designed the study. Data was collected by PB and the IICSAG. WS and PB analyzed and interpreted the data. WS wrote the initial draft of the manuscript in constant consultation with PB. PB and WS had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of data analysis. All authors have contributed to, read, and approved the final version of the manuscript.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.619036/full#supplementary-material>

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The remaining author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Child Sexual Abuse as Lifespan Trauma Within the Context of Intimate Partner Violence: Experiences of Caribbean Women

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**Background:** There is a dearth of research which explores sexual abuse from perspectives of Caribbean women, despite its high prevalence in the region. While sexual violence is universal, tackling it requires a deep understanding of the contextual specificities in which it arises and of the intersections of gender with other sources of oppression and marginalisation. It also calls for the recognition that intimate partner violence against women is not separate from, but linked to violence against girls, not only because both are forms of gender-based violence but because together they speak to its historical, persistent and accumulative effects.

**Methods:** In-depth intensive interviews were carried out with 35 women from Barbados and Grenada, aged 18–60 years who had experienced intimate partner violence under one of the following circumstances: during pregnancy ( $n = 15$ ), as a woman with a disability ( $n = 8$ ), as a woman living with HIV ( $n = 12$ ). Interviews were digitally recorded, transcribed and thematically analyzed.

**Results:** The participants experienced multiple forms of violence within their relationships, often concurrently. Twenty-one of the women had been subject to sexual violence and of these, 19 had experienced sexual abuse as children; these experiences were viewed as interconnected and bolstered by the high level of violence-acceptance reported within communities. Women were subject to different forms of control by their partners depending upon prevailing discourses related to their circumstances (as pregnant, disabled, or HIV positive); being ‘vulnerable’ was synonymous with having one’s agency as an independent, autonomous person constrained and little external help was available.

**Conclusion:** The study identified a clear chain of sexual behaviors, each of which fuel different layers of the problem: the prevalence of early sexualization of children is associated with the prevalence of child sexual abuse; child sexual abuse is pervasive in large part, because of the normalisation and social acceptance of violence against women and girls; “cultural” normalcy, in turn, fuels attitudes which contribute to sexual violence against women and women in especially vulnerable circumstances face additional risks. Integrated policy, which tackles these as interconnected issues is called for.

**Keywords:** child sexual abuse, Caribbean, pregnant, living with HIV, disability, woman, IPV

## INTRODUCTION

The sexual abuse of children (CSA) is high in the Caribbean; in a survey of 15,695 students aged 10–18 years from nine countries, 47.6% of girls and 31.9% of boys reported having been subjected to sexual abuse (Halcón et al., 2003). Further, the initiation of children into sexual activity is said to occur earlier in the Caribbean than anywhere else in the world, excepting countries that practice child marriage. In surveys carried out by UNICEF, approximately 15% of children aged 11–12 years and, 35% of young people, 14–15 years old reported having had sexual experience (UNICEF, 2006; UNICEF, 2008; UNICEF, 2012). Early sexual activity is highly correlated with sexual abuse and coercion, both as a causal link and also in increasing vulnerability to further victimisation (see for instance, Barrow and Ince, 2008). In the study by Halcon et al. (2003), over half of boys and about a quarter of girls who were sexually active stated that the age of first intercourse was 10 years or younger and almost two-thirds had intercourse before the age of 13, often as a result of force or coercion. Retrospective studies with adult survivors support these findings. In Barbados, for example, 30% of female respondents had been sexually abused as children. This study, which included several countries, concluded that forced sexual initiation and early childhood abuse were not uncommon in the Caribbean (World Health Organization, 2013). Jones and Trotman Jemmott explored the perceptions, attitudes and opinions of adults in regard to CSA within six Caribbean countries and highlighted societal acceptance of violence, patriarchal values which minimise the rights of women and children and, norms which associate masculinities with domination and sexual entitlement, as key factors (2009). Violence within the home, including CSA, can contribute to the intergenerational transmission of intimate partner violence (IPV) including, sexual violence (Heise and Garcia-Moreno, 2002; Capaldi et al., 2012; Jones et al., 2014); indeed, survivors of one form of violence are more likely to be victims of other forms and, girls who have been sexually abused are more likely to experience sexual re-victimization and be a victim of IPV in adulthood (Millett et al., 2010; Franklin and Kercher, 2012).

There is a dearth of qualitative research which explores the problem from the perspectives of Caribbean women, despite UN reports that every one of the Caribbean islands has a sexual violence rate higher than the world average (United Nation, 2007; Guedes, 2012). Also missing, are studies which examine differential experiences of sexual violence among women whose circumstances may place them at increased risk of victimisation. While sexual abuse is universal, tackling it requires attention to the local social, cultural and contextual specificities in which it arises and also, to the intersections of gender-based violence with other sources of oppression. This article makes a contribution to bridging this gap.

The study draws on the experiences of three groups of Caribbean women in “especially vulnerable circumstances” who were victims of IPV: women who were pregnant, disabled women and, women living with HIV. The study explores their experiences of sexual violence as a feature of

IPV and the meanings they attribute to associations with child sexual abuse.

## WOMEN IN ESPECIALLY “VULNERABLE” CIRCUMSTANCES—A CONSTRUCTIVIST LENS

This research uses an intersectional lens to investigate the convergence of gender, sites of “vulnerability” and difference among Caribbean women who have experienced sexual violence. Intersectionality originated as a conceptual tool to analyze the effects of race, gender and other forms of discrimination on women of color (Crenshaw, 1989) and is now widely used for the analysis of multi-layered social and institutional structures, their inter-connectedness and the ways in which they intersect with women’s gendered identities (Sumi et al., 2013; Carastathis, 2016; Hill Collins, 2019). Women in many Caribbean countries have made extraordinary strides in challenging inequalities, and human rights indicators point to the growth of women’s progress and achievements. However, despite their higher education attainment, women are less likely than men to hold positions of power, have higher levels of unemployment and are more likely to be subjected to gender-based violence, including sexual violence (UNFPA Caribbean, 2017). Furthermore, ingrained systems of patriarchy, intersecting with other structures (economic, social, and cultural traditions etc.) that together make up identities mean that many Caribbean women continue to be constrained and controlled (Jones et al., 2014). Patriarchy, viewed as symbiotic with processes of domination, provides the context in which the phrase “women in especially vulnerable circumstances” is used in this article. Un-problematized, the terms connotes victimhood rather than agency, but situated within the critical realist standpoint adopted for the study, “vulnerability” is viewed not as objective descriptor, but as a fluid state constructed at the nexus through which normative ideology (the social meanings attributed to women’s health status, in this instance as pregnant, disabled, or living with HIV) meets structural reality.

Focusing on women in especially vulnerable circumstances can unearth what might be known about sexual violence among women from diverse and marginalised backgrounds, but a critical realist perspective takes this further and insists on examining the symbolic and material structures that limit women’s freedoms. Critical realism calls also, for the recognition of human agency (Humphries, 2008). Acknowledging agentic power is important, but oftentimes analysis offers little more than a rhetorical nod in the direction of women’s empowerment. It is not enough to idealise agentic womanhood in constrained environments as heroic; we need to understand more deeply, the contexts and liminality of women’s conscious action (Hill Collins, 2000). This study thus also makes use of Einspahr (2010) structural theory of freedom which regards freedom as non-domination and calls for the dismantling of the constraining effects of patriarchy as it impacts both the material and, symbolic circumstances of women. This is crucial in tackling sexual abuse in the Caribbean since here, hegemonic versions of masculinity not



only dictate what it means to be gendered, but also, what it means to be sexualised, as explored by Kempadoo and Taitt (2006) in their review of 150 journal articles, programs and “grey” literature. In respect of the entry points of analysis for this article, it also dictates what it means to be a woman who is pregnant, disabled or living with HIV.

IPV is not demographic specific and there is no typical victim. There are myriad ways in which women might be rendered vulnerable to IPV: homelessness; drug and alcohol abuse; mental ill-health; trafficking; environmental disasters; ill-health and more. There was, of course, simply no way of including all these groups in the study and through consultation with women’s organisations in the participating countries, a consensus approach was used to determine the final selection.

## Pregnancy and Intimate Partner Violence

Accurate data on IPV during pregnancy is scarce in the English-speaking Caribbean yet estimates for other Latin America and Caribbean countries are among the highest in the world (Han and Stewart, 2014) signalling this as a significant public health problem across the region (Campbell et al., 2004). IPV during pregnancy is a global problem too. In a Canadian study, 10.5% of women of the 23,766 respondents, reported being physically and/or sexually abused during pregnancy (Taillieu et al., 2015); in India, 18% of 2199 women experienced violence during their last pregnancy (Ahmed et al., 2006) and a study in Uganda revealed that of 612 Ugandan women screened in their second trimester, 27.7% had been subjected to IPV. Burch and Gallup Jr (2004) conducted research with 258 men convicted of spousal abuse and found that the severity and frequency of violence they inflicted actually doubled during their partner’s pregnancy. A meta-analysis of studies from 15 countries, suggests a prevalence rate of between one and 28%, with up to half of all victims receiving direct blows to the abdomen during pregnancy (Ellsberg et al., 2008). Though pregnancy is not of itself a source of vulnerability, it can be a catalyst for violence. (Audi et al., 2008) A Caribbean study noted that for some women, violence began when they got pregnant, while for others, men used the pregnancy situation to exert more violence and control than they had previously (Jones et al., 2017). Pregnant women are rendered vulnerable *because of* IPV, in that violence places them at extreme risk of adverse maternal and infant outcomes (Silverman et al., 2006; McMahon et al., 2011).

## Disability and Intimate Partner Violence

Both men and women with disabilities are more likely to experience violence within their personal relationships than non-disabled persons (UNAIDS/WHO, 2007) however, the cumulative effect of gender inequalities and disablism exposes women and girls to a high risk of IPV, coercion and, sexual violence (Hughes et al., 2012). A survey carried out in European Union member states reported that almost 80% of women with disabilities involved in the study had been victims of violence, and they were four times more likely to be subjected to sexual violence (la Rivière Zijdel, 2004). Breiding and Armour (2015) drew on data from the United States National Intimate Partner and Sexual Violence Survey (NISVS) (an ongoing, telephone survey of

adults) and reported similar concerns. From a total of 9086 females who completed the survey in 2010, women with a disability were significantly more likely to experience rape than other women (1.7 compared to 0.4), other forms of sexual violence (4.5 compared to 1.8), physical abuse (7.1 compared to 3.3), stalking (21.0 compared to 12.2), and psychological abuse and control of sexual health (2.4 compared to 1.4) (Breiding and Armour, 2015). In the United Kingdom, research commissioned by Women’s Aid (Hague et al., 2011) involving a survey of domestic violence and, disability organisations and, interviews with 30 disabled women revealed that 50% of women with disabilities had experienced IPV compared with 25% of women without disabilities; they were twice as likely to be assaulted or raped and were likely to have to endure IPV for longer because of the lack of appropriate support. Although there are some studies on the victimization of women with disabilities in Latin America and the Caribbean, there are no reliable prevalence data. As the region has one of the highest rates of violence against women in the world, it can be assumed that Caribbean women with disabilities are disproportionately impacted by IPV because of limited access to services and the position of power and control abusers may have over them. Disabled women are also likely to be more dependent on their abuser for care and support than other groups of women and have reduced access to economic autonomy; these factors exacerbate isolation and vulnerability.

## Living With HIV and Intimate Partner Violence

Violence against women and HIV are conjoined public health problems with profound implications for health, wellbeing and social development. The Caribbean has the highest incidence of HIV-AIDS outside of Africa and it is estimated that 53% of persons living with HIV in the region are women (Allen, 2011). Although women are biologically more susceptible to contracting HIV infection, this does not fully explain how and why HIV has become so heavily feminized. Global studies reveal that this is primarily due to gender inequalities, sexual cultures, violence against women and girls and women’s lack of control over their sexual rights. Forced sex and rape, place women and girls at particular risk, as these types of sex cause injuries in the vaginal and anal tissue, allowing the virus to be more easily introduced into the body (Luciano, 2013). HIV transmission in the Caribbean is increased by complex sexual cultures which include: the early sexual initiation of girls; sexual exploitation; forced, non-consensual sex; norms about male sexual entitlement; multiple partnering and, sexual-economic exchange relations. This construction of complex sexual cultures is supported by qualitative research with sex workers (Kempadoo, 2004), with adolescent girls 16–18 years (Barrow 2008) and also, through a review of literature conducted by Bombereau and Allen (2008). At the ideological level, HIV and AIDS continue to symbolize deviancy and contagion and, in the Caribbean, women living with HIV face stigmatization, social alienation and victim-blaming. These factors force women

into silence and often cause them to have to mask violence within relationships. Violence against women therefore has both a causal and consequential relationship with HIV. There is a high level of awareness of these intersections between HIV and IPV among Caribbean governments, and international organizations (UN Women, PAHO/WHO, 2007) have initiated programs designed to catalyse integrated responses, nevertheless, policy and programming tend to be fragmented and the mechanisms for effective implementation are often missing.

## The Present Study

The empirical data presented in this article was collected in 2016 as part of a larger research project on the experiences of IPV among women in Barbados and Grenada. The study utilized a cross-sectional qualitative design—data collected at one time-point through guided reflective interviews. The objectives of the study were derived from a preliminary literature review and sought to 1) explore the ways in which women from especially “vulnerable” groups who experience IPV may be exposed to heightened risks as a consequence of their partners’ exploitation their situations and, 2) to see what commonalities or differences exist between the situations of the women.

## METHODS AND MATERIALS

Participants were recruited through professional networks, agencies and snowballing. Interviews took between one-two hours and were digitally recorded. Interview prompts were designed to facilitate extended narratives, to elicit information about patterns of abuse and sexual violence experienced and to evoke memories of childhood. These prompts were: 1) How do you define domestic violence? 2) Do you face particular risks of violence because of your health or situation? 3) What do you think the reasons are for the increase in risk? 4) How does being pregnant/disabled/living with HIV affect you in getting support in dealing with or escaping a violent relationship? 5) What helps you to cope?

### Participants

Thirty-five women participated in the study: 15 of the women were pregnant, eight were disabled and 12 were living with HIV (four of these women were also pregnant). The ages of the participants at the time of the interviews ranged from 18 to 60 years. Twenty of the women were single, separated or divorced and 15 women were married or in a long-term relationship. Many women were able to participate in the study only because they had been able to escape the relationship in which they were abused and this accounts for the large number of single women in the study. Twenty-eight women had children and 13 women had four children or more. Thirty-one of the participants described themselves as poor or low income (a limitation of the sampling approach, which recruited participants through agencies that primarily provide services to poorer women), three women were of average income and one woman reported above average means.

## Procedure

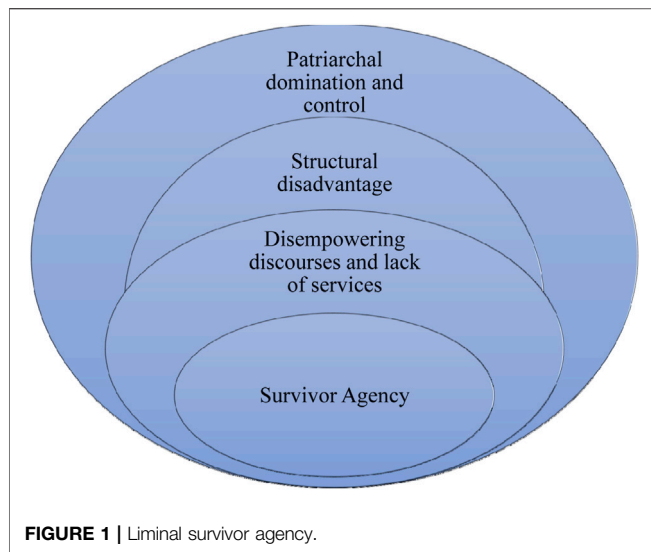
This study used convenience, purposive, non-probability sampling techniques in order to identify participants whose circumstances were appropriate for the research objective. A data base of agencies and government departments providing services to the relevant groups of women in the two countries was created. Agencies that agreed to support the study distributed information about the research to their service users. Women notified the agency of their wish to be included in the study and initial contacts by email were followed up with confirmatory telephone calls. To ensure participant safety, no direct contact was made with the women and interviews were arranged through the organisation by three research assistants recruited and trained in conducting IPV research. This approach was necessary given the sensitivity of the issue explored and the potential risks to women of more representative and open recruitment methods. The recordings were transcribed verbatim and subject to iterative, in-depth, thematic analysis (Braun and Clarke, 2013). This involved three stages: first, multiple, purposeful readings of the transcripts and repeated listening to the recordings without coding to gain an overall impression of meanings of expression in the context in which they were used; second, detailed coding to identify significant themes on sexual violence as a feature of IPV among the three groups of women (pregnant women, women with disabilities and, women living with HIV) and third, the merging of ideas to produce thematic maps (Braun and Clarke 2013) and to check for patterns across groups of participants and across both countries. Once the themes were identified, quotes were selected to best illustrate the findings.

## Ethical Statement

Ethical approval for the study was granted by the ethics committee at the United Kingdom university leading the research. The participants’ identities were anonymised to minimise risk to them and counselling was made available in the event of re-traumatisation. Participants were provided with an information sheet detailing the nature of the study and informed that they could withdraw at any stage of the process. Informed consent was obtained on this basis. Data collection and data management were subject to stringent ethical protocols to safeguard women’s privacy rights and all transcripts and digital recordings were secured through password protection.

## RESULTS

The results are organised around the three situational groupings reflected in the study: 1) Being pregnant, 2) Women with disabilities and 3) Women living with HIV. The three situational groupings, though initially predetermined based on the research objectives, were considered important to retain because these categories contextualised and differentiated women’s experiences in ways that mattered to them. In seeking to preserve difference while at the same time exploring commonality,



within these groupings, three overarching cross-cutting themes are discussed: Intimate Partner Violence, Sexual Violence and Freedom. The first two of these are a product of the analysis. IPV is used to refer collectively to the many forms of violence that were inflicted within the context of the women's intimate partner relationships; sexual violence refers specifically to violence of a sexual nature. Of the 35 women in the study who had experienced IPV, 21 reported that these experiences had included sexual violence and 19 referred to childhood experiences of sexual abuse although in two cases, the women did not view this as abuse (these two women had been raped as children). Other terms used within the analysis include physical violence, which refers to the use of physical force and, psychological violence which includes verbal and emotional abuse and threats of harm. It is important to stress that the revelations of child sexual abuse (CSA) were an emergent phenomena from this broader study of IPV and that in the discussion of results on CSA, only data from the 19 participants who reported this is explored.

It is important to acknowledge that these distinctions are a theoretical contrivance, which though seeking to provide a comparative picture of women's experiences, runs the risk of underplaying the embeddedness of different types of violence, one within the other. In mitigating this risk it is important to stress therefore, that all the participants experienced multiple forms of violence within their relationships, often concurrently. The women did not describe these as separate forms of violence but rather, as violence with many "heads and shapes". So, for example, physical violence exerted in order to carry out sexual violence was most likely accompanied by verbal abuse. These were not experienced as three types of violence but as single violent acts containing these different and overlapping elements. Verbal battering by itself seems to have been an ever-present feature of most women's experiences but when linked to other violent actions, it served specific functions: a precursor to an assault, part of the build-up; a form of 'justification' for the perpetrator's benefit; or, fuelling the

severity of violence (e.g., reminding the victim and perpetrator of the woman's transgressions). The third theme 'freedom' was theoretically derived to explore the concept of freedom as non-domination or being free from the constraining effects of patriarchy (Einspahr, 2010). Freedom meant different things for different women depending upon their situations but for all women, was centered around how to escape the violence. This in turn meant how women tried to free themselves from patriarchal domination, to challenge the structural disadvantages they faced, and to confront disempowering discourses and the lack of services. In the absence of being able to escape, it also meant the strategies women used when forced to adapt to living within these constraints which included making incremental improvements to their circumstances (liminal agency). Liminal agency as described in this study, can therefore be understood as survivors enacting agency in ways which improved their day to day lives but bounded *within* external structural barriers, were unable to disrupt them. This is represented in **Figure 1**.

In addition to the separate groups of women and the common themes across them, two other themes relating explicitly to sexual violence are explored: sexual abuse as lifespan trauma and the normalisation of sexual abuse. These themes dominated the narratives of 19 of the 35 women and relate to childhood experiences of sexual violence.

## Being Pregnant Intimate Partner Violence

Motherhood was an important role for the majority of the women. Twenty-eight of the 35 participants had children and 13 women had four children or more. Half of the mothers ( $n = 14$ ) had been subjected to IPV during their pregnancies and 12 women reported that the violence either started or increased during pregnancy and then persisted throughout the relationship. Emma, a 39 year old married woman with two children, experienced abuse from the third month of her second pregnancy:

*"When I get home from work tired, my husband would start cursing and abusing me. I cry a lot and sometimes I think of committing suicide. I blame myself a lot. I think I should have been able to see that it was not love. When someone loves you, they don't hit you. I was not happy and I became very timid".*

Most of the abuse reported was physical and emotional:

*"He dragged me in the grass and punched me. My baby came at seven months, because of the constant verbal abuse and one incident of physical abuse." (Vera, 49 years)*

Women's abdomens and unborn babies were often targeted to inflict maximum harm:

*"He grab me by my throat . . . and push me up against the wall . . . then he cuff [punched] me in my stomach. He*

*said you don't deserve no child and I am killing you tonight". (Joan).*

*"You cannot fight back because you have to study like, to hide my belly to prevent it being hit. It is hard to fight back; I would study to run but I could not get nowhere because I had a belly". (Betty)*

*"One day he gave me a blow in my temple and I fell to the ground and my cervix tore. I began to bleed and had to be rushed to the hospital. My cervix had to be stitched up to hold the baby for the balance of the pregnancy." (Peace).*

### Sexual Violence

Sexual violence was also commonly reported among pregnant women. Two women had become pregnant as teenagers as a result of rape while other women said they faced sexual assaults right through and immediately after their pregnancies. Jenny recounted:

*"...he wanted sex. I told him the baby is too young and I can't go through with that. He took a knife and he cut off my clothing."*

*"Once he [describes violent vaginal sexual assault] and tell me that he will rip the child from inside me." (Maureen)*

### Freedom (Constraints to Escaping Violence)

Mothers were reluctant to leave violent partners because it was important to them that their children should not grow up without a father. This was especially the case for women whose pregnancy had seemed to be the catalyst for violence. These women convinced themselves that once the child was born the violence would stop; they were also encouraged by the family to remain in the relationship for the "sake of the baby". Participants who had endured abuse over time recalled feeling it was a "phase" that would pass but were often able to pinpoint the time when they realised it would "never stop". This was most often when they became aware that their children were being directly affected. The participants believed it was important for women to get out of abusive relationships as soon as the abuse starts, regardless of whether one was pregnant or not and yet they also recognised that physical and social constraints made this extremely difficult especially when there were other children. In instances where women left their partners, they often felt compelled to return because there was nowhere to get help and without a partner, they were victim to social disapproval, as Vera explains:

*"People are judgmental so it will be hard for persons to get help when pregnant".*

Andrea, a 39 year old woman living with HIV, was abused during her three pregnancies. She said she that she could not go anywhere because she was "big pregnant" and all she wanted to do was to protect her baby. She gained temporary respite from the beatings when the neighbors hid her, but she always had to return.

### Women With Disabilities Intimate Partner Violence

The experiences of women with disabilities revealed that social and structural isolation compounded the violence they were exposed to. Intimate partner violence often entailed the exploitation of specific impairments as a means of inflicting psychological harm. These women did not feel limited by their impairments but their partners would make use of their impairments to constrain them and *this* was limiting. Aya, was blind and when her husband wanted to punish her, he would move all of her markers of space and place in the home so that she would be lost, stumble or require his assistance. When Cathy, aged forty-one and a mother of five children had a stroke, her husband became abusive. In addition to physical and sexual abuse, he told people she had had a "nervous breakdown" and was mentally unstable. He was so plausible that friends began to shun her and even the courts believed him.

*"Many times, he forced me to have sex. When I told him that I would expose him and tell everyone that he is abusing me he told me that he would tell everyone I am mad. This was the beginning of the campaign to make everyone believe I was mad since the stroke".*

Michelle had been badly burned in a fire and was visibly scarred; she was left with physical impairments. A survivor of physical and sexual violence, she had actually been burned saving the life of another female victim of violence. Despite the IPV she was experiencing in her current relationship, this act was recalled with pride and seemed symbolic of her resilience—she had no doubt that she would leave as soon as she "saved a little money".

*"A man wanted to kill her. I saved her, I put her on my back and brought her out. I was 22 years when this happened.... They were fighting and the man came home and light the fire in the night. I was in the newspaper when I got burn up in the fire."*

### Sexual Violence

Women with disabilities seemed to be at particular risk of sexual violence, especially if their partners had a role in their personal care. This violence was sometimes "opportunistic", inflicted when helping the woman with her personal care; women reported that it felt like their bodies did not belong to them but were simply there for the sexual gratification of their partners. Other women said their partners expected them to show gratitude, including sexual gratitude, in return for being provided with somewhere to live and food. Aya, explained that because she was completely reliant upon her husband and had nowhere else to go, she believed she had no choice but to endure the abuse. She also described a longstanding pattern of sexual exploitation both inside and outside the home.

*"I've had of people pushing themselves at me sexually because I was dependent on them for money".*

Cathy, like some other women with disabilities, did not feel she could ever deny her husband sex although he made her feel that



her disability rendered her sexually unattractive. Paradoxically, he continually accused her of “looking for sex” whenever she ventured out of the home without him. Cathy was routinely sexually violated by her husband as a means of surveillance.

*“Every time I go out, he would want to know where I went and [describes being sexually assaulted] to see if I was having sex with someone else. I could not go anywhere without him thinking I was seeing someone”.*

### Freedom (Constraints to Escaping Violence)

Women with disabilities, like the other women in the study spoke of having to depend on their abuser for economic and other forms of assistance. Material dependency was compounded for some disabled women by the psychological dependency borne out of chronic abuse and the lack of services to facilitate their independence. Reduced personal autonomy resulted in high levels of control and domination; this created both physical and psychological barriers to leaving.

*“...how can I tell anyone about him when I need him to help me get up, to bathe, to go to the toilet; how can I leave if I cannot live on my own?” (Sasha).*

Peace was locked in the house while her partner went to work. There were times when he forgot to take the keys but as she was not independently mobile, she was unable to leave and in any event was so fearful of what he would do upon finding her that she did not consider this a viable option. Having grown up with an acute awareness of IPV from witnessing it in her own family, Michelle struggled to escape it. As a disabled woman, “things only got worse”. She was finally able to leave when someone called the police when she was being held captive.

*“He would tie me up to the bed and have sex with me when I was tied up. All the women that he has he beats them and tie them up and rapes them”.*

Tracy, a 20 year old single woman with a physical disability had been totally reliant on her father since being an infant. She was not permitted to use a wheelchair and in the absence of external help, had no means of escaping the sexual violence he subjected her to.

### Living With HIV Intimate Partner Violence

As with other participants, women living with HIV suffered all forms of IPV, in addition however, they also lived with the constant fear that their partner would disclose their HIV status. In a context in which HIV-AIDS stigma and discrimination can adversely affect all aspects of social life (employment, friendships, leisure activities) not only for the woman, but for her children, this was a powerful psychological weapon which inflicted a great deal of harm and fueled feelings of low self-worth. Agnes, a 56 year-old woman living with HIV believed she acquired the virus from her husband as he had a lot of sexual partners (although, to her knowledge, he

had not been tested). She said that he continually mocked her and regularly threatened to tell their friends.

*“...he started insulting me in public. Like, he would make a big fuss about not using the same glass or fork... Everybody would hear him and you could see what they were thinking. I asked him, please don’t say that . . . , they will think I have some terrible disease. And he would say well you DO have a terrible disease”.*

### Sexual Violence

For some women, sexual violence had been the pathway through which they had acquired the virus. Sula, a married woman aged 59 years had been living with HIV for many years. She said she had first been abused at the age of 9 years and this led to a pattern of engaging in high risk sexual behavior during adolescence and as a young adult. Although she had been a child, Sula did not view her early sexual encounters as coercive. She referred to being raped as a young girl as “having sex” and described herself as “simply going along with men who would come on to me, you know”.

Annie did not know she was HIV positive until she attended the maternity clinic when she was pregnant. Her husband had been working away and during this time, she had a sexual relationship with someone she met at college. She was devastated by her diagnosis and believed that she deserved to suffer for her infidelity.

*“My husband never looked at me the same again. Although I think he always loved me. But he could never see me the same again. Then he started having sex with me again but only anally. Very hard. Very rough. Like an animal. Like a punishment”.* (Annie).

Andrea, a 37 year old mother of three children, had experienced sexual abuse as a child and as an adolescent. She also lost a child to abuse; her two-year old daughter died after being molested by an uncle. In her last relationship, she was “pimped” by her boyfriend; he refused to work and sent her out prostituting to pay the bills and buy food and drugs, she was beaten often.

*“I sold my body to pay for drugs, I was assaulted by many customers; it was a very bad time”.*

Andrea acquired HIV from one of the male customers.

### Freedom (Constraints to Escaping Violence)

Women living with HIV often experienced high levels of stigma and alienation from families and their communities. This compounded IPV in specific ways and as their partners also exploited their circumstances, increased their vulnerability to ongoing abuse. Some women chose to put up with the abuse, rather than facing the social trauma of entering into a new relationship and having to disclose their HIV status. Several participants said that their partners threatened to disclose their status if they left and they considered that living with IPV was

better than facing the unknown consequences of HIV disclosure. Some women had lost jobs because someone had disclosed their status, and the fear of not being able to provide for themselves and their children meant that survival required they develop the personal resilience to remain in the relationship. For these women, the home, though a place of violence, paradoxically provided a 'safety-net' against the risk of being homeless and unemployed as a woman living with HIV who has children. For Andrea, it was not fear of others learning of her HIV status that forced her to stay in an abusive relationship, but her addiction to drugs. She had started using drugs as a way of dealing with the abuse and death of her two-old daughter:

*"I smoked and smoked and smoked and smoked and blocked out everything, all of the pain, the abuse".*

Andrea's dependency upon crack cocaine was sustained by the fact that her partner was also using drugs. Andrea was one of the few women in the study who had been able to access appropriate support. She was sent to a drug rehabilitation facility (where she was living at the time of the interview) and was working to create an independent abuse-free life for herself.

*"Right now, I am a real survivor for real. Because after 16 years of abuse in every shape and form I am currently doing two courses, one in jewellery making and the other one in auxiliary nursing".*

## Sexual Abuse as Lifespan Trauma

This section of the article draws only on the data of the 19 women who revealed that as well as facing IPV as adults, they had been subjected to child sexual abuse.

As in Andrea's circumstances (described in the previous section), women who reported sexual violence as adults, in almost all cases, also referred to historic child sexual abuse and for some, sexual violence had continued across the span of their lives. Cynthia, a 39 year old married, but separated woman was sexually abused by an adolescent boy who was a close friend of the family when she was 11. Debbie, a twenty-six-year-old single mother with two children also said that her abusive experiences began in childhood; she was abused by her uncle when she was 10 years old. As with Cynthia and Debbie, several women questioned whether their later experiences of sexual violence had been in part "scripted" because of the failure of adults to believe them when they were children and the ways in which the abuse was "brushed over". This was the case for Sami, a 38 year old single mother of eight. She recalled being molested by her uncle when she was about six and then she was raped (vaginally and anally) at around 10 years of age by her sister's boyfriend. When she was 14, Sami ran away with 20 year-old a man to whom she became pregnant. Having experienced sexual molestation, rape and sexual exploitation at different stages during her childhood, she had gone on to experience sexual violence in every one of her adult relationships. Sami believed that her early sexualisation and abuse had led to a lack of self-worth and a view of herself as having no value outside of being available to service men's sexual desires;

she wondered whether this contributed to the poor relationship choices she said she had made.

Some women recalled witnessing their mothers being sexually abused when they were children and later, as adults, being subjected to abuse in front of their own children.

*"He started abusing me, physically he would beat and hit. Then sexually where he would come home at night and rape me in front of our daughter".*

Interviewer: How old was she?

*"She was three and she would be up. It was like seeing a cycle of my mother when I was a child and that really hurt me".*

## Normalization of Sexual Abuse

Sami and the other women who had experienced abuse in childhood questioned whether the environments in which they had grown up in had laid the groundwork for their victimisation.

Debbie, sexually abused by an uncle, later found out her mother had also been abused by an uncle.

*"It was a generational thing because his father did it to my mother and he continued on that trait".*

Several of the women described living in households in which male sexual entitlement was an accepted social norm. In the absence of oppositional voices, the oftentimes complicity of families and communities and, the failure of child protective services to recognize and act on abuse, these norms became embedded within everyday life. Tracy, a 20 year old disabled woman said she was in primary school when she was first sexually abused by her father. With a severe mobility impairment, Tracy was carried everywhere by her father; she did not have a wheelchair. From her being very young, her father assumed responsibility for her personal care needs. After the first incident of sexual abuse, this became a part of the daily routine of "care" he provided. Tracy said she loved her father and did not see a problem with what he was doing. She also revealed that she had become pregnant with her father's child and had been forced to have an abortion. Her response to the interviewer on how she felt about this was "I am only grateful. Can you imagine?" Physical and economic dependency intersecting with patriarchal domination and an assumption that Tracy has no rights to her own body or sexuality, had created a life of which, she could not imagine existing outside. When a family member suggested Tracy should consider emigrating so that she could go to college and get support to live independently. She retorted: "Home is fine for me".

Sula too, had grown up thinking that it was normal for men to have sex with young girls.

*"...we have a lot of grown men having sex with young girls. It's normal. I don't know any young girls who did not have sex with men. It was normal".*

Her initiation into sexual submissiveness was to have a profound effect on her sexual behavior as an adult, leading to her acquiring HIV.

Most women who had witnessed abuse as children or who had been victimized themselves, recognized the behavior as abusive but in the face of societal acceptance, did not think they had the power to do anything about it.

*"I realized it was abuse as soon as it started, but because I grew up in an abusive home, I thought that this is how it should be. My mom went through it so I thought that I had to do the same". (Emma)*

Some women recalled being oppositional and defiant and several reported abuse to others even though this sometimes resulted in them being disbelieved or being blamed.

*"... I remember plainly my first words were "mommy uncle M... interfere with me". I could remember being called a [offensive] and a [offensive] and being told that I want killing, at two years old. So, if you at two years hear that, ok, things die down for a while then he started back. If you tell somebody in the beginning and nobody believed you who will you tell again?"*

Aya lost her sight at the age of 11 and soon after, her father started sexually abusing her; she refused to keep quiet about it: "I spoke to my grandmother, I spoke to my mother and, I spoke to my teacher". After two years, the abuse stopped, although Aya was made to feel responsible for what had happened.

*"I don't know how to explain how it affected them because they never even stood up for me. All of them were against me".*

The normalization of sexual abuse meant that there were rarely any negative consequences for the men who perpetrated it. Michelle had become pregnant as a result of coercive sex when she was 15 and railed against the fact that while her abuser faced no consequences, she was ostracized and given no support.

*"...you know as a teenage mother ... you are so stigmatized and discriminated against and people tend to judge you when they do not know the circumstances of how you became pregnant, so I faced all of that and my life started going downhill from then".*

Michelle was also angry that she had been ignored when she first reported CSA as a young girl and believed that had help been available, she may have been able to avoid the series of abusive relationships she later encountered. She was particularly distressed that at 15, she had been expelled from school because she was pregnant and was not able to complete her education. She had nevertheless demonstrated considerable resilience and now, as a mother, she was determined that though her children had been exposed to violence, she would do all she could to make sure they would not be at risk of violence in their own lives.

## DISCUSSION

This article has explored the intersections of patriarchal domination, structural disadvantage and interpersonal violence among three groups of women in especially vulnerable circumstances in Barbados and Grenada. The experience of violence associated with being pregnant, disabled or, living with HIV was unique to each individual woman however, the axes of differentiation that structured the women's lives were connected to each other because of systemic inequalities. In applying an intersectional lens, a common theme to emerge from the findings was that women's material circumstances and the extent to which they were subject to control and constraint was related to the discourses which surrounded their social status. Weaponizing of difference and disadvantage was a central feature of many women's experiences and perpetrators of violence often exploited a woman's impairment or situation in order to humiliate and exert control. Being "especially vulnerable" was synonymous with having one's agency as an independent, autonomous person constrained and suppressed. These constraints were impacted by physical and social restrictions and through the interplay of patriarchal power with institutional failings. Two agentic factors emerged from the findings: women's economic dependency and, the psychological dependency generated by ideologies of female submission. At the time of the interviews, some of the participants had been able to generate a modest income through crafts or selling, however most had been financially reliant upon their partners when they experienced violence and this severely limited agency and opportunity for escape. All of the women in the study bemoaned the lack of services to support victims of violence in acquiring the means to live independently. Women needed help to live; this, they considered, was the best way of helping them to leave.

## Patriarchy and Constraints on Leaving Violent Relationships

In identifying the plurality of power relations in the experiences of women in especially vulnerable circumstances, it was clear that cycles of continuous and coterminous oppression and violence are very difficult to exit without external support. Implicit in patriarchal role expectations that were a feature of the lives of the participants, was the requirement for women to adopt subject positions that embody acquiescence and sexual availability. Normative discourses around being pregnant, disabled or living with HIV and the symbolic meanings they generated, created additional social barriers to leaving violent relationships. So, for example, expectations concerning maternal roles were found to be predicated on essentializing views of motherhood (Jeremiah, 2006). If a woman was pregnant and the father of her baby had not abandoned her, then she simply could not leave, regardless of abuse or any other threats she faced; the role is considered immutable and so are its social requirements (Jeremiah, 2006). The experiences of women with disabilities, revealed that disability is often openly parodied in ways that served to diminish them. These women described being the target of fun, pity, and

discrimination not only in their personal lives, but in their interactions with public agencies (the police, the courts, welfare officials). This aligns with other research on the topic (e.g., Brownridge, 2006; Breiding and Armour, 2015). Prevailing paternalistic attitudes undermined disabled women's rights to autonomy; treated as childlike and lacking intellectual capacity, their accounts of violence were often regarded as non-credible and they were systematically denied access to the means of self-determination. Disabled women could not leave violent relationships because they were assumed not to be able to cope on their own and there were few services to enable this, even in the face of the violence they suffered. Women living with HIV face extremes of stigma and discrimination spanning everyday microaggressions that communicate social contempt, right through to overt discrimination and violence (Hale and Vazquez, 2011; Luciano, 2013). That hegemonic perceptions associate HIV with deviance, contagion and sanction was evident in the women's accounts. Even though the Caribbean has some excellent public education programmes aimed at tackling HIV discrimination, women believed that disclosure of their status would lead to them being shunned and targeted and would generate huge problems for their children. Women living with HIV cannot leave violent relationships because the fear of the consequences is simply too great.

### The “Ties That Bind Us”–Early Sexualization, Child Sexual Abuse, Cultural Normalcy and Sexual Violence Against Women

In the present study, women's experiences of IPV were exacerbated because of a high level of tolerance for violence against women and girls within their families and communities and, the acceptance of early sexualization. This link between violence victimization in childhood and violence acceptance is confirmed through research on attitudes and exposure to abuse among 1400 children in Barbados and Grenada (Debowska et al., 2018) and studies on the prevalence of interpersonal violence (Le Franc et al., 2008). Furthermore, Barrow and Ince (2008) demonstrate that sexual exploitation is strongly associated with children becoming sexually active at a young age. Other studies have also reported the association between social acceptance, cultures of normalcy and child sexual exploitation in Caribbean settings (e.g., Kempadoo and Taitt, 2006; Barrow 2008). In the present study, 17 of the 19 participants who recalled sexual victimization as children suggested that these earlier violations, set within a context in which sexual relations between children and adults sometimes were normalized, may have contributed to the conditions for later IPV they faced (two participants did not make this link). Described by one woman as “the ties that bind us”, this author contends that the interrelationship between violence against children and violence against women is a key finding, one which can inform policy and the development of more cohesive services. This is supported by other studies (see, for example, Namy et al., 2017).

Schrötte and Glammeyer (2013) suggest that the risk of IPV is increased two/three times when women have experienced violence in childhood since these early experiences can lead to low self-esteem and undermine the ability to set boundaries in relationships. The relationship choices women in especially vulnerable circumstances make in such circumstances cannot be deemed wholly agentic. This is because 1) these choices are predicated *on* and situated *within* wider ideological norms which promote patriarchal values of dominance, male sexual entitlement and female acquiescence (Harris et al., 2005; Ahrens et al., 2010) and 2) the women making these choices are subject to material, psychological and structural constraints arising out of the intersections of gender and social status over which they have little control (Heise et al., 1998; Hale and Vazquez, 2011). Combined, these processes fuel the prevalence and persistence of violence against women and limit agency. The current study has focused on women who are pregnant, disabled or, living with HIV, however the concept of “ties that bind us” is an important one for all women. Greater recognition of sexual abuse as lifespan trauma and sustained *integrated* action on violence prevention for children *and* women is therefore essential.

## STRENGTHS AND LIMITATIONS

The strengths of the current study include the foregrounding of differential experience of sexual violence within a unifying intersectional framework which includes attention to patriarchy, agency and social circumstances. This has revealed unique insights into the specificities of what is a universal problem. Limitations of the study lie in the sampling methods used, for example, only participants who had experienced IPV were included and only women who were in contact with a support agency were included. This means that the voices of women unable or unwilling to access services or, who may be prevented from accessing services have not been included in this study; women who may be at even greater risk of violence than those in contact with NGOs. Research is also needed among women who are pregnant, disabled and living with HIV and who are *not* subject to IPV to determine the ways in which the intersectional framework can generate insights into lives not impacted by violence.

## DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because this dataset includes transcripts of qualitative interviews with women, several of whom were in violent relationships at the time of the research; given the small size of the countries in which the study was conducted, there is a risk that some of the women may be identifiable and this could jeopardize their safety. Requests to access the datasets should be directed to a.d.jones@hud.ac.uk.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by The University of Huddersfield, School of Human and Health Sciences Research Ethics Committee. The patients/



participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

AJ: grant capture, conceptualization, analysis, writing, and editing.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fsoc.2021.623661/full#supplementary-material>.

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# Swedish and Norwegian Police Interviewers' Goals, Tactics, and Emotions When Interviewing Suspects of Child Sexual Abuse

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As the suspect interview is one of the key elements of a police investigation, it has received a great deal of merited attention from the scientific community. However, suspect interviews in child sexual abuse (CSA) investigations is an understudied research area. In the present mixed-methods study, we examine Swedish ( $n = 126$ ) and Norwegian ( $n = 52$ ) police interviewers' self-reported goals, tactics, and emotional experiences when conducting interviews with suspected CSA offenders. The quantitative analyses found associations between the interviewers' self-reported goals, tactics, and emotions during these types of suspect interviews. Interviewers who reported experiencing more negative emotions were more likely to employ confrontational tactics. Specifically, anger was positively associated with the goal of obtaining a confession and with aggressive tactics like raising one's voice and emphasizing the seriousness of the crime. Frustration and disgust displayed similar patterns. Somewhat contrasting these quantitative results, the thematic analysis identified a strong consensus that emotions should not and do not affect the police interviewers' work. Furthermore, the police interviewers described a range of strategies for managing emotions during the interview and for processing their emotional reactions afterwards. The present findings highlight the relevance of emotional processes in CSA suspect interviews and provide an initial exploration of the potentially complex relationship between the goals, tactics, and emotional experiences of police interviewers who question CSA suspects.

**Keywords:** police, interrogation, suspect, child sexual abuse, Norway, Sweden, investigative interview, emotion

## INTRODUCTION

Criminal investigations concerning alleged child sexual abuse (CSA) presents a challenge for legal practitioners worldwide. As corroborative evidence is often scarce, the statements provided by child witnesses and suspects typically constitute the primary sources of information (Ernberg et al., 2018). During the last four decades, a considerable amount of research has increased our knowledge of forensic child interviewing during CSA investigations (see e.g., Brubacher et al., 2019). Likewise, a large body of psychological research on suspect interviewing has developed over the last several decades. Much of this literature is focused on risk factors for false confessions (Kassin et al., 2010). Other parts of the literature have been aimed at developing interviewing methods that increase the amount of accurate information obtained while questioning suspects

(Mac Giolla and Granhag, 2017). This latter part of the literature has demonstrated that non-accusatory techniques that are focused on gathering information, rather than obtaining confessions, are more effective than confrontational, accusatory techniques (e.g., minimization; Meissner et al., 2014; Luke and Alceste, 2020). However, research is scarce regarding practitioners' experiences of interviewing suspected CSA offenders. In the present study, we aimed to address this gap by examining Swedish and Norwegian police interviewers' self-reported goals, tactics, and emotions when questioning suspects of sexual abuse against a child. Given the low prosecution rate for CSA offenses, there is an urgency for research exploring the current procedures used when investigating these crimes, and their accordance with evidence-based methods (Ernberg et al., 2020).

The lack of research on how to interview suspected CSA offenders poses numerous problems. First, investigating cases of CSA can be challenging, as it includes being exposed to potentially traumatic material or information (Burns et al., 2008; Powell et al., 2014). This may cause these investigations to be emotionally demanding and can even lead to secondary traumatic stress and burnout among professionals (Perez et al., 2010; Bourke and Craun, 2014; Turgoose et al., 2017; Seigfried-Spellar, 2018). Second, perpetrators of CSA differ from non-sex offenders in numerous ways (e.g., more likely to suffer from mental illness, anxiety, low self-esteem, and have greater social deficits, but less likely to have lifestyle instability and antisocial disorder; Whitaker et al., 2008), which may impact on the suitability of different interview tactics. Third, convicted CSA perpetrators have reported a strong internal need to confess to their crimes, compared to general violent offenders or those convicted of raping adults (Gudjonsson and Sigurdsson, 2000). Yet, in Swedish court cases involving CSA, only 31% of defendants admitted guilt during their trial (Magnusson et al., 2018). According to the Pathways model (Ward and Siegert, 2002), there are four psychological mechanisms involved in sexual offending against children. One of the mechanisms—cognitive distortions—may constitute an obstacle for offenders to recognize that they have committed a crime. The interview techniques used by police need to challenge any distorted excuses, encourage offenders to admit to their wrongdoings, while at the same time making sure to minimize the risk of obtaining false confessions. Establishing a respectful and supportive environment is critical to increase the suspect's confidence to engage in the process and provide an honest and detailed response (Read et al., 2009).

The use of different interviewing tactics might vary depending on the type of crime. A study examining 59 police interviews from the UK (Oxburgh et al., 2014) found that suspects of CSA were asked significantly more inappropriate questions compared to suspects of child or adult murder. Furthermore, a Swedish study (Holmberg and Christianson, 2002) that compared self-reported interview experiences between convicted sex offenders (including offenses against both children and adults) and murderers found several differences between crime types. Although only a minority of murderers and sex offenders described their interviewers as aggressive or explicitly

confrontational, sex offenders described experiencing less open-minded attitudes, cooperation, and more coercion than did murderers. A majority of the sex offenders experienced stress during the interview, and significantly more sex offenders described a lack of being respected compared to the murderers. Moreover, police interviews marked with dominance (compared to interviews marked with humanity) were associated with a higher proportion of denials. However, it is unclear whether a dominant approach led to denials, or if denying resulted in a negative response by the interviewer. On a similar note, a study based on interviews with convicted sex offenders in Australia reported that sex offenders perceived ethical interviewing and displays of humanity to increase the likelihood of a confession (Kebbell et al., 2010). Despite the findings described above, the use of empathy in police interviews with suspects of sexual abuse has shown no direct effect on the amount of information elicited (Oxburgh and Ost, 2011).

Although we lack data to draw firm conclusions, it is possible that the type of crime influences the way the interviewer conducts the suspect interview, which in turn might affect the likelihood of eliciting information. This raises the question of how police interviewers are affected by the nature of the crime, and how their emotions potentially affect their goals and tactics. Many emotional demands are put on law enforcement and extensive research has examined the causes and consequences of stress and traumatic work experiences (e.g., Toch, 2002; Perez et al., 2010; Seigfried-Spellar, 2018). The focus has mainly been on how work-related stressors impact the psychological health of police officers. Thus, we have identified some important aspects that have received limited attention, namely if and how emotions influence how police interviewers perform their work. This is of particular interest in cases of CSA, as these investigations have been shown to be perceived as especially distressing (Huey and Kalyal, 2017).

Emotions can influence human behavior and decision making in a number of ways that may impact the conduct of suspect interviews. First, specific emotions are associated with cognitive appraisals (Scherer and Moors, 2019) that may shape interviewers' perception of guilt and responsibility. For instance, anger can increase the perception of criminal intent behind ambiguous actions and promote punitiveness (Ask and Pina, 2011) and may increase the attribution of guilt to a suspect under investigation (Sambrano et al., 2020). Second, emotional states influence the type of information processing that an individual is likely to engage in. For instance, it has been shown that police investigators who experience anger tend to process case materials more superficially, and thus rely more on heuristics, than colleagues who experience sadness (Ask and Granhag, 2007). Third, affective states have been found to influence people's strategies in social interactions. For instance, people in a happy (vs. sad) state tend to rely on more direct, less elaborate strategies when spontaneously interacting with, making requests from, negotiating with, and trying to persuade others (Forgas, 2002). Relatedly, specific emotions are associated with distinct action tendencies, which facilitate behavior congruent with the current emotional state (Frijda et al., 1989). For instance, anger is associated with the tendency to approach and



confront the source of the emotion (Carver and Harmon-Jones, 2009), whereas fear is associated with avoidance and withdrawal (Lerner and Keltner, 2001).

Studies that directly examine the relationship between emotional experiences and interviewer behavior are scarce. One notable example, highly relevant to the present study, is the recent study by Sambrano et al. (2020). They experimentally induced specific emotions (happiness, sadness, and anger) and observed their influence on mock detectives' preference for interrogation tactics in a hypothetical crime scenario. Across two experiments, while all groups showed a preference for benevolent (empathetic) over hostile (guilt-confirming) tactics, this preference was more pronounced among sad participants than among angry and happy participants. This finding is consistent with the theoretical assumption that emotions associated with certainty appraisals (e.g., anger, happiness) promote confirmation-seeking behaviors, whereas uncertainty-related emotions (e.g., sadness) promote more elaborate, open-minded thinking, and action (Tiedens and Linton, 2001; Lerner and Tiedens, 2006). In sum, these results raise the possibility that the behavior of police interviewers questioning CSA suspects may be influenced by the emotions they experience in response to the nature and content of the case.

The current data collection took place in Sweden and Norway. Although the neighboring countries have much in common with regard to their societal structures, legislations, and criminal investigation practices, there are some key differences in terms of their focus on research-based interviewing (Fahsing et al., 2016). In Norway, a shift toward more research-based police practices began after a number of judicial scandals involving coercive interrogation techniques. In 2002, the Police University College commissioned a national model for investigative interviewing (KREATIV; Fahsing and Rachlew, 2009) that was heavily influenced by the PEACE model from England and Wales (Milne and Bull, 1999). The KREATIV training program focuses on teaching research-based information-gathering techniques for interviewing victims, witnesses, and suspects (Fahsing et al., 2016). The program is now an integral part of the basic education to all Norwegian police officers. In addition, the Norwegian Police University College offers specialized courses in investigative interviewing of adults and the handling of sexual crimes investigations which include some interview training (Detective superintendent C. Tombre, personal communication, August 30, 2019). However, there are no specific guidelines for suspect interviews in CSA cases. While substantial organizational changes have occurred through the implementation of KREATIV, studies are lacking regarding the quality of Norwegian interview practices following the reform.

Unlike Norway, Sweden has not implemented a national interview model that all police interviewers are required to follow. However, Swedish police interviewers are by law not allowed to use threats, coercive techniques including sleep or food deprivation, promises of leniency, or to deceive the suspect (the Swedish Code of Judicial Procedure, chap 23, §6). Furthermore, the police academies across Sweden focus primarily on information-gathering techniques and advise against using accusatory methods (Granhag et al., 2013). Field and laboratory research from suspect interviews involving a variety of different

crimes point toward the use of both information-gathering and more confrontational methods among Swedish police interviewers (Granhag and Magnusson, 2017; Mac Giolla and Granhag, 2017). Similar to Norway, Sweden has not implemented any specialized interviewing guidelines for questioning suspected CSA offenders. However, police interviewers can take a course on investigating crimes against children which include some training in interviewing suspects (E. Norrman, course leader, personal communication, September 9, 2020).

The present mixed-methods survey aimed to descriptively examine Swedish and Norwegian police interviewers' self-reported interview goals, tactics, and emotions when questioning suspects in CSA cases. Using a series of quantitative analyses, we aimed at examining the interrelationships between interview goals, tactics, and experienced emotions. Due to differences between countries with regard to the implementation of a research-based investigative interview model, we were also interested in comparing the reports of goals, tactics, and emotions given by Swedish and Norwegian police interviewers. Lastly, we aimed to qualitatively explore how practitioners report managing different types of emotions that may arise during interviews with CSA suspects.

## MATERIALS AND METHODS

The study was pre-registered on the Open Science Framework ([https://osf.io/jtac5/?view\\_only=e3b14c4113144dd3a857448c4ec6b913](https://osf.io/jtac5/?view_only=e3b14c4113144dd3a857448c4ec6b913)). The registration included a recruitment strategy and plan for exploratory analyses. We followed the recruitment plan as specified, but we have deviated from the exploratory analysis plan in order to simplify the presentation of results and to address reviewer comments.

### Participants and Recruitment

A total of 127 Swedish police interviewers responded to the survey. However, one participant did not meet the current inclusion criterion of having experience conducting suspect interviews during the last 5 years. The final Swedish sample thus consisted of 126 participants (105 women, 21 men,  $M_{\text{age}} = 45.2$  years,  $SD = 9.1$ ), with 101 police officers (2 years of training at the police academy) and 24 civilian officers (academic degree in other relevant fields, for example, criminology or psychology). The interviewers had between 0 and 25 years ( $M = 7.0$ ,  $SD = 5.6$ ) of experience conducting interviews with CSA suspects. The majority (80.2%) had finished the course on investigating crimes against children which includes training on interviewing suspects. The Swedish survey was distributed during a national conference for specialized child interviewers, with a response rate of 79% of the attendees. According to the Prosecution Development Centre Gothenburg (2016), there are around 305 active child interviewers in Sweden. Based on this estimate, our sample would represent 41.3% of the current population of child interviewers in Sweden.

With regard to the Norwegian data collection, a total of 52 police interviewers participated in the survey (45 women, 7 men,  $M_{\text{age}} = 40.0$  years,  $SD = 8.02$ ). All except three

participants, who chose not to report their employment status, had a background as police officers (this requires a bachelor's degree from the Police University College, or equivalent training before the current training program was implemented). The Norwegian participants had between 0 and 24 years ( $M = 8.9$ ,  $SD = 6.5$ ) of experience interviewing suspects in CSA cases. All participants except one (98.1%) had completed the KREATIV training program, and 40.3% had completed the training course on investigating sexual crimes which includes some suspect interview training. Due to varied recruitment methods, we were unable to calculate a response rate for the Norwegian sample.

## Survey

The survey consisted of six different sections. First, the survey included a cover page with information about the research project and the participants' ethical rights (e.g., participation is voluntary and can be withdrawn at any time). All participants were asked to provide their informed consent to take part in the survey. The cover page also included a screening question asking if they had experience conducting interviews with CSA suspects during the last 5 years. Participants who did not have this experience were informed that they were not eligible for participation and thanked for their time. The second section consisted of demographic questions about the participants' experience and previous training in forensic interviewing.

The third section comprised a list of different interview tactics for questioning CSA suspects adapted from the current research literature (see **Table 1**). The participants were asked to

indicate how often they used each tactic. The Likert scales ranged from (1) *Never* to (5) *Always*. The order in which the tactics were presented was reverse counterbalanced. The fourth section consisted of a list of interview goals formulated as statements (see **Table 2**) adapted from a previous police survey. The respondents were asked to indicate to what extent they agreed or disagreed with each of the goals. The scale ranged from (1) *Do not agree at all* to (5) *Completely agree*. The order in which the different goals were presented was reverse counterbalanced.

In the fifth section, the respondents were asked to assess how often they found themselves in emotionally demanding situations during their work with interviewing CSA suspects (1 = *Never*, 5 = *Always*), and to what extent their work with interviewing CSA suspects is emotionally demanding (1 = *To a very low extent*, 5 = *To a very high extent*). The respondents were also asked to describe how often they experienced a range of different emotions during their interviews with CSA suspects. The scale was adapted from Ask and Pina (2011), and the scale step for each item ranged from (1) *Never*, to (5) *Always*. The order in which the emotions were presented was reverse counterbalanced, with one-half of the participants rating the emotions in reversed order. Lastly, the respondents were asked an open-ended question about how they manage different emotions that may arise inside them during a suspect interview in CSA cases.

The survey was created in Swedish and translated to Norwegian using forward and back-translations. One of the authors, a native Norwegian researcher fluent in Swedish, initially translated the survey in consultation with another researcher fluent in both Norwegian and Swedish. After the survey was translated, a third researcher fluent in both languages reviewed the translations, and all three agreed upon the final version of the translation. The Norwegian survey was thereafter translated back to Swedish by a native Swedish speaker fluent in Norwegian. Some minor changes were made during this stage of the process. Both versions of the survey were pre-tested prior to data collection for clarity and terminology. The demographic questions regarding training were based on the course curriculums offered in each country.

## Procedure Design

We used a QUAN+qual embedded mixed-methods design (Creswell and Clark, 2017) in which quantitative and qualitative

**TABLE 1 |** List of different interview tactics.

Tactic	Survey statement
Treat friendly	You treat the suspect in a friendly way
Raise voice	You raise your voice during the conversation with the suspect
Care about feelings	You show that you care about the suspects feelings
Interrupt	You interrupt the suspect while he/she is talking
Common interests	You try to find common interests to talk to the suspect about
Boss	You show who's boss
Show respect	You show respect for the suspect as a human being
Confront with info	You confront the suspect with information about the case
Emphasize seriousness	You put pressure by emphasizing the seriousness of the situation
Let suspect talk	You let the suspect finish talking even if he/she talks about irrelevant details
Active listening	You actively listen to what the suspect says
Show what you think	You show the suspect what you think about the criminal act
Unanticipated questions	You ask unanticipated questions
Claim suspect has more info	You claim to know that the suspect has more information than he/she tells you

Statements as presented in the survey. Participants indicated how often they used each tactic on a Likert scale ranging from *Never* (1) to *Always* (5).

**TABLE 2 |** List of different interview goals.

Goals	Survey statement
Confession	Receiving a confession from the suspect is a high priority
Full report	Receiving the suspect's full report is a high priority
Unknown information	Receiving previously unknown information during an interrogation is a high priority
Explanation	Receiving the suspect's explanations regarding existing investigative information is a high priority

Statements as presented in the survey. Participants indicated to what extent they agreed to each goal on a Likert scale ranging from *Do not agree* (1) to *Completely agree* (5).

data answered different research questions, were collected at the same occasion, analyzed separately, and then merged. In this study, quantitative data (e.g., Likert scale responses) from the survey were used to investigate Swedish and Norwegian police interviewers' goals, tactics and emotions, and the potential relationship between variables. The qualitative data (open-ended responses) from the survey were used to explore how police interviewers manage emotions that arise during suspect interviews.

### Data Collection

Verbal information and a pen-and-paper version of the survey was presented to approximately 160 Swedish practitioners during a national conference for specialized child interviewers in March 2019. The same recruitment method was used during a Norwegian national conference in October 2019 for approximately 100 specialized child interviewers. However, unlike in Sweden, the majority of the Norwegian child interviewers did not carry out interviews with CSA suspects. Due to this unforeseen circumstance, we carried out a second data collection with Norwegian practitioners between March and June 2020. For practical reasons following the coronavirus outbreak, we used an online version of the survey. Invitations to participate and a link to the survey was sent out to five large police districts across Norway. The survey was also distributed on social media via Linked-In, Twitter, and Facebook. The participants did not receive any compensation for taking part in the survey.

## Analyses

### Quantitative Analyses

For the quantitative analyses, we combined the data from the Swedish and Norwegian samples ( $N = 178$ ). We analyzed police interviewers' responses to the quantitative items primarily using bivariate correlations, to examine the relationships between goals, tactics, and emotions. Using the emotion adjectives for which participants provided endorsement ratings, we created five composites based on the conceptual groupings of the emotion words: *anger* (angry, mad;  $\alpha = 0.81$ ; all reliability coefficients calculated using polychoric correlations), *disgust* (disgusted, sickened;  $\alpha = 0.66$ ), *interest* (engaged, interested;  $\alpha = 0.76$ ), *fear* (nervous, scared, worried;  $\alpha = 0.82$ ), *sadness* (sad, sorrowful;  $\alpha = 0.60$ ), and *frustration* (frustrated, irritated;  $\alpha = 0.62$ ). Additionally, we examined the extent to which interviewers from the Swedish and Norwegian samples differed in terms of their self-reported goals, tactics, and emotions by calculating standardized mean differences ( $d$ ) between the samples.

### Qualitative Analyses

For the qualitative analyses, we combined the Swedish ( $N = 120$ ) and Norwegian ( $N = 33$ ) police interviewers' responses to the open-ended question about strategies for managing emotions during CSA suspect interviews. The responses were analyzed using data-driven thematic analysis (Braun and Clarke, 2006). Initially, two of the authors separately created code labels that closely matched the content of the written responses. All codes were cross-compared and merged to a thematic structure including themes and sub-themes. Disagreements were resolved through discussion, and the data was re-coded into the final

thematic structure. To assess the inter-rater reliability of the coding system, a research assistant coded 20% of the data following the thematic structure. The inter-rater reliability, estimated using Gwet's AC1 for each subtheme, showed very good agreement ( $M = 0.954$ , range = 0.936–0.964). Lastly, quotations to illustrate the qualitative process were selected, edited to facilitate reading, and translated to English.

## RESULTS

### Quantitative Analysis: Self-Reported Interview Goals, Tactics, and Emotions

#### Interview Goals

Swedish police interviewers reported prioritizing obtaining a confession ( $M = 2.61$ ,  $SD = 1.11$ ) to a greater extent than Norwegian interviewers ( $M = 2.09$ ,  $SD = 0.98$ ),  $d = 0.47$  [0.14, 0.79]. Interviewers in the Swedish ( $M = 4.50$ ,  $SD = 0.76$ ) and Norwegian ( $M = 4.69$ ,  $SD = 0.47$ ) samples reported prioritizing to a similar extent getting a complete account from the suspect,  $d = -0.28$  [-0.60, 0.05]. Norwegian interviewers reported prioritizing obtaining previously unknown information ( $M = 4.58$ ,  $SD = 0.64$ ) to a greater extent than Swedish interviewers ( $M = 4.06$ ,  $SD = 0.97$ ),  $d = -0.56$  [-0.89, -0.23]. Swedish interviewers reported prioritizing getting an explanation for existing investigative information ( $M = 4.60$ ,  $SD = 0.72$ ) to a greater extent than Norwegian interviewers ( $M = 4.21$ ,  $SD = 0.82$ ),  $d = 0.49$  [0.17, 0.82].

#### Interview Tactics

Table 3 displays descriptive statistics for each sample's self-reported interview tactics, as well as standardized effect sizes estimating the differences between each sample for each tactic. Both the Swedish and Norwegian samples reported using nearly all of the listed tactics with some regularity. All tactics were reported with mean and median frequencies of use above the lower endpoint of the scale (i.e., 1), with the exception of "showing the suspect what you think about the crime" ( $Mdn = 1$ ).

Some notable differences between the Swedish and Norwegian samples were evident. For example, Swedish interviewers reported raising their voice,  $d = 0.64$  [0.31, 0.97], and emphasizing the seriousness of the offense,  $d = 0.62$  [0.29, 0.94], more frequently than Norwegian interviewers, and Swedish interviewers reported approaching the suspect in a friendly manner less frequently than Norwegian interviewers,  $d = -0.50$  [-0.82, -0.17]. Norwegian interviewers also reported finding common interests with the suspect,  $d = -0.65$  [-0.97, -0.32], and saying that the suspect had more information than they were providing,  $d = -0.56$  [-0.89, -0.23], more frequently than Swedish interviewers.

#### Emotions

Table 4 displays descriptive statistics for each sample's self-reported emotions, as well as standardized effect sizes estimating the differences between each sample for each emotion composite. Both the Swedish and Norwegian samples reported experiencing nearly all the listed emotions with some regularity. All emotion composites had means

**TABLE 3 |** Descriptive statistics and sample differences for reported interview tactic usage.

Strategy	Sweden				Norway				<i>d</i> [95% CI]
	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Range</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Range</i>	
Treat friendly	4.83	0.37	5	4, 5	5.00	0.00	5	5, 5	−0.50 [−0.82, −0.17]
Raise voice	1.95	0.63	2	1, 3	1.55	0.54	2	1, 3	0.64 [0.31, 0.97]
Care about feelings	3.86	0.86	4	2, 5	3.90	0.63	4	3, 5	−0.05 [−0.38, 0.27]
Interrupt	2.16	0.54	2	1, 4	2.12	0.38	2	1, 3	0.09 [−0.24, 0.41]
Common interests	2.58	1.13	3	1, 5	3.35	1.14	3	1, 5	−0.65 [−0.97, −0.32]
Boss	3.22	1.10	3	1, 5	3.28	1.07	3	1, 5	−0.05 [−0.38, 0.27]
Show respect	4.89	0.44	5	1, 5	5.00	0.00	5	5, 5	−0.30 [−0.62, 0.03]
Confront with info	4.10	0.81	4	1, 5	4.35	0.62	4	3, 5	−0.32 [−0.65, 0.00]
Emphasize seriousness	2.98	0.86	3	1, 5	2.42	0.89	2	1, 4	0.62 [0.29, 0.94]
Let suspect talk	3.68	0.70	4	1, 5	3.46	0.64	3	2, 5	0.32 [0.00, 0.65]
Active listening	4.88	0.33	5	4, 5	4.85	0.36	5	4, 5	0.10 [−0.22, 0.43]
Show what you think	1.37	0.58	1	1, 3	1.46	0.58	1	1, 3	−0.15 [−0.48, 0.17]
Unanticipated questions	3.15	0.75	3	1, 5	3.06	0.72	3	1, 4	0.12 [−0.21, 0.44]
Claim suspect has more info	2.10	0.92	2	1, 5	2.77	1.62	2	1, 5	−0.56 [−0.89, −0.23]

*n* = 126 for Sweden and *n* = 52 for Norway. *M* = mean, *SD* = standard deviation, *Mdn* = median, *d*[95% CI] = standardized mean difference with 95% confidence interval.

**TABLE 4 |** Descriptive statistics and sample differences for reported experienced emotions.

	Sweden				Norway				<i>d</i> [95% CI]
	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Range</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Range</i>	
Anger	2.23	0.74	2.00	1.00, 4.00	2.03	0.75	2.00	1.00, 3.50	0.26 [−0.07, 0.58]
Disgust	2.27	0.81	2.00	1.00, 4.50	1.86	0.53	2.00	1.00, 3.00	0.54 [0.22, 0.87]
Sadness	2.20	0.76	2.00	1.00, 4.00	2.09	0.80	2.00	1.00, 4.00	0.14 [−0.19, 0.47]
Fear	1.75	0.56	1.67	1.00, 4.00	1.80	0.61	1.67	1.00, 3.00	−0.09 [−0.42, 0.23]
Interest	4.38	0.60	4.50	1.00, 5.00	4.11	0.61	4.00	2.00, 5.00	0.44 [0.11, 0.77]
Frustration	2.75	0.53	3.00	1.00, 4.00	2.68	0.66	3.00	1.00, 4.50	0.11 [−0.21, 0.44]

*n* = 126 for Sweden and *n* = 52 for Norway. *M* = mean, *SD* = standard deviation, *Mdn* = median, *d* [95% CI] = standardized mean difference with 95% confidence interval.

and medians above the lower endpoint of the scale. Swedish interviewers reported to more frequently feel interested, *d* = 0.44 [0.11, 0.77], and disgusted, *d* = 0.54 [0.22, 0.87], during suspect interviews, compared to Norwegian interviewers.

Overall, participants on average reported that they experienced emotionally demanding situations in their work rarely or sometimes (*M* = 2.62, *SD* = 0.80). Additionally, Swedish police interviewers (*M* = 2.73, *SD* = 0.77) reported being more frequently in emotionally demanding situations compared to Norwegian interviewers (*M* = 2.37, *SD* = 0.82), *d* = 0.45 [0.12, 0.78]. On average, participants reported that they found their work emotionally demanding sometimes (*M* = 3.08, *SD* = 1.05). However, Swedish police interviewers (*M* = 2.94, *SD* = 0.98) reported that their work is emotionally demanding to a lesser extent compared to Norwegian interviewers (*M* = 3.40, *SD* = 1.14), *d* = −0.43 [−0.76, −0.11].

### Correlations Between Goals, Tactics, and Emotions

**Table 5** displays the correlations between interview goals and self-reported use of tactics. Several tactics have a significant

correlation with the four goals. The goal of obtaining a confession was significantly positively correlated with raising one's voice, emphasizing the seriousness of the offense, showing the suspect what you think about the crime, and claiming that the suspect has more information. The goal of obtaining a full report was significantly positively correlated with confronting the suspect with information and engaging in active listening and significantly negatively correlated with interrupting the suspect. The goal of obtaining previously unknown information was significantly positively correlated with finding common interests with the suspect, confronting the suspect with information, and with claiming the suspect has more information. The goal of obtaining an explanation for the offense was significantly positively correlated with showing the suspect who is boss and confronting the suspect with information.

**Table 6** displays the correlations between the six emotion composites and four self-reported goals for suspect interviews. As can be seen, self-reported experiences of anger and frustration were significantly positively correlated with the goal of obtaining a confession. Additionally, experiences of disgust were negatively correlated with the goal of obtaining



**TABLE 5 |** Bivariate correlations and 95% confidence intervals of interview tactics and goals.

	Confession	Full report	Unknown information	Explanation
Treat friendly	−0.038 [−0.184, 0.109]	0.103 [−0.045, 0.246]	−0.018 [−0.164, 0.129]	−0.115 [−0.258, 0.032]
Raise voice	<b>0.173 [0.027, 0.312]</b>	−0.062 [−0.207, 0.085]	−0.140 [−0.281, 0.006]	0.011 [−0.136, 0.157]
Care about feelings	−0.023 [−0.169, 0.124]	0.126 [−0.021, 0.268]	0.030 [−0.117, 0.176]	0.073 [−0.075, 0.217]
Interrupt	0.042 [−0.106, 0.187]	<b>−0.154 [−0.294, −0.008]</b>	−0.010 [−0.156, 0.137]	0.008 [−0.139, 0.154]
Common interests	−0.043 [−0.189, 0.104]	0.045 [−0.103, 0.190]	<b>0.170 [0.024, 0.309]</b>	−0.037 [−0.183, 0.110]
Boss	0.136 [−0.011, 0.277]	0.034 [−0.114, 0.179]	0.032 [−0.115, 0.178]	<b>0.158 [0.012, 0.298]</b>
Show respect	−0.022 [−0.168, 0.125]	0.105 [−0.043, 0.248]	0.033 [−0.114, 0.179]	−0.024 [−0.170, 0.123]
Confront with info	0.075 [−0.073, 0.219]	<b>0.156 [0.010, 0.296]</b>	<b>0.170 [0.024, 0.309]</b>	<b>0.265 [0.123, 0.396]</b>
Emphasize seriousness	<b>0.328 [0.191, 0.453]</b>	−0.058 [−0.203, 0.089]	0.058 [−0.089, 0.203]	0.102 [−0.045, 0.245]
Let suspect talk	0.023 [−0.124, 0.170]	0.117 [−0.030, 0.259]	−0.013 [−0.159, 0.134]	0.041 [−0.107, 0.186]
Active listening	−0.023 [−0.169, 0.125]	<b>0.166 [0.019, 0.305]</b>	−0.075 [−0.219, 0.072]	−0.019 [−0.165, 0.128]
Show what you think	<b>0.166 [0.020, 0.305]</b>	−0.092 [−0.236, 0.055]	0.084 [−0.063, 0.228]	0.021 [−0.126, 0.168]
Unanticipated questions	0.114 [−0.034, 0.256]	0.026 [−0.121, 0.172]	−0.015 [−0.161, 0.132]	0.009 [−0.138, 0.155]
Claim suspect has more info	<b>0.164 [0.017, 0.303]</b>	0.103 [−0.045, 0.246]	<b>0.268 [0.126, 0.399]</b>	0.066 [−0.082, 0.210]

Correlations whose 95% CI excludes 0 are displayed in boldface.

**TABLE 6 |** Bivariate correlations and 95% confidence intervals of emotion composites and interview goals.

	Anger	Disgust	Sadness	Fear	Interest	Frustration
Confession	<b>0.231 [0.087, 0.365]</b>	0.128 [−0.019, 0.270]	0.095 [−0.053, 0.238]	−0.091 [−0.235, 0.056]	0.075 [−0.072, 0.220]	<b>0.171 [0.025, 0.310]</b>
Full report	0.058 [−0.089, 0.203]	−0.084 [−0.228, 0.063]	0.033 [−0.114, 0.179]	0.080 [−0.068, 0.224]	0.098 [−0.049, 0.242]	0.100 [−0.047, 0.243]
Unknown information	−0.033 [−0.178, 0.115]	<b>−0.150 [−0.291, −0.004]</b>	0.030 [−0.117, 0.176]	0.009 [−0.138, 0.155]	−0.031 [−0.177, 0.116]	−0.002 [−0.149, 0.145]
Explanation	0.079 [−0.069, 0.223]	0.069 [−0.078, 0.214]	0.093 [−0.054, 0.237]	0.019 [−0.128, 0.166]	<b>0.197 [0.052, 0.334]</b>	−0.001 [0.148, 0.146]

Correlations whose 95% CI excludes 0 are displayed in boldface.

previously unknown information, and experiences of interest were positively correlated with the goal of obtaining an explanation for the offense.

Table 7 displays the correlations between the six emotion composites and the self-reported use of interview tactics. Self-reported experiences of anger were significantly positively correlated with raising one's voice, emphasizing the seriousness of the crime, and asking unanticipated questions, and anger was significantly negatively correlated with expressing care for the suspect's feelings. Experiences of disgust were positively correlated with raising one's voice, emphasizing the seriousness of the crime, asking unanticipated questions, and disgust was negatively correlated with treating the suspect in a friendly manner. Sadness was not significantly correlated with the self-reported use of any interview tactics. Fear was significantly negatively correlated with showing respect for the suspect and with claiming the suspect has more information. Interest was significantly positively correlated with expressing care for the suspect's feelings. Frustration was significantly positively correlated with raising one's voice and with emphasizing the seriousness of the offense.

## Qualitative Analysis: How Police Interviewers Manage Emotions

A total of 120 Swedish and 33 Norwegian police interviewers provided a written response to the open-ended question "How

do you manage different emotions that may arise within you in connection to an interview of a CSA suspect?" The thematic analysis revealed that a majority of police interviewers expressed that their emotions did not belong in the interview room, which is captured in the main theme *Putting emotions aside during the interview*. Furthermore, most police interviewers described how they tried to manage their emotions in different ways outside of the interview room, which is captured in the main theme *Coping with emotions afterwards*. Each theme had three subthemes, see Table 8.

### Putting Emotions Aside During the Interview

The consensus among respondents seemed to be that the interviewer's emotions should not be expressed during a suspect interview. Some police interviewers described this as an easy task (e.g., "It is a job I am used to and have learned to handle"), whereas other practitioners described how they in different ways had to work actively on putting their emotions aside by using different strategies. These strategies could be categorized into three different subthemes: (1) *Focus on one's professional role*, (2) *See the human behind the act*, and (3) *Take a break*.

#### Focus on One's Professional Role

The most frequently mentioned way to manage emotions during the interview was reminding oneself about one's professional role. The answers provided insight into different ways this could be

**TABLE 7 |** Bivariate correlations and 95% confidence intervals of interview tactics and emotion composites.

	Anger	Disgust	Sadness	Fear	Interest	Frustration
Treat friendly	−0.094 [−0.237, 0.054]	<b>−0.176 [−0.315, −0.030]</b>	−0.015 [−0.161, 0.132]	0.017 [−0.130, 0.164]	0.122 [−0.025, 0.264]	−0.014 [−0.160, 0.133]
Raise voice	<b>0.280 [0.139, 0.410]</b>	<b>0.278 [0.137, 0.408]</b>	−0.025 [−0.171, 0.122]	0.115 [−0.032, 0.258]	−0.097 [−0.240, 0.050]	<b>0.229 [0.086, 0.364]</b>
Care about feelings	<b>−0.159 [−0.299, −0.013]</b>	−0.116 [−0.258, 0.031]	0.102 [−0.045, 0.245]	0.137 [−0.010, 0.278]	<b>0.177 [0.031, 0.316]</b>	−0.080 [−0.252, 0.038]
Interrupt	0.090 [−0.057, 0.234]	0.095 [−0.053, 0.238]	−0.031 [−0.177, 0.117]	−0.042 [−0.187, 0.105]	−0.109 [−0.252, 0.038]	0.050 [−0.097, 0.196]
Common interests	−0.006 [−0.152, 0.141]	−0.015 [−0.161, 0.132]	0.045 [−0.102, 0.190]	0.090 [−0.057, 0.234]	0.120 [−0.027, 0.262]	−0.075 [−0.220, 0.072]
Boss	0.097 [−0.051, 0.240]	−0.012 [−0.158, 0.135]	−0.020 [−0.166, 0.127]	−0.100 [−0.243, 0.047]	0.061 [−0.086, 0.206]	−0.035 [−0.181, 0.112]
Show respect	−0.062 [−0.207, 0.085]	−0.054 [−0.200, 0.093]	−0.050 [−0.196, 0.097]	<b>−0.200 [−0.337, −0.055]</b>	0.081 [−0.067, 0.225]	−0.008 [−0.155, 0.139]
Confront with info	0.047 [−0.101, 0.192]	0.045 [−0.103, 0.190]	−0.100 [−0.243, 0.048]	−0.067 [−0.211, 0.081]	0.096 [−0.051, 0.240]	−0.022 [−0.168, 0.125]
Emphasize seriousness	<b>0.323 [0.185, 0.448]</b>	<b>0.280 [0.139, 0.410]</b>	0.141 [−0.006, 0.281]	0.139 [−0.008, 0.280]	−0.060 [−0.205, 0.088]	<b>0.335 [0.198, 0.459]</b>
Let suspect talk	0.020 [−0.127, 0.166]	−0.007 [−0.153, 0.140]	0.005 [−0.142, 0.152]	−0.103 [−0.246, 0.044]	0.134 [−0.013, 0.275]	−0.015 [−0.161, 0.132]
Active listening	−0.090 [−0.234, 0.057]	−0.073 [−0.217, 0.074]	−0.055 [−0.200, 0.093]	−0.081 [−0.225, 0.066]	0.076 [−0.072, 0.220]	−0.110 [−0.253, 0.037]
Show what you think	0.068 [−0.080, 0.212]	0.066 [−0.082, 0.211]	−0.029 [−0.175, 0.118]	−0.020 [−0.166, 0.127]	−0.058 [−0.203, 0.089]	0.092 [−0.056, 0.235]
Unanticipated questions	<b>0.160 [0.014, 0.300]</b>	<b>0.197 [0.051, 0.334]</b>	0.005 [−0.142, 0.151]	−0.057 [−0.202, 0.090]	0.079 [−0.068, 0.223]	0.115 [−0.032, 0.257]
Claim suspect has more info	0.100 [−0.047, 0.244]	0.007 [−0.140, 0.154]	−0.021 [−0.167, 0.126]	<b>−0.171 [−0.310, −0.025]</b>	−0.122 [−0.264, 0.025]	−0.064 [−0.209, 0.083]

Correlations whose 95% CI excludes 0 are displayed in boldface.

done. Oftentimes, remaining professional involved suppressing one's personal feelings:

You adopt a professional role where your own emotions are put aside. The goal is to get the suspect to talk, to put his/her experiences and knowledge about what happened into words. Show respect—gather the information that is needed to clarify guilt or innocence. My emotions are not expressed during the interview situation (Norwegian police officer, 17 years of experience interviewing CSA suspects).

Other strategies were keeping their guard up and not letting emotions arise in the first place, or not putting any personal judgement on the criminal act. Many interviewers found it helpful to focus on the task in order to avoid being emotional, and some described how it could also be a way of motivating oneself when facing tasks that were more challenging than others:

What can sometimes be difficult is to ask intimate questions related to the sexual parts, or to ask about more details on a specific topic (because you pressure the one being questioned). It is a kind of invasion of another person's private sphere, even though the situation has the framework that it has. I deal with this by convincing myself that it is natural to talk about this, and that the situation requires it. I do what I can to both appear and sound neutral. And sometimes I explain the reason for asking these questions (Norwegian police officer, 5 years of experience interviewing CSA suspects).

**TABLE 8 |** Overview of the thematic structure and the proportion of responses categorized into each sub-theme. (*n* = 153 respondents).

Theme	Sub-theme	Responses
Putting emotions aside during the interview	Focus on one's professional role	85 (55.6%)
	See the human behind the act	10 (6.5%)
	Take a break	8 (5.2%)
Coping with emotions afterwards	Share emotions with others	98 (64.1%)
	Take care of oneself	25 (16.3%)
	Reflect on the experience	9 (5.9%)

The thematic analysis is based on open survey answers from 120 Swedish and 33 Norwegian police interviewers.

Most officers attempted to suppress their feelings, but they also acknowledged that this could be a difficult task. One police officer explained how interviewing suspects of CSA could be especially stressful, particularly in cases where the same police officer had first interviewed the child victim:

It is okay to have emotions, but they must be handled the right way. If I experience too much emotion, I should leave the interview to my colleague. This is especially important if I have conducted a child interview that evoked a lot of feelings (Swedish police officer, 9 years of experience interviewing CSA suspects).

According to some police interviewers, controlling one's emotions was an ability developed by experience and thus got

easier over time. A few police interviewers revealed that they occasionally had failed to do so, which could result in them raising their voice against the suspect. These situations were described as a “loss of control” and thus not a planned strategy. Contrasting this common belief that emotions should not be expressed, a few argued that showing emotions could be a way of highlighting the seriousness of the situation. One police officer explained that it was not the initial strategy, but something one might have to resort to in exceptional cases:

I enter the room with an attitude of not knowing what has happened. I have received a story from a child and now I want to know the suspect's story. If the suspect does not take the child's story seriously, I might emphasize the gravity of the situation (Swedish police officer, 6 years of experience interviewing CSA suspects).

### ***See the Human Behind the Act***

Building a positive, open, and respectful environment was described as a way of gaining as much information as possible during the interview. This could be accomplished by trying to feel empathy for the suspect as a human being, without neglecting the seriousness of the crime that the suspect was accused of committing.

Some emotions can be good, like feeling sympathy for the person behind the crime. .../ The slightest sense on their part that you feel anger, contempt etc., means that you will be met with the same, and you will not get any answers. It is possible to get answers to very intimate questions and to push on specific questions if the person is treated with respect and without judgment (Swedish police officer, 10 years of experience interviewing CSA suspects).

In some cases, it could be difficult to feel empathy for the suspect. The answers revealed how it could be useful to try focusing on the suspect as a multifaceted person, with both good and bad sides, and not being judgmental.

It helps me to think “he did not know better,” “his home life is bad,” “lack of upbringing,” to have an explanation to myself (which I of course do not say). It is difficult when you want them to feel guilt (if they do not express it) and at the same time not make them feel bad (they are probably already feeling bad, plus it is not our job to handle such a thing) (Swedish police officer, 1 year of experience interviewing CSA suspects).

### ***Take a Break***

If negative emotions did arise during the interview, several police interviewers described how they tried to regain their focus by pausing shortly. Some mentioned how a break could relieve problematic emotions before continuing the interview: “If I feel frustrated I take a break and talk to my colleague in the back room, or a break with fresh air for us both” (Norwegian police officer, 6 years of experience interviewing CSA suspects). Others described how they could make sure to get a mental break in the middle of the interview by taking a sip of water, taking a deep breath, flipping through some papers or asking the prosecutor if he/she has any questions: “Note the feeling and ‘let

it pass’. Breathe. Take a break.” (Swedish police officer, 7 years of experience interviewing CSA suspects).

### ***Coping With Emotions Afterwards***

Interviewing suspected CSA offenders could evoke a range of emotions. However, as discussed in the previous main theme, most practitioners agreed that these emotions should not influence their interview procedures. Furthermore, some described that they rarely experienced any strong emotions during the interview, but instead experienced that negative emotions could sometimes appear afterwards. The police interviewers discussed different methods for coping with emotions after leaving the interview room. These strategies could be categorized into three different sub-themes: (1) *Share emotions with others*, (2) *Take care of oneself*, and (3) *Reflect on the experience*.

#### ***Share Emotions With Others***

The most frequently reported strategy for managing emotions was to share their feelings afterwards. Many police interviewers found support among their co-workers. Oftentimes, the police interviewers could vent to their closest colleagues who were knowledgeable about the situation. Since their co-workers shared similar experiences, this form of collegial support was described as very important for their emotion management.

I can talk to my co-workers after the interview about how I felt and how I feel now. I experience that it helps to talk about the emotions that arise. All my co-workers have a great understanding of the emotions that can be present. No one needs to feel stupid, or like it is wrong or something like that (Swedish civilian officer, less than 1 year of experience interviewing CSA suspects).

The Swedish police interviewers also talked about the value of attending individual or group supervision sessions (typically led by a psychologist). This form of regular supervision was described in positive terms. However, some practitioners described that they did not have access to it on a regular basis. In contrast, the Norwegian police interviewers did not mention regular supervision as a strategy for managing emotions. Lastly, a few police interviewers reported that they sometimes shared their feelings with their partner or close friends. This could be challenging, however, as the police interviewers had to leave out case-specific information for sensitivity and confidentiality reasons.

#### ***Take Care of Oneself***

Another commonly reported strategy for managing emotions was to take care of their well-being, both mentally and physically. Many police interviewers stated that they went for a run or did other physical exercises after the interview to clear their mind and release any potential negative emotions. A few described other forms of physical activity, including going on walks outside in the fresh air. Some mentioned the importance of sleep for their mental well-being. Having hobbies and a rich private life was also described as a protective factor for managing emotions that can arise during their line of work.

Training and physical activity outside works if you feel it in your body. Being together with friends and family and keeping yourself busy with other things (Norwegian police officer, 10 years of experience interviewing CSA suspects).

One police officer highlighted that although physical activity or distractions was helpful, it did not replace the need for directly addressing the emotions.

“Exercising, doing completely other stuff, seeing the good world. This is, however, a kind of escape, and it is important to discuss the emotions in the group first.” (Swedish police officer, 5 years of experience interviewing CSA suspects).

### ***Reflect on the Experience***

Lastly, some police interviewers discussed the importance of reflecting upon the interview process and their performance. This could include self-reflection on how to improve for the next interview.

I always watch the video-recording of the interview and reflect on how it felt, and about my performance. I think this creates some distance to the case and my feelings, and I can learn from any potential mistakes (Swedish police officer, 5 years of experience interviewing CSA suspects).

Others emphasized the importance of reflecting on their own reactions, in order to understand them and learn from their experiences until the next case: “I reflect on my own emotions. Evaluate why they arose and what it triggered in me as a person.” (Swedish civilian officer, 5 years of experience interviewing CSA suspects).

## **DISCUSSION**

The present study sought to examine police interviewers' self-reported goals, tactics, and emotional experiences when questioning CSA suspects in a Scandinavian context. The Swedish and Norwegian interviewers reported largely similar profiles of emotional experiences when conducting these interviews. Reassuringly, interviewers appear to feel predominantly interested. This was the only feeling that, on average, occurs “often” according to the respondents' self-ratings. Negative emotions typically occur only “sometimes” or even “rarely.” Of these, feelings of frustration seem to be the most prevalent. Although the exact cause of frustration is not apparent from these ratings, they do imply that a failure to meet one's objective is not an uncommon experience when interviewing CSA suspects. Fear-related emotions, like feeling worried and scared, were the least frequently reported, suggesting that interviewers rarely experience a complete lack of control or a sense of threat in the interview room.

Two notable differences were observed between Swedish and Norwegian interviewers' reported emotions: Swedish respondents reported experiencing disgust and interest more frequently than their Norwegian counterparts. This might reflect a higher degree of personal involvement in CSA cases among

Swedish interviewers. This interpretation would be consistent with one of the systemic differences between the countries: In Sweden, the same interviewer is often involved in both the child victim and suspect interview. In contrast, Norwegian child interviewers often try to avoid interviewing the suspect in the same case (Detective superintendent Inger-Lise Brøste, personal communication, 30 August 2019). This difference became evident during data collection, where many Norwegian child interviewers did not meet the inclusion criterion of having experience conducting suspect interviews during the last 5 years. It seems plausible that a more extensive personal involvement in a case would generate more intense emotional reactions. This explanation is speculative, but it raises the interesting possibility that reducing personal involvement may be an effective measure to minimize unwanted emotional interference in criminal investigations.

The observed correlations between emotions and interviewing goals and tactics were typically weak. This is perhaps to be expected considering that respondents were asked to report generalities across several cases rather than reflect on any particular case. Nevertheless, we were able to detect a few patterns that deserve attention: First, the frequency of experiencing anger was positively associated with the goal of obtaining a confession and with aggressive tactics like raising one's voice, emphasizing the seriousness of the crime, and not caring about the suspect's feelings. From an emotion-theoretical perspective, these correlations make sense. The experience of anger is associated with action tendencies that facilitate confrontational and confirmation-seeking behavior (Lerner and Tiedens, 2006; Carver and Harmon-Jones, 2009). Second, the reported frequency of experiencing frustration displayed a similar pattern as anger, which may indicate that some interviewers resort to aggressive tactics when facing frustrating obstacles in the interview room. Third, disgust was similarly associated with aggressive tactics and negatively, albeit weakly, associated with the goal of obtaining previously unknown information. The fact that disgust is associated with avoidant action tendencies (Frijda et al., 1989) might explain why the emotion correlates with a reduced interest in further information. In addition, feelings of disgust are intimately associated with the act of moral condemnation (Chapman and Anderson, 2013), which may explain the link between the emotion and use of aggressive interview tactics.

It is important to note that our correlational data cannot distinguish between the different causal mechanisms that may produce the observed relationships between emotions and interview goals and tactics. For instance, the possibility that emotions precede the employment of goals and tactics (e.g., anger increases the motivation to obtain a confession) is equally plausible as the opposite causal direction (e.g., confession-seeking behavior produces frustrating suspect responses). Moreover, the correlations might be due to unspecified individual differences among interviewers (e.g., personality characteristics may influence both the likelihood of experiencing anger and the preference for aggressive interview tactics). This limitation notwithstanding, our correlational findings highlight the relevance of emotional processes in CSA suspect



interrogations and raise the need for further exploration of the topic.

Despite the quantitative results indicating that emotions do play a role in CSA suspect interviews, the participants asserted in their open-ended responses that emotions should not and do not affect their work. The qualitative analysis showed strong consensus regarding the importance of not expressing emotions during the suspect interview, or letting emotions influence their interview procedures. To achieve these aims, the police interviewers described several strategies for managing their emotional reactions and coping with emotions after the suspect interview. It is possible that a similar thematic structure would be applicable if asking police interviewers about managing emotions in investigations of other violent crimes. However, cases involving children are often perceived as especially distressing (Brown et al., 1999; Oxburgh et al., 2015; Huey and Kalyal, 2017). A few officers explicitly mentioned some unique aspects of CSA investigations that could be particularly challenging, for instance, having to ask intimate questions of a sexual nature. While this could be perceived as invading the private sphere of the suspect, it is a crucial task in a CSA investigation, illustrating the high demand put on the professionals.

In line with previous research emphasizing the importance of emotional support from co-workers as a coping aid (Burns et al., 2008; Powell et al., 2014), both Swedish and Norwegian officers frequently expressed that sharing emotions with colleagues was helpful. Interestingly, Swedish police officers also commonly mentioned the benefits of attending regular psychology sessions provided by their work, which was not discussed by the Norwegian officers. In previous studies, the attitudes toward receiving psychological support have varied, with the main reason for dissatisfaction being that psychologists lack specialized knowledge about investigating sensitive cases and thus came across as uncomfortable talking about specific topics (Powell et al., 2014). A fear of the possible repercussions of utilizing psychological support (e.g., that it is considered to be something negative if applying for promotion), and a stigma associated with officers seeking help has also been reported (Cullen et al., 2020; Foley et al., 2021). Furthermore, having understanding and knowledgeable supervisors is also important (Powell et al., 2014), as inadequate organizational support has been reported as a factor underlying burnout (Fansher et al., 2020).

Another aspect highlighted in the open-ended responses, was that the interview with the child victim might evoke many emotions, which was described as a complicating factor when trying to remain neutral in the subsequent interview with the suspect. While this contrasts previous findings that police interviewers used fewer negative emotional utterances during the interview of a CSA suspect if they had first interviewed the child (Oxburgh et al., 2006), it is possible that police interviewers manage to remain neutral, but that it is highly emotionally taxing for them.

The qualitative analysis also provided some insight into some police interviewers' goals of the suspect interview. Several officers described how their main task was to get the suspect to talk and provide his or her view on the allegations, while a few described how they emphasized the seriousness of the crime in order to evoke feelings of guilt in the suspect. Thus, based on

the open-ended responses, information-gathering tactics were much more common than accusatory techniques. Similarly, the quantitative results indicate that information-gathering goals (e.g., collecting previously unknown information and getting explanations for investigative information) were prioritized to a greater extent than obtaining a confession. Moreover, interview tactics focused on collecting information and building rapport (e.g., active listening, showing respect, and letting the suspect talk) were among those reported to be used most frequently, consistent with observational research examining the tactics used in countries that have implemented investigative interviewing approaches (see, e.g., Soukara et al., 2009).

Although the police organizations in Sweden and Norway share some similarities, there are significant systematic differences that could help shed light on the variations in tactics and goals across countries. With the implementation of KREATIV, the shift toward a research-based interview model occurred nearly two decades ago in Norway. While Sweden is currently working toward implementing a national model, it will take time before the entire police force has received training in the technique. The lack of a research-based interview model may help explain some of the differences observed between the two countries. For example, we observed that Swedish interviewers reported more frequently using confrontational tactics, such as raising one's voice and emphasizing the seriousness of the crime, whereas Norwegian interviewers reported using these tactics less. Swedish interviewers also reported prioritizing obtaining confessions to a higher degree than their Norwegian counterparts. These differences may be due, in part, to the KREATIV model emphasizing gathering information rather than seeking a confession (Fahsing et al., 2016). As Sweden continues to work toward implementing its new interview model, these differences may diminish over time.

Furthermore, both countries are currently lacking specialized interview guidelines focused on investigations involving alleged CSA. Given the nature of these cases (e.g., the scarcity of corroborative evidence: Ernberg et al., 2018), the development of research-based interview guidelines adapted for suspected CSA offenders may facilitate the police in their daily work. Indeed, research-based guidelines for CSA cases are especially important, given the quality of currently available practical recommendations. For example, the Reid Technique—an accusatory interrogation approach widely criticized by researchers and legal scholars (see, e.g., Kassin et al., 2010)—offers a manual on interrogations in CSA cases (Buckley, 2015), closely based on its more general system of interrogating suspects (Inbau et al., 2013), which advocates the use of problematic tactics (e.g., minimization; Luke and Alceste, 2020).

## LIMITATIONS

Some methodological limitations of the current research need to be addressed. First, the findings are correlational, and we can therefore not draw any conclusions regarding causality or directionality. Second, the data are based on retrospective self-reports from practitioners. Survey data can be affected by a range of response biases, including social desirability effects (Tourangeau et al., 2000). Furthermore, we asked the

participants about their general perceptions and experiences of interviewing CSA suspects. Their goals, tactics, and emotional experiences might differ between interviews depending on the situation at hand (e.g., the amount of corroborative evidence available, whether the suspect is cooperative or uncooperative). Due to limitations with self-reports, systematic field research is needed to study the techniques used by Swedish and Norwegian practitioners inside the interview rooms. Finally, our sample was relatively small (total  $N = 176$ ), and as a consequence, our ability to estimate small and subtle differences is limited. The small sample is especially concerning given that the correlations we observed between goal, tactics, and emotions were small in size. That being said, given that there are relatively few police interviewers in Sweden and Norway who conduct interviews with suspects of CSA, our sample nevertheless represents a substantial portion of the total population.

## CONCLUSIONS

This study set out to explore Swedish and Norwegian police interviewers' goals, tactics, and emotional experiences when questioning suspected CSA offenders. The quantitative data showed correlations between officers' self-reported emotional experience and the tactics they use and the goals they prioritize, suggesting that emotions play a role in the interview of suspected CSA offenders. In the qualitative analysis, however, participants asserted that emotions should not and do not affect their work. They described a range of different strategies that could be used to put emotions aside during the interview and instead manage them afterwards. Given the low prosecution rates and limited

access to corroborative evidence in CSA investigations (Ernberg et al., 2018), more research is needed to better understand how to effectively interview CSA suspects. The potential link between interviewers' goals, tactics, and emotional experiences should be kept in mind during the development of such guidelines.

## DATA AVAILABILITY STATEMENT

The quantitative data supporting the conclusions of this article will be made available in aggregated form by the authors on request, without undue reservation.

## ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

MM, MJ, and TL designed the study. MM, MJ, and MLS collected the data. MM and MJ carried out the qualitative analyses. TL and KA carried out the quantitative analyses. All authors discussed the results and worked on the manuscript.

## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.606774/full#supplementary-material>

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**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Greater Knowledge Enhances Complainant Credibility and Increases Jury Convictions for Child Sexual Assault

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Child sexual assault (CSA) cases reliant on uncorroborated testimony yield low conviction rates. Past research demonstrated a strong relationship between verdict and juror CSA knowledge such as typical delays in reporting by victims, and perceived victim credibility. This trial simulation experiment examined the effectiveness of interventions by an expert witness or an educative judicial direction in reducing jurors' CSA misconceptions. Participants were 885 jurors in New South Wales, Australia. After viewing a professionally acted video trial, half the jurors rendered individual verdicts and half deliberated in groups of 8–12 before completing a post-trial questionnaire. Multilevel structural equation modeling exploring the relationship between CSA knowledge and verdict demonstrated that greater CSA knowledge after the interventions increased the odds ratio to convict by itself, and that the judicial direction predicted a higher level of post-trial CSA knowledge in jurors than other expert interventions. Moreover, greater CSA knowledge was associated with heightened credibility perceptions of the complainant and a corroborating witness. At the conclusion of the trial, the more jurors knew about CSA, the higher the perceived credibility of both the complainant and her grandmother, and the more likely jurors were to convict the accused.

**Keywords:** jury decision making, child sexual abuse, educative information, expert evidence, judicial directions, witness credibility, deliberation, multilevel structural equation modeling

## INTRODUCTION

In Australia, child sexual assault (CSA) cases typically result in low conviction rates, possibly because of a lack of corroborative evidence to prove the alleged sexual abuse (Cossins, 2020) but also because of research findings suggesting a strong relationship between juror misconceptions about CSA, such as expectations that the victim will resist and immediately report the abuse (Quas et al., 2005; Cossins, 2008; Cossins et al., 2009), low assessments of complainant credibility (Gabora et al., 1993), and a high acquittal rate (Wundersitz, 2003; Fitzgerald, 2006; Goodman-Delahunty et al., 2017a,b). Several studies have documented juror uncertainty and/or lack of knowledge about children's reactions to sexual assault which is incongruent with responses of sexually abused children, especially when the abuser is known to the complainant (Cossins et al., 2009; Seymour et al., 2013). Jurors may disregard counter-intuitive evidence which contradicts common CSA beliefs and stereotypes, and may rely on misperceptions and erroneous stereotypes in the absence



of forensic evidence (Cossins and Goodman-Delahunty, 2013). This view is consistent with dual processing social persuasion theories of jury decision making showing that jurors may resort to quick, heuristic peripheral information processing in the absence of motivation or time to engage in more effortful central processing of substantive, scientific information (Salerno et al., 2017).

Prior studies have examined the effectiveness of specialized knowledge to counteract individual jurors' CSA misconceptions (Cossins et al., 2009; Goodman-Delahunty et al., 2010, 2011a). Specialized educative summaries were derived from results of empirical studies of the counter-intuitive behaviors of sexually abused children as well as information about children's memory, reliability and suggestibility (Goodman-Delahunty et al., 2017a). Two intervention sources presented the educative information to mock jurors: (a) expert witness evidence; or (b) the presiding judge, in the form of a specially drafted educative judicial direction to jurors. Expert evidence in CSA trials is permitted in five out of six Australian jurisdictions<sup>1</sup>, but remains under-utilized in practice (Shead, 2014). The second source is not permissible under Australian law, but is allowed in New Zealand when a complainant is <6 years of age [Section 21(3), *Evidence Act* 1908 (NZ)]. A comparison of the effectiveness of these two interventions is important to inform legal practitioners about the efficacy of expert evidence and to consider law reform proposals regarding judicial directions. Other legal mechanisms to reduce jury bias, such as jury selection, were not tested since prospective jurors cannot be questioned before empanelment in Australian courts, where juror selection is limited to a few peremptory challenges based on the appearance of the juror, or challenges for cause (Horan and Goodman-Delahunty, 2010).

Our prior research using written simulated CSA trial materials demonstrated that specialized knowledge reduced CSA misconceptions, enhanced credibility ratings of the complainant and increased the conviction rate (Cossins and Goodman-Delahunty, 2013). However, these findings were based on individual mock-juror decisions without jury group deliberation. Since deliberation is a critical legal procedure expected to reduce jury errors and individual biases (Levett and Devine, 2017), adding deliberation to a jury research program is vital to assess its impact on misconceptions that may influence case outcomes in CSA trials. An important question is whether changes in research procedures, such as adding group deliberation, interact with substantive variables to influence the outcomes of simulated jury studies because "the presence of interaction effects may indicate that aspects of the research method limit the external validity or generalizability of the research conclusions" (Penrod et al., 2011, p. 197). Accordingly, research testing the relationship between construct, external, and ecological validity is needed (Wiener et al., 2011). In this study, we consider the example of CSA, since these cases constitute the highest proportion of all criminal offenses in Australian courts where the most indictable offenses

are prosecuted (NSW Bureau of Crime Statistics Research, 2013). A recent crime report showed an increase of 5.3% in sexual assault and indecent assault incidents in the past 60 months (and an increase of 9.4% in 24 months), while rates of other major offenses remained stable or decreased, with the exception of domestic violence (NSW Bureau of Crime Statistics Research, 2020). Despite their prevalence, CSA cases and adult sexual assault cases produce the lowest conviction rates at trial (61% and 66% respectively), compared to 89% for all other offenses (e.g., 70% for assault, 73% for robbery, 94% for illicit drugs) (Fitzgerald, 2006; Browne, 2017; Cashmore et al., 2019). The number of CSA convictions decreased by 8% between 2016 and 2020 (NSW Bureau of Crime Statistics and Research, 2021).

## The Influence of Individual Juror Characteristics in Cases of Child Sexual Assault

Meta-analyses of the influence of individual juror characteristics in specific cases have generally yielded results showing little difference between students and non-students (Bornstein and Greene, 2017). However, in certain types of cases, jurors with different pretrial attitudes and beliefs produce different verdicts. For example, individual jurors who were more authoritarian and who supported capital punishment were more prone than other jurors to convict; and in sentencing decisions, students were more lenient than non-student mock jurors (Field and Barnett, 1978). A meta-analysis that tested the influence of individual juror characteristics on verdicts showed a weak but statistically significant gender effect regardless of crime type, such that women were more likely to convict than men; in particular, among student mock-jurors (Devine and Caughlin, 2014).

Gender effects in sex offense cases are commonplace (Krauss et al., 2012). One meta-analysis of sexual assault cases showed that women were more prone than men to convict (Schutte and Hosch, 1997). Women in the role of mock-jurors rated child complainants more credible than did their male counterparts (Tabak and Klettke, 2014). Although some past studies have yielded mixed results based on juror demographics such as age and gender (possibly attributable to the study sample, Devine and Caughlin, 2014), a robust relationship between susceptibility to CSA misconceptions and verdict emerged among jury-eligible undergraduate students and community volunteers who served as mock-jurors (Goodman-Delahunty et al., 2011a). Their demographic profiles and beliefs about CSA differed from those of citizens who respond to a summons for jury duty, in terms of age, educational levels, parenting experience and other attitudinal measures (Goodman-Delahunty et al., 2017b). Accordingly, further research into the impact of juror attitudes and demographic features on case outcomes in CSA cases is required to determine whether CSA cases comprise a specific type of legal case where variations in jury beliefs and demographic composition are associated with trial outcomes, and to assess the generalizability of results obtained with jury eligible students (Henrich et al., 2010) and other non-jury community samples to actual jury samples (MacCoun, 2005; McCabe et al., 2010; Lieberman et al., 2011).

<sup>1</sup>The Evidence Act, 1995, section 79(2) admits expert evidence as an exception to the opinion rule which generally excludes opinion evidence. These provisions apply in the ACT, NSW, the Northern Territory, Tasmania, the Commonwealth and Victoria.

## The Form of Expert Evidence Proffered in CSA Cases

To develop policies to guide courts in appointing expert witnesses in CSA cases, research on the most effective expert witnesses is helpful (Cossins and Goodman-Delahunty, 2013). Several studies have examined the impact of the type of expertise and credentials of expert witnesses who testify in CSA cases (Kovera et al., 1994, 1997; Klettke et al., 2009). An expert who is an experimental psychologist will provide a summary of relevant research pertinent to the case, often described as “social framework” testimony (Monahan et al., 2009), but typically does not offer an explicit ultimate opinion as to whether the complainant was or was not sexually assaulted (Faigman et al., 2014). By comparison, a clinical psychologist who interviews the complainant may offer an ultimate opinion about whether the child has been sexually abused. Past studies which varied the credentials of social framework vs. diagnostic experts revealed that jurors were more readily persuaded by a clinician than an experimental researcher in death penalty and in sex offender cases (Krauss and Sales, 2001; Krauss et al., 2012).

Results of our prior CSA jury simulation study using written trial materials yielded no statistically significant difference between the perceived credibility of a social framework vs. a diagnostic expert, but the conviction rate following evidence from the diagnostic expert (71%) exceeded that in response to the social framework expert (65%; *Odds Ratio [OR]* = 1.32) and was significantly higher than that in the jury group exposed to no expert evidence (37.5%; *OR* = 4.08) (Goodman-Delahunty et al., 2011a). A case study examining juror responses to expert evidence in a real CSA trial that ended in acquittal revealed that jurors complained that the social framework expert had never seen the child, and was unhelpful because his evidence was non-specific (Horan and Goodman-Delahunty, 2020). Moreover, where the social framework evidence was a poor fit for specific case facts, some jurors cited those gaps as reasons to discount the evidence and credibility of the complainant (Horan and Goodman-Delahunty, 2020). Further research is needed to examine whether observed differences in conviction rates are attributable to unmeasured differences in the perceived credibility of the two types of experts, or the fact that the diagnostic expert interviewed the child, and whether this finding is replicated in a sample of actual jurors. Use of videotaped trial materials in which the same actor portrays either a social framework or a diagnostic expert can tease apart these factors.

## The Impact of Deliberation in Child Sexual Assault Cases

As was noted above, a key component of jury decision-making is deliberation with fellow jurors. Interestingly, in six Australian jurisdictions, majority verdicts are permitted in relation to some offenses. Jurors are first instructed to deliberate to a unanimous verdict, and if unable to do so within a specified time, they are then instructed that a majority verdict of 11-1 or 10-2 will suffice, depending on the jurisdiction (*Jury Act, 1977* (NSW), s55F; *Criminal Code Act, 1983* (NT), s368; *Juries Act, 1927* (SA),

s57; *Jury Act, 1899* (Tas), s48(2); *Juries Act, 2000* (Vic), s46; *Juries Act, 1957* (WA), s41).

Overall, deliberation studies have yielded diverse outcomes. Although one meta-analysis reported that the impact of expert evidence did not differ as a function of deliberation (Nietzel et al., 1999), none of the studies examined jury deliberation in a CSA case following the presentation of expert witness testimony. Some indication of the effectiveness of expert evidence emerged in a study of an adult sexual assault: student mock-jurors rated the complainant more credible when exposed to expert evidence, and preferred an expert who linked evidence to case facts over one who did not (Brekke and Borgida, 1998). To date, few studies have examined deliberation about CSA. One exception is an Australian study that incorporated online rather than in person deliberations (Tabak et al., 2013; Tabak and Klettke, 2014). Deliberation content analyses revealed a focus on the perceived truthfulness of the victim, the context of the allegation, the behavior of the victim and defendant, and the inconclusive nature of word-against-word evidence.

Prior research reviews indicated that the strength of pre-deliberation attitudes may be reduced by deliberation (Penrod et al., 2011; Levett and Devine, 2017). For example, the magnitude of correlations of predeliberation attitudes and verdict among empaneled jurors serving on a criminal case was larger than that following deliberation (Moran and Comfort, 1982). However, mock-jury research on other topics conducted in North America (Devine, 2012), South Korea (Park et al., 2005) and Taiwan (Huang and Lin, 2014) demonstrated a “leniency effect” following jury deliberation, with more decisions to acquit when verdicts before and after group deliberation were compared (Peter-Hagene et al., 2019). Similarly, a recent study of a case of historical child sexual assault showed that individual pretrial attitudinal biases were associated with mock-juror decisions (culpability and verdict) at the individual juror level, while this effect disappeared at the jury group level (Goodman-Delahunty and Martschuk, 2020). One explanation posited for the lower postdeliberation conviction rates is that informational biases held by individual jurors exert a stronger influence than normative biases, or conformity effects in group decision making (Peter-Hagene et al., 2019). These researchers called for studies exploring the qualitative differences observed between individual juror and jury groups verdicts, using techniques such as multi-level modeling (Lovis-McMahon, 2015). Whether deliberation after juries are exposed to specialized CSA knowledge will decrease the conviction rate is the topic of the present study.

A common feature of mock jury research is the use of written trial summaries or case transcripts instead of a live trial enactment. Differences between types of trial simulations may affect mock-jurors’ engagement with the case and their capacity to assess witness credibility, a key component of the decision-making process to reach a verdict, particularly in word-against-word cases. In CSA cases, the method of evidence presentation can impact jury responses in assessing the credibility of the complainant and accused (Eaton et al., 2001; Landström et al., 2010). Comparisons of written and videotaped methods of presentation in simulated trials showed less impact of juror attitudes when more realistic videotaped trial materials were

used (Nietzel et al., 1999; Penrod et al., 2011). Reviews of the method of trial presentation yielded mixed outcomes (Penrod et al., 2011), including results of a meta-analysis of cases that included presentations of expert witness testimony (Nietzel et al., 1999). Accordingly, a videotaped simulated trial may diminish the influence of jury beliefs about CSA on credibility assessments, as was observed in response to written trial simulation materials.

The trial simulation experience is a further issue to consider when conducting mock-jury research. For example, if materials are administered online or in a laboratory setting, participating mock-jurors miss the experience of coming to court, engaging with court personnel, attending the court's jury orientation and induction training, all of which emphasize the solemnity and gravity of jurors' responsibilities, and have been shown to influence jury motivations (Bornstein and McCabe, 2005) and attitudes (O'Brien et al., 2008). Some researchers contend that these additional contextual features of ecological validity should not be overlooked (Vidmar, 2008; Ceci et al., 2010) as they may impact mock-jurors' motivation and the decision criteria applied in assessing the consequences of the verdict. The process of group deliberation has yielded conflicting outcomes about jurors' cognitive performance (Peter-Hagene et al., 2019).

## Aims of the Present Study

The present study had four aims: First it explored the demographics of a sample of non-empaneled jurors and measured their attitudes to CSA to discern whether individual juror characteristics were systematically related to jury verdicts. Second, it compared the effectiveness of educative interventions in increasing juror CSA knowledge, namely (a) a specially drafted judicial direction, and (b) social framework vs. diagnostic expert testimony. Third, the study compared individual juror verdicts with those of deliberating jurors to assess the impact of decision type. A fourth exploratory aim was to test whether the perceived credibility of the child complainant and corroborative witness, separate and apart from CSA knowledge, contributed to decisions to convict as psychological mediators. The dependent measures were CSA knowledge, assessments of witness credibility, and verdicts.

The study incorporated ecologically realistic components of the jury task into the research method by (a) inviting jurors who reported for jury duty to participate in a simulated trial (in lieu of jury eligible students and community volunteers); (b) conducting the study in District and Supreme Courts of NSW (in lieu of online or laboratory settings); (c) using a professionally-acted video trial (in lieu of written trial materials); and (d) inviting half the participants who watched the video trial to deliberate in jury groups. In addition, the study tested a fresh set of case facts, based on a real CSA case, to determine the external validity or generalizability of prior findings to other CSA cases.

## Research Hypotheses

This study tested seven hypotheses drawn from the foregoing literature review:

1. Female jurors, older jurors and better educated jurors will rate the complainant's credibility more favorably than their male (hypothesis 1a), younger (hypothesis 1b) and less well-educated counterparts (hypothesis 1c);
2. Exposure to educative interventions will increase juror post-trial CSA knowledge compared to that of jurors who are not exposed to any intervention (hypothesis 2);
3. Jurors with less CSA knowledge will make unfavorable assessments of the complainant's credibility and acquit the accused while jurors with more CSA knowledge will assess the complainant's credibility favorably and convict the accused (hypothesis 3);
4. The credibility of the diagnostic psychologist will be rated more favorably than that of the social framework expert and will produce statistically significantly more convictions compared to jury groups exposed to other educative interventions (hypothesis 4);
5. The acquittal rate among deliberating jurors will exceed that of non-deliberating jurors (hypothesis 5);
6. Credibility perceptions of the complainant and a corroborative witness will mediate the effect of post-trial CSA knowledge on the likelihood to convict (hypothesis 6).

## METHOD

### Participants

Participants were 885 jurors (58% men, 42% women) who reported for jury duty in the District and Supreme Courts of New South Wales (NSW), Australia, but were later excused. Aged between 18 and 74 years ( $M = 43.4$ ,  $SD = 13.33$ ), more than half the participants held a university degree (61.7%), 17.1% had a tertiary level diploma, 7.2% had a trade certificate, 10.5% finished high school, and 3.6% reported fewer than 12 years of formal education. English was the first language for 84% of participants. More than half the participants reported that they were a parent or guardian of a child (55%).

### Research Design and Procedure

A mixed study design was applied in which the first variable, CSA knowledge, was a within-subjects factor, and two variables were between-subjects factors, namely Decision Type (Deliberation in jury groups vs. Non-deliberating individual juror decision) and Source of Specialized CSA Knowledge (None, Judicial directions, Social framework expert, Diagnostic expert). A total of 443 deliberating jurors and 442 non-deliberating jurors were assigned to one of eight experimental groups. See **Table 1**.

All jurors completed a pretrial questionnaire. After the trial, non-deliberating jurors completed a post-trial questionnaire about CSA knowledge, rated the credibility of the complainant, the corroborating lay witness (her grandmother), the expert witness (where applicable), the judge, and rendered individual verdicts.

Deliberating participants were allocated to one of 43 juries, with 10 or 11 juries per experimental condition. Juries, comprised of 8–12 jurors, were instructed to choose a foreperson, deliberate as a jury and render a unanimous decision before completing the same post-trial questionnaire. Participants were given a maximum of 90 minutes to reach a verdict. Because the courts excused jurors from jury duty and invited them to participate in



**TABLE 1** | Illustration of experimental groups and number of participants in each condition.

	No intervention	Judicial direction	Social framework expert	Diagnostic expert	Overall
Deliberating juries	<i>n</i> = 109	<i>n</i> = 109	<i>n</i> = 109	<i>n</i> = 116	<i>n</i> = 443
Non-deliberating jurors	<i>n</i> = 113	<i>n</i> = 115	<i>n</i> = 108	<i>n</i> = 106	<i>n</i> = 442
Overall	<i>n</i> = 222	<i>n</i> = 224	<i>n</i> = 217	<i>n</i> = 222	<i>N</i> = 885

the study just before lunch hour, all deliberating participants were provided with sandwiches. Deliberations lasted between 11 and 87 min ( $M = 42.43$ ,  $Mdn = 40.4$ ,  $SD = 22.49$ ).

## Study Materials

A simulated trial was scripted based on an actual CSA case involving a 12-year-old female complainant, Bridget. The accused, the complainant's grandfather, was charged with one count of sexual penetration. The case facts were constant in all experimental conditions. The complainant reported that her grandfather penetrated her with his finger while she was sitting on a chair reading a book in the living room. Her grandmother was outside in the garden at the time. Before entering the living room, the grandmother heard the complainant say, "Grandpa, stop it, it hurts." When she entered the room, the complainant's pants were down and the accused was doing up the belt on his pants. The complainant ran to her grandmother, crying, and made an immediate disclosure of sexual assault. She was 13 years old when she testified at trial.

The video trial lasted 40–55 min depending on the intervention condition. Professional actors played the roles of the parties, the witnesses and the judge. In all conditions, the trial included opening and closing addresses by the prosecution and defense, evidence-in-chief and cross-examination of the complainant and a corroborating witness for the prosecution (the complainant's grandmother), and the judge's summing-up.

Educative specialized CSA knowledge was presented by a social framework expert (an experimental psychologist), a diagnostic expert (a clinical psychologist) or the presiding judge during her summing up. The educative information summarized empirical findings on counter-intuitive behaviors of sexually abused children, developmental aspects of children's memory, their reliability in reporting sexual abuse and suggestibility when questioned by adults (The **Supplementary Material** contains the full trial script.) The judge reported these findings but made no statement that the behavior of the complainant was consistent with that of a sexually abused child. Both experts presented the educative information after the complainant's evidence. Both stated explicitly that the complainant's behavior was consistent with that of a child who has been sexually abused<sup>2</sup>. In addition, the diagnostic expert stated that he had interviewed the complainant.

The verbatim testimony of the social framework expert was:

*Prosecution:* Based on your review of the research findings, and your examination of the police interviews of Bridget, in your

professional opinion, is Bridget's behavior consistent with that of a child who has been sexually abused?

*Experimental psychologist:* There are factors in this case which are consistent with the research findings indicative of child sexual abuse.

The verbatim testimony of the diagnostic expert was:

*Prosecution:* Based on your experience and your interview with Bridget, in your professional opinion is Bridget's account of events and behavior consistent with that of a child who has been sexually abused?

*Clinical psychologist:* Yes, it is.

## Questionnaire on Juror Knowledge About Child Sexual Assault

A questionnaire to assess participants' CSA knowledge (Goodman-Delahanty et al., 2017a,b; Reliability:  $\rho_y = 0.76^3$ ; Cronbach's  $\alpha = 0.67$ ) was administered before and after jurors viewed the simulated trial. The nine items in the questionnaire were based on empirical findings and measured jurors' knowledge about behavioral responses to sexual abuse and the suggestibility of children. Participants provided their agreement on a 5-point Likert scale from (1) *strongly disagree* to (5) *strongly agree*. A lower score indicated less CSA knowledge and greater endorsement of CSA misconceptions. Examples of items measuring the first factor, Impact of Sexual Abuse on Children (Reliability:  $\rho_y = 0.70$ ;  $\alpha = 0.63$ ), are: (a) "A sexually abused child typically cries out for help and tries to escape"; (b) "A child victim of sexual abuse will avoid his or her abuser"; or (c) "Child victims of sexual abuse respond in a similar way to the abuse." Examples of items measuring the second factor, Contextual Influences on CSA Reports (Reliability:  $\rho_y = 0.80$ ;  $\alpha = 0.67$ ), are: (a) "Children are easily coached to make false claims of sexual abuse"; (b) "Repeating questions such as 'What happened? What else happened?' leads children to make false abuse claims."

## The Witness Credibility Scale

The Witness Credibility Scale (WCS; Brodsky et al., 2010; Cronbach's  $\alpha = 0.95$ ) was used to measure jurors' perceptions of the credibility of the witnesses and the judge. The WCS contains 20 semantic differential items measured on a 10-point

<sup>2</sup>Prior researchers noted that this language conflates commonality with relevance (Lyon and Koehler, 1996). We used it because it remains a standard admitted formulation of expert evidence on this topic.

<sup>3</sup>The reliability coefficient  $\rho_y$  was used because the CSA-KQ questionnaire format violated assumptions for Cronbach's  $\alpha$  (Cronbach, 1951; Raykov, 1997, 2002), leading to an underestimation of the reliability of the CSA-KQ (Lord and Novick, 1968; Raykov, 1997, 2002), while  $\rho_y$  was specifically developed to counteract these limitations by considering true variability, error variances, and indicator-construct weights (see Goodman-Delahanty et al., 2017a, p. 402). We added Cronbach's  $\alpha$  for readers more familiar with this measure.



continuum, and participants are instructed to rate the witness on each of paired contrasting adjectives such as from (1) *unfriendly* to (10) *friendly*; (1) *dishonest* to (10) *honest*; (1) *inarticulate* to (10) *well-spoken*; or (1) *illogical* to (10) *logical*. The WCS includes four subscales reflecting the perceived confidence ( $\alpha = 0.89$ ), likeability ( $\alpha = 0.86$ ), trustworthiness ( $\alpha = 0.93$ ), and knowledge ( $\alpha = 0.86$ ) of a witness, respectively. Credibility was assessed by removing one item with the descriptor “scientific” from the WCS since this item was inapplicable to lay witnesses. A higher total score indicated greater perceived credibility of the witness, with a maximum possible score of 190.

Before conducting the analyses, we tested the principal component analyses of the WCS with our data, revealing that all items loaded on the same component. In addition, the WCS subscales were highly correlated with each other, and with the overall witness credibility score, creating problems of multicollinearity, i.e., correlations ranged from  $r = 0.40$  to  $r = 0.68$  for the complainant, and  $r = 0.50$  to  $r = 0.70$  for the grandmother. Subscale correlations with the overall witness credibility score ranged from  $r = 0.74$  to  $r = 0.85$  for the complainant, and  $r = 0.78$  to  $r = 0.88$  for the grandmother. For these reasons, and because the combined measure had higher internal consistency than each of the subscales alone (see above), we did not conduct analyses with the separate WCS subscales.

### Other Dependent Measures

Juries and individual jurors rendered a binary verdict (guilty/not guilty) and provided demographic information (gender, age, educational level, parental status).

### Analyses

For multilevel structural equation modeling with mediation analyses, a sample size of 440 was initially suggested based on simulation guidelines (Wolf et al., 2013) for power of 0.94 regarding the direct path and 0.82 for the indirect path. The conventional rule-of-thumb of 10–15 cases per parameter indicated a sample size of  $10 \times 15 = 150$ . All power analysis results were integrated to select a far more conservative power strategy, by securing 800 participants, particularly to conduct multilevel analysis.

The impact of the educative intervention independently of decision type was assessed by calculating individual CSA knowledge gain scores after controlling for juror pretrial CSA knowledge. The CSA knowledge gain score was calculated by subtracting a juror's post-trial CSA knowledge score from their pretrial CSA knowledge score. Negative values indicated that CSA misconceptions increased after exposure to the videotrial; positive values indicated that CSA misconceptions decreased after exposure to the videotrial. Pretrial CSA knowledge scores were added as covariate because of statistically significant differences at the outset in mean CSA knowledge scores between some of the experimental groups. For example, before trial, non-deliberating jurors who were later exposed to specialized CSA knowledge from a diagnostic expert endorsed statistically significantly fewer CSA misconceptions ( $M = 30.74$ ,  $SD = 5.15$ ) than jurors in the similar non-deliberating control group ( $M =$

27.86,  $SD = 5.54$ ). No pretrial differences in CSA knowledge emerged among deliberating groups.

Preliminary analyses tested the association between the different independent variables (e.g., age, gender, educational level, intervention condition) and dependent variables (e.g., knowledge about CSA, perceptions of the witnesses, factual culpability ratings, verdict). Depending on the nature of the variables and the combination of the association, correlations between continuous, or continuous and categorical variables,  $\chi^2$  analyses between categorical or binary variables, and paired  $t$ -test analyses for pretrial and post-trial CSA knowledge. Further, analyses of covariance (ANCOVA) between demographic information, intervention condition and CSA knowledge scores were conducted, as well as separate between-subject ANCOVAs that examined the effects of source of intervention and decision type on juror CSA knowledge and perceived witness credibility. ANCOVA results that yielded different outcomes to the multilevel structural equation modeling (SEM; see below) are summarized in the online **Supplementary Material**.

Multilevel SEM examined the relationship between CSA knowledge and verdict at both juror and jury levels to accommodate the intercorrelations in the variables among jurors in each jury. The credibility perceptions of both the child complainant and the corroborating witness were modeled as double mediators to test why and how the impact of CSA knowledge and expert interventions occurred. Demographic covariates, pre-trial CSA knowledge, decision type (individual vs. jury group), and intervention source were considered as predictors of post-trial CSA knowledge. The non-independence of the nested jurors within a jury was addressed with multilevel modeling using Mplus V8, while variance in the verdict at the jury level was estimated. The non-deliberating jurors were analyzed as one jury, as were the other 43 deliberating jurors.

## RESULTS

Preliminary analyses indicated the presence of 12 out of 885 multivariate outliers. These participants were excluded from all further analyses. Scores for the perceived credibility of the experts and the judge violated normality assumptions (positively skewed with a positive kurtosis). Accordingly, log transformations of the values were performed to achieve a normal distribution (Tabachnick and Fidell, 2013).

### Juror CSA Knowledge About Child Sexual Assault

Analyses to test for differences between juror demographics (gender, age, educational level), their pre- vs. post-trial CSA knowledge and perceived witness credibility revealed that female jurors in the sample were somewhat more formally educated than their male counterparts, with 63.9% of women and 60.8% of men holding a university degree, 20.0% of women and 14.4% of men had some tertiary and further education (TAFE) diploma, and 11.0% of men and 1.9% of women held a trade certificate. The remaining 14.1% of women and 13.8% of men reported finishing high school or less. No differences in age emerged between men

and women. On average, older jurors were less educated (overall,  $r_s = -0.14$ ,  $p < 0.001$ ). Jurors with a university degree were younger on average ( $M = 41.79$  years,  $SD = 12.51$ ) than jurors who had a TAFE diploma ( $M = 46.82$  years,  $SD = 14.16$ ) or who had not finished high school ( $M = 50.63$  years,  $SD = 11.76$ ). The average age of jurors holding a trade certificate ( $M = 43.42$  years;  $SD = 13.73$ ), and of jurors who reported the highest level of education were similar ( $M = 44.09$  years old;  $SD = 15.01$ ).

Juror CSA knowledge was related to their demographic characteristics in several ways. Female jurors had statistically significant greater CSA knowledge, both pretrial ( $M = 29.47$ ,  $SD = 5.31$ ) and post-trial ( $M = 32.23$ ,  $SD = 5.31$ ) than male jurors [pretrial:  $M = 27.93$ ,  $SD = 4.49$ ,  $t(857) = 4.59$ ,  $p < 0.001$ ; post-trial:  $M = 30.13$ ,  $SD = 4.95$ ,  $t(868) = 5.68$ ,  $p < 0.001$ ] and perceived the complainant to be more credible ( $M = 123.09$ ,  $SD = 23.10$ ) than did male jurors [ $M = 117.76$ ;  $SD = 51.93$ ,  $t(852) = -3.20$ ,  $p = 0.001$ ] (hypothesis 1a). There was no main effect of juror gender on the overall conviction rate [ $\chi^2(1, 869) = 2.09$ ,  $p = 0.148$ ,  $\phi = 0.05$ ]. This finding was moderated by decision type. Whereas there was no effect of juror gender on convictions by deliberating jurors [women: 31.1%; men: 31.7%;  $\chi^2(1, 436) = 0.02$ ,  $p = 0.894$ ,  $\phi = -0.01$ ], women who rendered an individual verdict were significantly more likely to convict (53.3%) than their male counterparts [41.0%;  $\chi^2(1, 433) = 6.27$ ,  $p = 0.012$ ,  $\phi = 0.12$ ]<sup>4</sup>.

Juror age was positively correlated with perceived complainant credibility, such that older jurors rated the complainant as more credible than younger jurors,  $r = 0.17$ ,  $p < 0.001$  (hypothesis 1b). Further, juror age was positively correlated with CSA knowledge gains between the time of the pre- and post-trial measures,  $r = 0.10$ ,  $p = 0.005$ . This effect was moderated by decision type, such that CSA knowledge gain was associated with age only among non-deliberating participants,  $r = 0.14$ ,  $p = 0.005$ . There was no correlation between age and CSA knowledge gain among participants who deliberated as a jury,  $p > 0.10$ . Finally, juror educational level was correlated with CSA knowledge both pretrial (overall:  $r_s = 0.19$ ,  $p < 0.001$ ) and post-trial (overall:  $r_s = 0.18$ ,  $p < 0.001$ ), such that jurors with higher educational qualifications held fewer CSA misconceptions. Education was, however, not correlated with CSA knowledge gains or perceived complainant credibility,  $p > 0.05$  (hypothesis 1c). Neither juror age nor education level was associated with the conviction rate, independently of the decision type. **Table 2** displays correlations between juror demographic characteristics, CSA knowledge and perceived complainant credibility (measured by the WCS) separately for deliberating and non-deliberating mock-jurors.

Juror CSA knowledge was assessed pre- and post-trial using the CSA Knowledge Questionnaire. Before trial, jurors had a moderate degree of CSA knowledge, with average scores of ~28 out of a possible total of 45. The group scores ranged from a low of  $M = 27.86$ ,  $SD = 5.54$  (Control, non-deliberation), to a high of  $M = 30.74$ ,  $SD = 5.15$  (Intervention 3, non-deliberation).

Increases and decreases in CSA knowledge within each of the 43 deliberating juries revealed that CSA knowledge remained consistent or increased in the 10 deliberating juries, and decreased in one deliberating jury where no specialized educative CSA information was presented (hypothesis 2). Furthermore, mean CSA knowledge scores increased statistically significantly or tended to increase after deliberation in seven out of 32 juries (21.9%), while mean CSA Knowledge scores remained consistent within the remaining 23 juries (71.9%). Mean CSA knowledge scores declined statistically significantly in two of the 32 juries who were exposed to specialized educative knowledge (via a judicial direction and a social framework expert). **Table 3** presents the pre- and post-trial CSA knowledge change scores and verdicts for each jury deliberation group and for non-deliberating jurors.

## Perceived Witness Credibility

**Table 4** displays the perceived witness credibility of the complainant, her grandmother, the expert witness, and the judge as a function of source of intervention and decision type (For detailed statistical analyses, consisting of ANCOVAs, see **Supplementary Material**). In the absence of any specialized information, deliberating jurors perceived the complainant to be more credible than did non-deliberating jurors. Among non-deliberating jurors exposed to diagnostic expert evidence, the perceived credibility of the complainant exceeded that of non-deliberating jurors in the control group (hypothesis 3). Specialized CSA knowledge presented by the judge or by the social framework expert did not affect the perceived credibility of the complainant. When participants deliberated as a jury, the perceived credibility of the complainant was constant in all experimental groups. These results are displayed in **Figure 1A**. Similarly, credibility of the grandmother, the corroborating witness, was greater when specialized educative information was presented by an expert witness of either type than by the judge in a judicial direction. These results are displayed in **Figure 1B**. Error bars are 95% confidence intervals.

Decision type was not associated with the expertise of the psychologist, although non-deliberating jurors rated the experts as more credible ( $M = 162.89$ ,  $SD = 17.63$ ,  $Mdn = 165$ ) than did deliberating jurors ( $M = 158.69$ ,  $SD = 19.03$ ,  $Mdn = 161$ ) (hypothesis 4). By contrast, the perceived credibility of the judge decreased when the judge provided specialized information in a judicial direction ( $M = 163.24$ ,  $SD = 24.55$ ,  $Mdn = 169$ ) compared to trials in which the same information was provided by an expert, irrespective of whether the expert was a social framework ( $M = 168.89$ ,  $SD = 17.82$ ,  $Mdn = 172$ ) or diagnostic psychologist ( $M = 168.51$ ,  $SD = 17.68$ ,  $Mdn = 173$ ). In the two latter conditions, the judge was rated more credible than the experts. However, the judge was perceived as more credible by non-deliberating jurors ( $M = 167.73$ ,  $SD = 19.84$ ,  $Mdn = 171$ ) than by deliberating jurors ( $M = 166.05$ ,  $SD = 19.08$ ,  $Mdn = 171$ ).

## The Impact of CSA Knowledge and Interventions on Verdict

Results revealed an increase in the conviction rate when jurors rendered individual verdicts without deliberation following

<sup>4</sup>Differences in degrees of freedom arose for two reasons: (a) some participants did not answer all questions, and (b) findings are presented for subsamples (deliberating juries vs. non-deliberating jurors).

**TABLE 2 |** Intercorrelations between juror demographic characteristics, CSA knowledge, and perceived complainant credibility.

	1	2	3	4	5	6
1. Juror age	–	–0.11*	–0.01	–0.03	0.06	0.15**
2. Juror education	–0.15**	–	0.19**	0.23**	0.01	0.08
3. Pre-trial CSA knowledge	–0.05	0.17**	–	0.63**	–0.39**	0.17**
4. Post-trial CSA knowledge	0.04	0.16**	0.69**	–	0.47**	0.33**
5. CSA knowledge gain	0.14**	–0.00	–0.33**	0.46**	–	0.23**
6. Complainant credibility	0.16**	–0.08	0.26**	0.39**	0.20**	–

Correlations below the diagonal are for non-deliberating jurors; correlations above the diagonal are for deliberating jurors. Higher numbers for education indicate more formal education. For juror education the statistic is Spearman's Rho, the remainder are Pearson correlations. \* $p < 0.05$ ; \*\* $p < 0.01$ .

**TABLE 3 |** Mean pre- and post-trial CSA knowledge and verdict for each deliberating jury and non-deliberating jurors, by experimental condition.

	No intervention			Judicial direction			Social framework expert			Diagnostic expert		
	M <sub>pre</sub>	M <sub>post</sub>	Verdict	M <sub>pre</sub>	M <sub>post</sub>	Verdict	M <sub>pre</sub>	M <sub>post</sub>	Verdict	M <sub>pre</sub>	M <sub>post</sub>	Verdict
<b>Deliberating juries</b>												
1	27.78	29.67	6NG 3G	28.00	31.00	9NG	25.25	27.75	12NG	29.17	31.00	12NG
2	27.70	27.80	10NG	26.89	29.11	9NG	29.67	31.50	12NG	29.00	30.67	11NG 1G
3	27.87	31.25	8G	28.55	34.08	12G	29.91	33.45	11G	28.42	32.67	5NG 7G
4	30.11	30.33	2NG 7G	29.40	30.90	10NG	31.82	33.08	9NG 3G	29.33	29.78	9NG
5	28.08	29.91	12G	26.92	33.25	10NG 2G	30.13	32.13	1NG 7G	29.22	36.20	10G
6	27.42	29.67	1NG 11G	28.44	30.89	9NG	28.13	31.25	8NG	28.60	32.55	10NG 2G
7	29.56	32.90	9NG 1G	30.20	29.40	5NG 5G	26.36	28.09	12NG	27.25	29.75	12NG
8	29.14	26.80	9NG 1G	26.75	28.89	8NG 1G	29.82	35.18	1NG 11G	27.63	34.38	8G
9	27.38	27.25	7NG 1G	27.27	29.73	5NG 6G	29.36	30.67	12NG*	27.55	29.64	11NG
10	27.00	28.00	9NG	30.44	32.33	9NG	27.30	29.10	10NG	26.64	31.55	10NG 1G
11	26.42	27.08	5NG 7G	30.00	31.38	7NG 2G	–	–	–	27.00	30.37	8G
All	28.03	29.12	58NG 51G	28.41	31.10	81NG 28G	28.74	31.20	77NG 32G	28.18	31.62	80NG 37G
<b>Non-deliberating jurors</b>												
All	27.97	27.87	68NG 44G	28.48	32.38	64NG 51G	28.14	31.07	58NG 49G	30.65	33.46	48NG 58G

G, guilty; NG, not guilty. \*Some jurors pressured others to change their views.

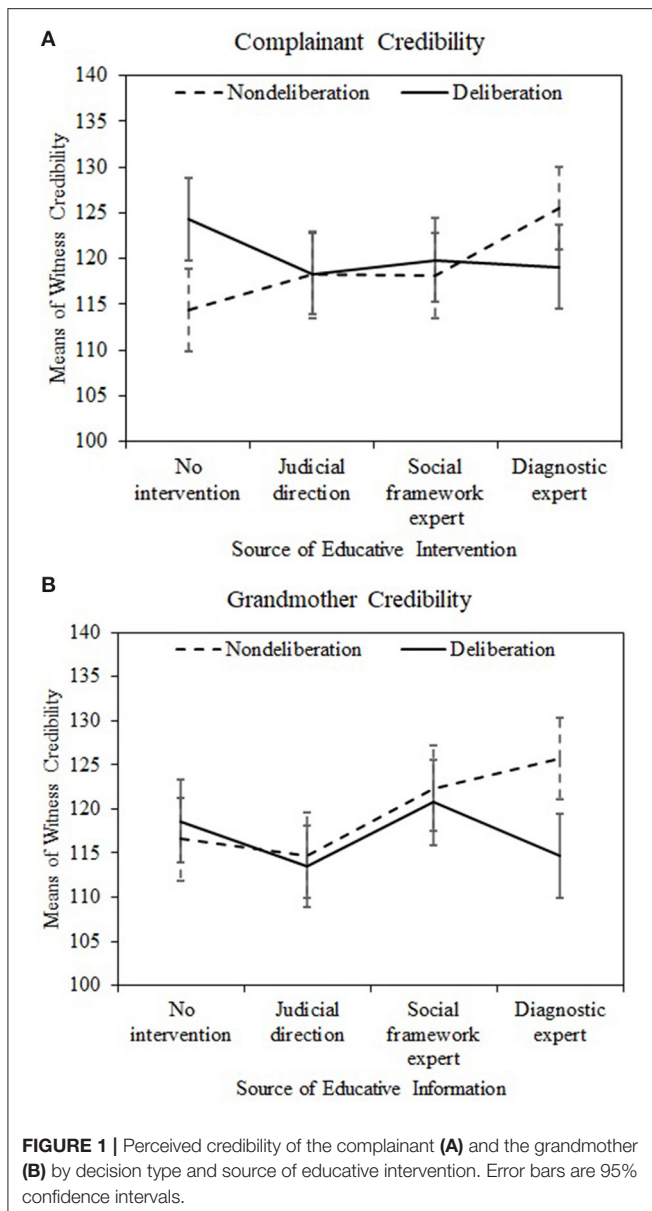
**TABLE 4 |** Perceived credibility of witnesses and the judge by decision type and experimental group.

Decision type	Source of educative intervention							
	No intervention		Judicial direction		Social framework expert		Diagnostic expert	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<b>Non-deliberation</b>								
Complainant	115.37	29.12	118.86	24.46	118.11	22.83	126.42	23.98
Grandmother	118.35	27.01	114.90	24.57	122.04	26.01	125.97	25.86
Expert	–	–	–	–	160.86	18.50	165.19	16.63
Judge	168.00	15.39	162.83	28.07	169.22	15.32	171.16	16.42
<b>Deliberation</b>								
Complainant	123.35	22.11	118.43	25.62	121.46	22.44	118.19	20.16
Grandmother	117.89	23.18	113.18	24.30	121.44	21.99	114.54	22.81
Expert	–	–	–	–	160.81	18.71	156.33	20.04
Judge	165.91	17.31	164.68	20.30	168.57	20.11	166.09	18.49

The descriptor "scientific" was removed from the WCS to enhance comparability of scores; maximum possible score = 190.

exposure to specialized knowledge from either the judge (44.3%), the social framework expert (45.4%) or the diagnostic expert (54.7%), compared to the no intervention control condition

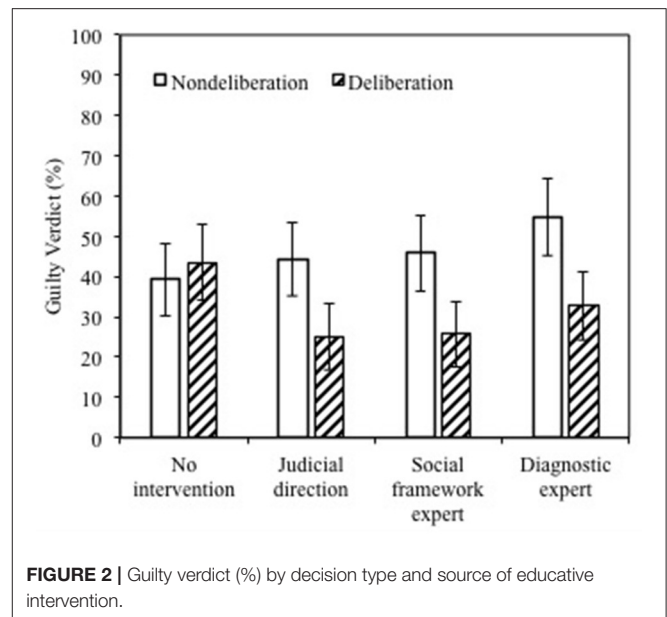
(38.9%). However, these differences were not statistically significant [ $\chi^2(3, N = 440) = 5.40, p = 0.145$ ]. The verdicts of deliberating jurors showed that in comparison with the



control group (43.1%), the individual conviction rate dropped statistically significantly following exposure to all types of interventions [ $\chi^2(3, N = 440) = 11.08, p = 0.011$ ], as shown in **Figure 2** (hypothesis 5). These results were further qualified by more advanced analyses as described in the following sections.

When considering jury group verdicts, almost a quarter of deliberations (23.3%) resulted in hung juries (no unanimous or majority decision was reached in the available time). Overall, 44.2% of juries reached a unanimous verdict and three accepted a majority decision, as shown in **Table 2**.

In the absence of educative information, three juries voted unanimously to convict the accused, five juries acquitted (two unanimously) and three juries were hung. Juries with less CSA knowledge voted to acquit. Following exposure to specialized



knowledge presented in a judicial direction, one jury with the highest post-trial CSA knowledge ( $M = 34.08, SD = 6.07$ ) convicted; six juries with mixed levels of CSA knowledge acquitted (five unanimously), and the remaining four juries were hung. Following exposure to specialized knowledge presented by a social framework expert, three juries with higher CSA knowledge scores convicted (one unanimously), six acquitted, although in two of the six juries CSA knowledge scores were high, and one jury was hung. Similarly, after exposure to specialized knowledge presented by a diagnostic expert, three juries with moderate to high CSA knowledge scores convicted, six juries in which overall levels of CSA knowledge were low acquitted (four unanimously), and two juries were hung.

## The Impact of CSA Knowledge, Interventions, and Witness Credibility on Verdict

Multilevel SEM analyzed psychological mechanisms reflecting the impact of CSA knowledge, educative interventions and deliberation effects. **Tables 5, 6** show hierarchical multilevel regression SEM results with statistically significant path coefficients explaining the impact of CSA knowledge on witness credibility and the subsequent final verdict. Model 1 was a simple regression model to explain post-trial CSA knowledge. In most models, the three intervention conditions were contrast coded with the control group and multiplied with the deliberation variable to test the interaction effects. Models 1–3 tested the significance of predictors of post-trial CSA knowledge that in turn examined its impact on the credibility of the child complainant and the corroborating witness.

In Model 1, the interaction effects were omitted due to convergence issues at Level 1, the individual juror level. Demographic variables of gender, age, education, and pretrial



**TABLE 5 |** Multilevel SEM analysis predicting CSA knowledge and witness credibility: unstandardized coefficients (b).

Predictor/model fit	Model 1	Model 2	Model 3
<b>Juror level predictors of post-trial-CSA-K</b>			
Juror age	0.02**	0.02**	0.02*
Female juror	1.05**	1.08**	1.08**
Education	0.27**	0.28**	0.29**
Deliberation	−0.44	0.50	−0.54
Intervention contrast			
Control vs. Intervention (C1)	0.90**	0.90**	0.90**
Judicial instr. vs. Experts (C2)	0.23**	0.23**	0.23**
Social vs. Diagnostic expert (C3)	0.47**	0.37**	0.37**
Interaction: Deliberation × Intervention			
Deliberation × C1		−0.52**	−0.48**
Deliberation × C2		−0.31	−0.32
Deliberation × C3		0.13	0.79
Pretrial CSA-K	0.65**	0.65**	0.65**
<b>Juror level paths</b>			
Post-trial CSA-K→WCS Victim		1.83**	
Post-trial CSA-K→WCS Witness			1.77**
<b>Jury level predictors of post-trial CSA-K</b>			
Control vs. Intervention (C1)	0.40**	18.64**	−10.80
Judicial instr. vs. Experts (C2)	−0.12	11.22**	9.67
Social vs. Diagnostic expert (C3)	0.33	3.43**	65.25
CSA-K intercept	11.72**	11.25**	11.18
CSA-K variance	0.77	0.63	0.32
Model fit: Loglikelihood	−5594.51	−9152.18	−9193.78
Akaike information criterion	11217.05	18344.15	18427.47
Sample-size adjusted BIC	11238.90	18375.57	18458.96

CSA-K, Child sexual abuse knowledge; Education on a 5-point scale from 1 "less than Year 12 certificate" to 5 "University degree or higher." Deliberation: No jury deliberation = −1. Jury deliberation = 1. Control vs. Intervention (C1): Control group = −3, Three intervention groups = 1 × 3. Judicial direction vs. Experts (C2): Judicial direction group = 2, Social Framework Expert and Diagnostic Expert = 1 × 2. Social vs. Diagnostic expert (C3): Social Framework Expert = −1, Diagnostic Expert = 1. WCS, Witness Credibility Scale; BIC, Bayesian Information Criterion. \* $p < 0.05$ ; \*\* $p < 0.01$ ; Number of jurors ranged from 815 to 835; Number of juries = 44.

CSA knowledge were statistically significant and explained the variance in post-trial CSA knowledge. However, decision type did not predict post-trial CSA knowledge, while all intervention contrast variables were statistically significantly associated with post-trial CSA knowledge. Specifically, jurors in all three intervention groups had statistically significantly higher CSA knowledge after the trial than the control group jurors. Jurors were more persuaded by the judicial direction (gained more CSA knowledge) than by the expert testimony, while the diagnostic expert intervention predicted higher CSA knowledge scores after trial than the social framework expert intervention. Yet, at Level 2, the jury level, only juries in the three intervention groups showed more CSA knowledge than the control group juries after the trial. The positive effects of the judicial direction and diagnostic expert were not statistically significant at the jury level.

In Model 2, all demographic variables were statistically significantly associated with post-trial CSA knowledge while the intervention contrast between the control group and intervention groups was moderated by the impact of deliberation.

The impact of the interventions was stronger when jurors did not deliberate: jurors without any intervention had lower CSA knowledge scores ( $M = 27.87$ ,  $SD = 5.67$ ) after trial than jurors exposed to one of the interventions ( $M = 32.30$ ,  $SD = 5.40$ ). Among jurors who deliberated, post-trial differences in CSA knowledge scores between the intervention groups ( $M = 31.32$ ,  $SD = 4.95$ ) and the control group ( $M = 29.12$ ,  $SD = 4.78$ ) were smaller. However, the judicial direction compared to the expert witness intervention predicted more post-trial CSA knowledge, while the diagnostic expert was more persuasive (as shown in higher post-trial CSA knowledge scores) than the social framework expert. At the jury level, though, the control group showed a higher level of post-trial CSA knowledge compared to the three intervention groups, while the other intervention effects were in the same direction as at the juror level. When the perceived credibility of the corroborating witness was included in Model 3, it was statistically significantly explained by post-trial CSA knowledge. The impact of all other variables and interaction effects produced statistically similar results. Because the jury level effect of the intervention was no longer statistically

**TABLE 6 |** Multilevel mediation SEMs predicting conviction with post-trial CSA knowledge and mediators of witness credibility: unstandardized coefficients and odd ratios.

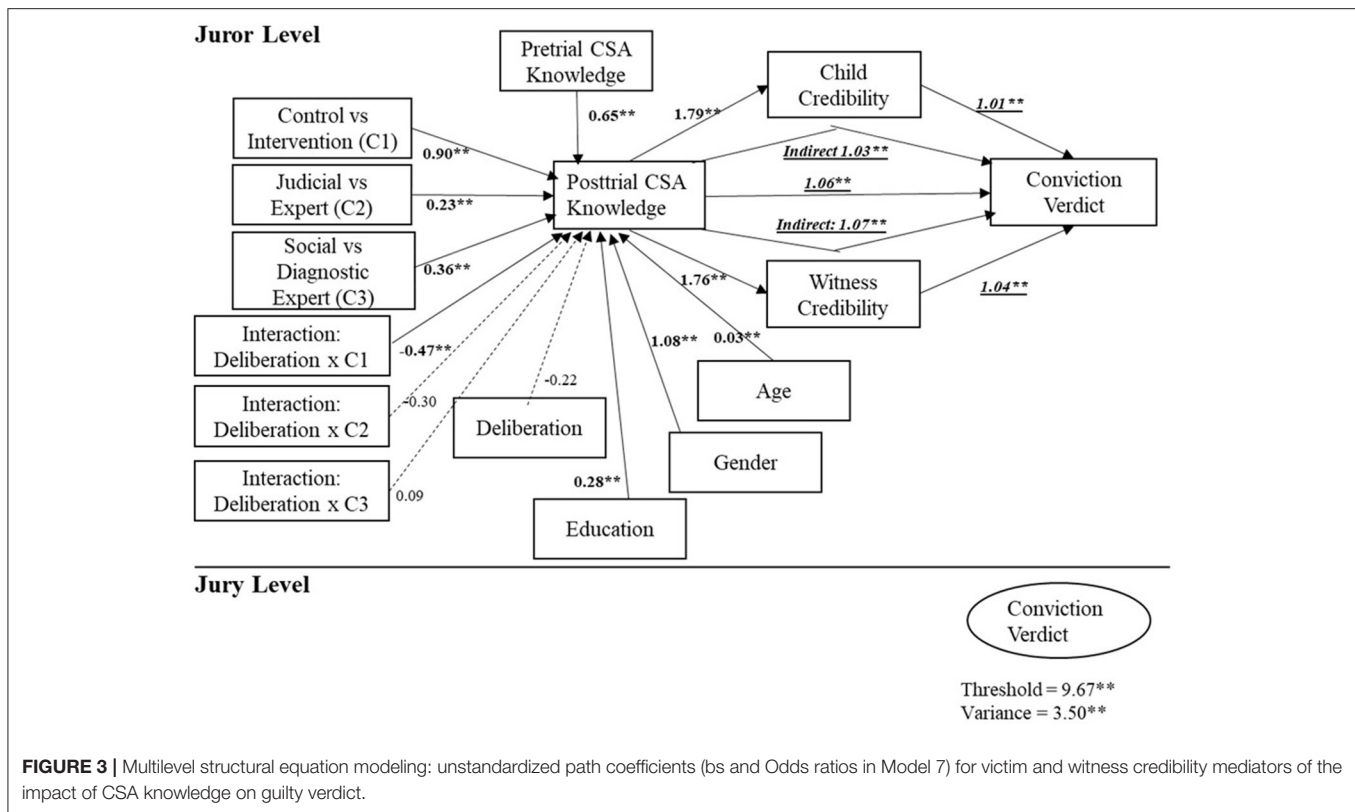
Predictor/model fit	<i>b</i> or Odds Ratio (OR)			
	Model 4	Model 5	Model 6	Model 7
<b>Juror level predictors on post-trial-CSA-K</b>				
Juror age	0.03**	0.03**	0.03**	0.03**
Female jurors	1.07**	1.08**	1.08**	1.08**
Education	0.28**	0.28**	0.28**	0.28**
Deliberation	−0.21	−0.22	−0.22	−0.22
Intervention contrast				
Control vs. Intervention (C1)	0.90**	0.90**	0.90**	0.90**
Judicial vs. Experts (C2)	0.23**	0.23**	0.23**	0.23**
Social vs. Diagnostic expert (C3)	0.36**	0.35**	0.36**	0.36**
Interaction: Deliberation × Intervention				
Deliberation × C1	−0.47**	−0.48**	−0.47**	−0.47**
Deliberation × C2	−0.31	−0.30	−0.30	−0.30
Deliberation × C3	0.09	0.10	0.09	0.09
Pretrial-CSA-K	0.66**	0.65**	0.65**	0.65**
<b>Juror level paths</b>				
Post-trial-CSA-K→WCS Victim	1.80**		1.79**	1.79**
Post-trial-CSA-K→WCS Witness		1.75**	1.76**	1.76**
Post-trial-CSA-K→Convict	1.08**(OR)	1.08**(OR)		1.06**(OR)
WCS Victim→Convict	1.04**(OR)		1.02**(OR)	1.01**(OR)
Indirect via WCS Victim	1.07**(OR)		1.03**(OR)	1.03**(OR)
WCS Witness→Convict		1.05**(OR)	1.04**(OR)	1.04**(OR)
Indirect via WCS Witness		1.09**(OR)	1.07**(OR)	1.07**(OR)
<b>Jury level</b>				
Convict threshold	7.88**	9.01**	8.47**	9.67**
Convict between-juries variance	3.57**	3.85**	4.12**	3.50**
Model fit: Loglikelihood	−6517.51	−6536.03	−10350.61	−10345.04
Akaike information criterion	13075.02	13112.06	20747.22	20738.07
Sample-Size Adjusted BIC	13106.43	13143.48	20783.35	20775.77

CSA-K: Child sexual abuse knowledge; Education on 5-point scale from 1 "less than Year 12 certificate" to 5 "University degree or higher." Deliberation: No jury deliberation = −1. Jury deliberation = 1. Control vs. Intervention (C1): Control group = −3, Three intervention groups = 1 × 3. Judicial direction vs. Experts (C2): Judicial direction group = 2, Social Framework Expert and Diagnostic Expert = 1 × 2. Social vs. Diagnostic expert (C3): Social Framework Expert = −1, Diagnostic Expert = 1. WCS: Witness Credibility Scale. BIC, Bayesian Information Criterion. \*\* $p < 0.01$ ; Number of jurors ranged from 815 to 835; Number of juries = 43. CI: Model 7: 95% confidence intervals of the coefficients—Age, 0.004–0.04; Female jurors, 0.65–1.52; Education, 0.11–0.45; Deliberation, −0.66–0.22; C1, 0.88–0.91; C2, 0.21–0.25; C3, 0.30–0.42; Deliberation × C1, −0.71–0.24; Deliberation × C2, −0.72–0.11; Deliberation × C3, −0.50–0.69; Post-trial-CSA-K→WCS Victim, 1.52–2.06; Post-trial-CSA-K→WCS Witness, 1.47–2.05; Post-trial-CSA-K→Convict, 1.04–1.09; WCS Victim→Convict, 1.01–1.02; Indirect via WCS Victim, 0.01–0.04; WCS Witness→Convict, 1.03–1.05; Indirect via WCS Witness, 1.05–1.09. Confidence intervals for other models are available by request to the authors (omitted due to space limitations).

significant in Model 3 due to the large standard errors of the parameter estimates, the variables (i.e., predictors of Post-trial CSA-Knowledge: C1, C2, C3) were omitted from Models 4–7.

Models 4–7 further examined the relationship between post-trial CSA knowledge and guilty verdicts in a dual mediation model, with credibility ratings of the complainant and her grandmother as mediators, and pre-trial knowledge scores and demographic variables as covariates. Model 4 yielded a statistically significant direct effect of post-trial CSA knowledge on conviction and a statistically significant indirect effect through victim credibility as a psychological mediator. All other effects, including the interaction effects, remained similar to those in the previous model. Higher post-trial knowledge scores were

associated with higher perceived complainant credibility, which in turn increased the odds ratio to convict. When the credibility of the grandmother as a corroborating witness was added, Model 5 showed similar results. Post-trial CSA knowledge was directly associated with an increased odds ratio to convict with its statistically significant indirect effect through perceived witness credibility. Further, Model 6 and Model 7 compared whether the direct effect of CSA knowledge on the odds ratio to convict was statistically significant when both credibility variables were tested as dual mediators (Figure 3). In terms of model fit, Model 4 fit the data best, with the smallest Akaike Information Criterion (AIC) and sample-size adjusted Bayesian Information Criterion (BIC) among Models 2–5.



**FIGURE 3 |** Multilevel structural equation modeling: unstandardized path coefficients (bs and Odds ratios in Model 7) for victim and witness credibility mediators of the impact of CSA knowledge on guilty verdict.

To further test the dual mediation (hypothesis 4), Model 6 and Model 7 were compared. The results showed that Model 7 was superior to Model 6 with a better model fit, that is, smaller AIC and sample-size adjusted BIC, which suggested partial mediation of the credibility of both the child victim and the corroborating witness. Partial mediation was supported because of the statistically significant paths of both the direct impact of CSA knowledge and the indirect impact through the perceived credibility upon conviction rates. Older jurors, female jurors, more educated jurors, and jurors already knowledgeable about CSA were more likely to show greater post-trial CSA knowledge. Similar patterns to the results in Model 2 were observed in this final dual mediation model regarding the impact of interventions during the trial. The impact of all the three interventions was moderated by deliberation with a statistically significant interaction effect, deliberation  $\times$  C1. Specifically, the intervention effect of specialized educative information on CSA knowledge was stronger when jurors did not deliberate than when they did. The remaining two interaction terms were not statistically significant, supporting the main effects of interventions. In particular, the judicial direction predicted a higher level of post-trial CSA knowledge in jurors than other expert interventions with the positive coefficient of the contrast dummy variable, C2. When interventions by the diagnostic expert and social framework expert were compared with the C3 contrast variable, more post-trial CSA knowledge emerged among jurors exposed to the diagnostic expert.

In turn, jurors with greater post-trial CSA knowledge were  $\sim 1.06$  times more likely to convict per each point of increase

in their CSA knowledge score. This path from post-trial CSA knowledge to conviction was statistically significantly mediated by the perceived credibility of both the complainant and the corroborative witness. First, a one-point increase in the post-trial CSA knowledge score was statistically significantly associated with a score higher by 1.79 points in ratings of the credibility of the child complainant and with a score higher by 1.76 points in rating the credibility of the corroborative witness. Third, higher ratings of the perceived credibility of the child complainant in turn yielded statistically significantly greater odds of conviction. That is, jurors were 1.01 times more likely to convict per each increase of a single point on the credibility scale. Fourth, jurors with a score higher by one point on the perceived credibility of the corroborative witness were 1.04 times more likely to convict. These four statistically significant paths comprised statistically significant indirect effects of CSA knowledge via the perceived credibility of the child complainant, 1.03 times more likely to convict, and via the perceived credibility of her grandmother, 1.07 times more likely to convict. This finding suggested a double partial mediation, that is, higher post-trial CSA knowledge was associated with a higher likelihood of a conviction on its own (a statistically significant direct effect) and also indirectly through credibility perceptions of both prosecution witnesses (two statistically significant indirect effects).

In light of the two-factor structure of the CSA knowledge measure, supplementary multilevel SEM was conducted. Similar partial mediation results emerged: when the first factor of the CSA-KQ (the subscale score on the Impact of CSA on Children), was used as the main predictor variable, compared to total

CSA-KQ scores, the larger impact of witness credibility on convictions (odds ratios up to 1.06) was statistically significant. Regarding the second factor (subscale scores on Contextual Influences on CSA Reports), a similar increase in the impact of witness credibility (odds ratios up to 1.16) was statistically significant. Both models showed better fit to the data than Model 7 in the main analysis.

## DISCUSSION

The present study explored jurors' pre-trial attitudes toward complainants in CSA cases and tested the effects of educative interventions to increase jurors' CSA knowledge by providing specialized information within a realistic trial setting. Jurors attending the District and Supreme Courts in NSW participated in the study, and verdicts rendered by non-deliberating individual jurors were compared with those of jurors who deliberated in jury groups.

Inspections of jury groups revealed that CSA knowledge gains varied by group both between and within each of the experimental conditions. These findings indicated that the combination of the variability in juror CSA misperceptions at the outset of the experiment, the intervention source, and the decision process were related to final levels of juror CSA knowledge and verdicts.

Multilevel SEM analyses presented novel insights into psychological mechanisms showing why and how jurors' CSA knowledge impacted their verdicts. When the variance in jurors' verdicts was analyzed, at both juror and jury levels, the impact of CSA knowledge was partially mediated by the perceived credibility of both the child complainant and the corroborative witness. Greater CSA knowledge after the interventions increased the odds ratio to convict by itself, whereas greater CSA knowledge was also associated with heightened credibility perceptions as psychological mechanisms which in turn further predicted a higher odds ratio to convict the defendant. In these mediation models, older age, being female, more formal education, and more pre-trial CSA knowledge were associated with higher CSA post-trial knowledge scores. Whether or not the jurors had deliberated moderated the effect of interventions, such that the interventions had a greater impact on non-deliberating jurors. The judicial direction had a greater impact on post-trial CSA knowledge than diagnostic or social framework expert interventions, while the diagnostic expert was more persuasive than the social framework expert. These results are discussed in relation to the research hypotheses.

### The Influence of Juror Demographic Characteristics on the Perceived Credibility of the Complainant and Verdict

Our first hypotheses, that juror demographic characteristics would affect perceived witness credibility assessments and verdict, were partially supported in a number of ways. Correlations between juror gender and CSA knowledge showed that women's knowledge of CSA was statistically significantly greater than that of men, before and after exposure to

the videotrial, replicating previous findings with Australian community volunteers (Goodman-Delahunty et al., 2010). Further, CSA knowledge was significantly correlated with jurors' formal education levels, such that jurors with higher educational qualifications had statistically significantly more accurate CSA knowledge. Women and older jurors gained most benefit from the educative trial interventions, reflected in their higher knowledge gain scores and post-trial reductions in CSA misconceptions, compared to male and younger jurors. These findings on demographic influences in understanding and responding to CSA knowledge remained consistent in the multilevel SEMs. Moreover, women and older jurors rated the complainant statistically significantly more credible than did men and younger jurors.

Similarly, conviction rates were related to juror gender, such that women rendering individual decisions were more likely to convict the accused than were their male counterparts. A similar pattern has been shown meta-analytically in cases involving CSA, adult sexual assault (Schutte and Hosch, 1997) and other types of criminal cases (Devine and Caughlin, 2014), namely that women are more prone to convict than men. This effect disappeared in the present study when jurors deliberated in groups to a verdict. These results indicated that before deliberation, women had a higher propensity than men to convict, but the influence of deliberation with other jurors exerted a more powerful effect on their verdict than juror demographic characteristics.

The second hypothesis was confirmed, namely that independently of the educative interventions, jurors who arrived for jury duty with numerous CSA misconceptions would rate the complainant low in credibility and tend to acquit the accused, while jurors with fewer CSA misconceptions at the outset would rate the complainant's credibility more favorably and be more inclined to convict the accused. Juror pre-trial CSA knowledge was positively correlated with perceived complainant credibility, showing a medium to strong effect. As expected, less CSA knowledge was associated with lower credibility ratings of the complainant. Moreover, jurors' CSA knowledge predicted the perceived credibility of the complainant, the corroborating witness, and verdicts, such that jurors with more CSA knowledge were more likely to convict. These results were consistent in the multilevel models, supporting previous findings obtained with psychology undergraduates and community members, confirming that jury eligible citizens with greater CSA knowledge were more likely to assess a child complainant as credible and more likely to convict (Gabora et al., 1993; Goodman-Delahunty et al., 2010, 2017b).

### The Impact of CSA Knowledge on the Perceived Credibility of the Witnesses

Although deliberating jurors who were not exposed to any educative CSA knowledge were less likely to convict than non-deliberating jurors in the parallel control condition, deliberating jurors in the control condition perceived the complainant as more credible than their non-deliberating counterparts. While deliberation appeared to enhance credibility perceptions in the control condition, that effect did not translate into convictions,



suggesting that the deliberation process and possibly group consideration of the meaning of the criminal standard of proof (MacCoun and Kerr, 1988; Wright and Hall, 2007) increased jurors' doubt of the accused's guilt, or their willingness to convict, even when they perceived him to be factually culpable. Reluctance by deliberating juries to convict the accused in a CSA case in the face of perceived factual culpability is not unusual (Goodman-Delahunty and Martschuk, 2020).

Unexpectedly, the educative interventions had little impact on the perceived credibility of the complainant among deliberating jurors: ratings of the complainant's credibility were constant in all experimental conditions. For non-deliberating jurors, however, the perceived credibility of the complainant was highest in response to the diagnostic expert condition and lowest in the control condition. Further, for non-deliberating jurors, the grandmother's credibility was influenced more favorably by the two expert witnesses than by the judicial direction, although no similar effect emerged for the credibility of the complainant. As noted above, the educative interventions impacted the verdict, but were not the sole predictors of verdict.

The mediation analyses provided an explanation for these results. Specifically, it revealed that the extent of jurors' post-trial CSA knowledge predicted the perceived credibility of the complainant and the grandmother, in parallel with the source effects of the educative intervention. The interaction between deliberation and interventions was partially supported in that the impact of judicial or expert interventions was stronger in non-deliberating jurors when the variance in the final verdict was analyzed at both juror and jury levels. These findings emphasize the importance of interventions to enhance jurors' CSA knowledge during the trial while jurors who are deliberating may find their group discussion more persuasive than the expert interventions. More importantly, the mediation analysis showed that the combination of CSA knowledge scores and increases in the perceived credibility of the complainant and her grandmother was statistically significantly associated with guilty verdicts. The more jurors knew about CSA post-trial, the higher the perceived credibility of both the complainant and her grandmother, the more likely the jurors were to convict the accused. Because both the direct impact of CSA knowledge on verdict and the indirect effects through two credibility scores were statistically significant, the mediation was partial rather than full. However, the indirect paths through credibility variables showed stronger effects than the direct effects. Hence, the credibility perceptions as mechanisms of CSA knowledge impacting on verdict appeared important, and call for theoretical and practical attention. Prior research demonstrated that the credibility of a complainant who was the sole prosecution witness apart from the expert witness, mediated the effect of CSA knowledge change on verdict (Goodman-Delahunty et al., 2011a). The interaction impact of jury deliberation may indicate that other factors that were not measured in this model should be considered in future studies. Specifically, unique factors within each of the deliberating juries (such as interpretations of the evidence and the criminal standard of proof, the overall extent of CSA misconceptions in the group, and group-specific dynamic factors) may further explain

additional variance in CSA knowledge acquisition and final verdict decisions.

As a novel analytic attempt, the mediation models were tested using multilevel modeling. These types of rigorous methods need to be adopted widely to deal with the troublesome interdependence in juror data given their nested nature (Lovis-McMahon, 2015; Peter-Hagene et al., 2019).

## The Impact of Educative Interventions on Juror CSA Knowledge

The third hypothesis that the educative interventions would increase jurors' CSA knowledge was confirmed. In the absence of any intervention, both deliberating and non-deliberating jurors endorsed fewer CSA misconceptions after viewing the videotrial than before, and the decrease in CSA misconceptions was greater for non-deliberating than for deliberating jurors. Similarly, analyses of jurors' CSA knowledge scores showed that jurors in the control group acquired less accurate information about CSA in the course of the trial than did their counterparts who were exposed to specialized educative information.

Previous research showed similar statistically significant increases in the CSA knowledge of jury eligible citizens who were exposed to specialized knowledge interventions (Goodman-Delahunty et al., 2011a). Unlike the present study, CSA knowledge in the control group in our previous study was unchanged post-trial. That study differed in a number of respects that may account for this difference, including juror demographic characteristics (jury eligible students and community members vs. jurors), the presentation mode (written vs. video-recorded trial) and decision type (individual non-deliberating jurors vs. deliberating juries). The findings in the present study more closely approximate real juror pre-trial CSA knowledge and responses to educative interventions. Although the educative information did not statistically significantly increase CSA knowledge among the non-deliberating jurors, this information protected these juries from susceptibility to CSA misconceptions observed to increase among juries in the control condition who were not exposed to this information.

The post-trial increase in juror CSA misconceptions in the control condition in which no specialized educative information was presented, regardless of whether they deliberated, is an important finding since it is likely to reflect the everyday trial circumstances in the majority of CSA trials conducted in Australia and elsewhere. In other words, prosecutors typically do not call expert witnesses to provide educative information to jurors about the counter-intuitive behaviors of sexually abused children and the reliability of child witnesses, nor do judges routinely provide this information in a judicial direction. One potential source of the observed post-trial increase in CSA misconceptions was the stereotypical misconceptions introduced by the defense lawyer during her vigorous cross-examination of the complainant in the simulated trial. For example, the complainant was asked about continuing to live with her grandfather after the alleged assault and she confirmed that he took her to school each day. Defense counsel also asserted that the complainant had given three conflicting versions of the events,

that she had fabricated her assault allegation after coaching by her grandmother, and had the knowledge to do so because she had attended sex education classes at school. Thus, jurors' CSA misconceptions, and those introduced by defense lawyer during cross-examination of the complainant and other witnesses, were left unchallenged. Absent exposure to educative information to correct CSA misconceptions, these misconceptions intensified when jurors deliberated in jury groups to a verdict.

## The Impact of Type of Expert Witness on Juror CSA Knowledge and Verdict

The fourth hypothesis, that jurors would prefer a diagnostic over a social framework expert and that trials involving the diagnostic expert would yield statistically significantly more convictions compared to other educative interventions, was partially confirmed. The simple difference test in jurors' individual verdicts showed the effect of educative judicial and expert intervention did not support the hypothesis. However, further advanced models showed that the control group without any educative intervention had significantly lower post-trial CSA knowledge which in turn decreased witness credibility perception and subsequently the odds ratio to convict the defendant when the interaction effect of deliberation and educative intervention and demographic covariates such as education and gender were taken into account, particularly with the variance in the verdict variable analyzed both at the juror and jury levels with the strength of multilevel modeling.

Jurors' assessments of the experts as measured by the WCS revealed that the perceived credibility of the social framework and the diagnostic experts was equivalent. Ratings of their credibility may have been similar because the study did not vary attributes of the experts intrinsic to the WCS. Both experts were portrayed by the same actor who conveyed similar evidence in a uniform manner in direct and cross-examination. The experts' level of education and experience in the field establishing pertinent credentials were parallel. Thus it is understandable that they were perceived by jurors as equivalently likable, confident, trustworthy and knowledgeable. In testifying, both stated that the behavior of the complainant was consistent with that of a sexually abused child, although the social framework expert's statement was more cautious than that of the diagnostic expert, perhaps unnecessarily so. The major difference between the experts was that one reviewed only police records (the social framework expert), whereas the other reviewed these records and personally interviewed the complainant (diagnostic expert). The fact that the diagnostic expert interviewed the complainant appeared to enhance the credibility ratings of the complainant. Specifically, educative information presented by the diagnostic expert increased the perceived credibility of the complainant compared to ratings by jurors in the control condition, whereas educative information presented by the social framework expert or the trial judge did not impact the perceived credibility of the complainant. However, this effect was statistically significant only for non-deliberating jurors. The conviction rate revealed a similar pattern of results: both deliberating and non-deliberating individual jurors tended to convict more often in response to the

diagnostic expert who stated that he had interviewed the child, than in response to the social framework expert who had only reviewed the police records. However, among deliberating jurors, the number of juries voting to convict the accused did not differ in response to the type of expert witness.

## The Persistence of CSA Misconceptions Following Jury Deliberation

The hypothesis, that CSA misconceptions would decrease after exposure to one of the three educative interventions, was partially confirmed. CSA knowledge scores of jurors in all non-deliberating conditions either increased slightly or remained stable, unlike those of their deliberating counterparts. Following deliberations, CSA knowledge persisted at a level equivalent to pre-trial CSA knowledge in all intervention groups. The increase in CSA misconception scores of deliberating jurors who were not exposed to any educative information (control condition) far exceeded that of jurors in other deliberating groups. While the increase in CSA misconceptions was moderated by the presence and source of educative interventions, these findings demonstrated that deliberation did not reliably reduce juror errors and CSA misconceptions. In some juries, CSA knowledge increased after a discussion of the case facts as a group, but other juries endorsed CSA misconceptions in the course of their deliberations. Deliberation provided an opportunity for many jurors to repeat and reinforce CSA misconceptions introduced by defense lawyer during cross-examination of the complainant, or by other deliberating jurors. These findings reflect the impact within each jury of unmeasured factors arising from group dynamics, such as cohesion (Cialdini and Goldstein, 2004), norms arising within each group (Schulz et al., 2007), or the impact of dominant individual jurors on group decisions (Gordon, 2014).

The frequency of hung juries was greater among deliberating jurors who received specialized educative information from the judge in a judicial direction compared to those who received it from an expert witness. This finding suggested that jurors were more polarized by educative information in the form of a judicial direction compared to that provided by an expert witness, whose opinion they could disregard.

The post-trial persistence of CSA misconceptions in deliberating jurors who were exposed to three different sources of educative interventions was unexpected. These findings may be due to the persistence of discredited information (Anderson et al., 1980), a confirmation bias (Nickerson, 1998), or attitude polarization (Myers and Lamm, 1976), all of which have been tested and observed previously in the context of mock-jury research on topics other than CSA (Salerno et al., 2017; Peter-Hagene et al., 2019). Alternatively, misconceptions in statements by the jury foreperson or other influential jurors in the group may have dominated the discussion (Gordon, 2014). The findings are also consistent with deliberation theories such as the liberation hypothesis which postulates that when the evidence is ambiguous, jurors resort to extra-legal information such as their own experiences and beliefs, to reach a verdict (MacCoun and Kerr, 1988). Alternatively, the findings may

be attributable to the leniency effect previously observed in deliberation (MacCoun and Kerr, 1988; Devine et al., 2009). However, testing these theories requires analysis of the content of each of the deliberations, a task beyond the scope of the present study.

Notably, the multilevel modeling presented more evidence on general psychological factors and paths in understanding the variance in jurors' CSA knowledge and final verdict when the intercorrelation of juror data was taken into account at both juror and jury levels. Expert interventions and judicial direction statistically significantly increased jurors' post-trial CSA knowledge while psychological mechanisms of perceived credibility shed light on the social and cognitive factors that triggered guilty verdicts, thereby extending the previous literature (Goodman-Delahunty et al., 2010; Powell et al., 2016).

## Limitations of the Study

The observation or videotaping of jury deliberations in real trials is prohibited. If the effects of deliberation are to be tested, the best option for researchers in Australia is to recruit jurors called for jury duty to serve on a simulated case so that their deliberations can be videotaped, as was done in this study. Although we increased the external validity of our methodology by recruiting actual jurors who reported for jury duty, by conducting our experiments within a court precinct, and by using a professionally acted videotrial, it can nonetheless be argued that our findings may not generalize to real juries because jurors knew they were participating in a simulated trial (Goodman-Delahunty et al., 2011b). Nonetheless, jury deliberations revealed the conscientiousness with which jurors engaged in their task, with disagreements and anxiety expressed about the consequences of a guilty verdict.

The case facts in the simulated trial were representative of some counter-intuitive aspects of a typical CSA trial, namely (a) the perpetrator was someone familiar to the complainant, a family member, rather than a stranger; (b) the complainant continued to have ongoing contact with the perpetrator after the alleged abuse; (c) the abuse took place in familiar setting, the complainant's home; and (d) the abuse was not violent. However, the case facts also included a number of unrepresentative features of CSA cases, i.e., the complaint entailed (a) a single abusive event, a one-off instance rather than a series of recurring abusive events; (b) immediate rather than delayed disclosure; (c) the child victim was 12 years of age thus less suggestible than many younger children; (d) the victim resisted; and (e) a corroborating witness observed the complainant and the accused with their pants down and overheard the victim tell the accused to stop. Inclusion of the latter series of facts strengthened the evidence against the accused, supporting potential convictions, but decreased the goodness of fit between the case facts and typical counter-intuitive specialized CSA knowledge that is often the basis for expert evidence (Seymour et al., 2013). Prior research has shown that when this fit is poor, jurors may disregard the educative evidence or infer that the mismatch and atypical features indicate that the complainant was not sexually assaulted (Horan and Goodman-Delahunty, 2020). Future research testing the effectiveness of educative interventions should tailor trial

simulation materials to include a closer fit between the expert evidence and the case facts.

One caveat in interpreting the significant interaction effect between the expert witness condition and the deliberation condition is that this finding could have been confounded by a difference in the order of administration of post-trial verdict and CSA knowledge measures to deliberating and non-deliberating jurors. That is, post-trial CSA knowledge was measured after the deliberating jury group verdict and before the individual verdict of those jurors, whereas post-trial CSA knowledge of non-deliberating jurors was assessed before their individual verdicts were provided.

Had the juries been allowed more time to deliberate to a final verdict, there may have been fewer hung juries. Reviewers of prior research applying dual-process heuristic-systematic or elaboration likelihood models of persuasion to jury deliberations observed that the more rapid, heuristic or peripheral decision strategy may be triggered by time-pressure. Future research analyses of deliberation content applying these persuasion models should explore whether different decision strategies were applied by juries who felt pressured to conclude their deliberations, i.e., whether they avoided slower, more detailed reasoning about the information presented in the educative interventions.

Similarly, future research applying dual-process heuristic-systematic or elaboration likelihood models of persuasion to jury deliberations may benefit by distinguishing juror beliefs from juror knowledge to test the impact of contextual effects, such as group deliberations, on beliefs vs. knowledge. Psychologists have observed that global or abstract beliefs and attitudes often differ from actions in response to a specific set of case facts or a particular context (Ajzen and Fishbein, 2005). A lack of information is one common cause of the observed value-action gap between what people say and what they do. The fact that different results were obtained using only the individual post-trial questionnaire vs. group discussions in a naturalistic setting and a group decision followed by the individual post-trial questionnaire is unsurprising (Grzyb, 2016). Jury deliberation itself may have a number of possible effects. For instance, it may (a) reinforce in some jurors their belief (or uncertainty) that a judge's or expert's statement about children was false, enabling those jurors to dismiss that information so it does not become part of their knowledge base. Alternatively, (b) a juror who may have formed a belief that a certain educative statement was true but who had not yet engaged in more effortful processing to add it to their knowledge base, may be more readily persuaded by alternative arguments in deliberation that counteract that new belief. Or (c) other jurors who accepted certain educative statements (formed a belief) and then added that information to their knowledge base may be compelled to dismiss that newly acquired knowledge if the majority view of the jury was to dismiss it in order to reach a consensus verdict, whether to convict or acquit.

## CONCLUSION

Our study confirmed that in CSA trials, similar to results in studies of jury behavior in other selected types of cases, such

as capital crimes (where a conviction-prone bias accompanies support for the death penalty among death-qualifies jurors; see Bornstein and Greene, 2017), a statistically significant relationship exists between the pre-existing attitudes and demographic characteristics of citizens called for jury duty, their perceptions of the evidence, assessments of witness credibility, and verdicts. As anticipated, educational interventions in the form of a judicial direction and expert evidence from a psychologist statistically significantly increased jurors' CSA knowledge, which enhanced the credibility of the complainant and increased the conviction rate.

Our findings suggested that specialized information was best conveyed by a judicial direction than by an expert witness. However, a diagnostic expert who interviewed the complainant had a greater impact on juror perceptions of the complainant's credibility and verdict than a social framework expert, possibly because the diagnostic expert appeared more competent and reliable to express an opinion about the whether the child was sexually assaulted.

Importantly, the findings demonstrated systematic differences between individual juror decisions and jury decisions following group deliberations. The fact that these analyses yielded different outcomes in terms of CSA knowledge increases, the perceived credibility of the complainant, and the effects of deliberation on verdict underscores the critical importance of including group deliberation in simulated jury studies, and of using more sophisticated methods of analysis in jury research that take the non-independence of the nested jurors within a jury into account.

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## DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Charles Sturt University Human Research Ethics Committee. The patients/participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.624331/full#supplementary-material>

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# Non-intimate Relationships and Psychopathic Interpersonal and Affective Deficits as Risk Factors for Criminal Career: A Comparison Between Sex Offenders and Other Offenders

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Sex-offenders are at risk of criminal recidivism. For the treatment to be truly effective, it must be individualized. For this purpose, an accurate assessment should focus on criminological, psychological, and psychopathological features. The present study compared sex offenders with other offenders on historical experiences (i.e., problems with violence, anti-social behaviors, problems with personal relationships, problems with substance use, traumatic experiences, and parenting style). In addition, given the association between life events and psychopathy, we explored whether the relation between life events and crime type (sexual crime vs. other types of crime) might be moderated by psychopathy traits (interpersonal and affective deficits and antisocial behavior). Eighty-eight sex offenders (76% of whom child molesters) and 102 other offenders were included. The Historical, Clinical and Risk Management - 20 item Version 3 (HCR-20V3) and Psychopathy Checklist-Revised (PCL-R) were administered. The scores of the HCR-20V3 Historical scale items were computed to assess life events. The scores of the PCL-R factors, F1 Interpersonal affective deficits and F2 Antisocial behavior, were recorded. The presence of a history of problems with non-intimate relationships was the only significant risk factor for sexual crime compared with other crimes. Interpersonal and affective deficits provided an increased likelihood of being sex offenders as compared with other offenders when problems with non-intimate relationships were possibly/partially or certainly present.

**Keywords:** sex offenders, risk factors, psychopathy, personality traits, life events

## INTRODUCTION

The history of criminal perpetrators, the developmental pattern of their careers, and the risk factors for criminal behaviors have always been considered a central topic in criminological research.

The relationship between the traumatic experiences of the sexually abused victims and the arising of dysfunctional sexual behaviors was investigated by several scholars, with the conclusion

that additional causes underlying sexual offenses must be searched and that the so-called Victim/Perpetrator Paradigm is too reductive (Burton, 2008; Rasmussen, 2012).

Psychiatric disorders play an important role as well. Schizophrenia and bipolar disorder (Carabellese et al., 2012; Pozza et al., 2019, 2020) and mood and personality disorders (Dunsieth et al., 2004; Coluccia et al., 2020) were detected in sex offenders. In their research on a sample of 1346 sex offenders, Eher et al. (2019) found that 50.1% of them suffered from personality disorders. Carabellese et al. (2012) confirmed these results, highlighting the role of schizoid, narcissistic, and avoidant personality disorders.

The relevance of psychopathy on criminal behavior and violent conduct is widely recognized in the literature, and it is generally assessed by the gold standard measure Psychopathy Checklist-Revised (PCL-R; Hare and Neumann, 2006) which covers two main factors, i.e., interpersonal and affective deficits and antisocial behavior (Carabellese et al., 2008; Leistico et al., 2008; Campbell et al., 2009; Campobasso et al., 2009; Kennealy et al., 2010; Yang et al., 2010; Ismail and Looman, 2018; Mazzoni et al., 2018). The association between psychopathy and sexual crimes emerged in several studies, including a meta-analysis conducted by Hanson et al. (2009) which found that the presence of psychopathy in sex offenders constitutes a predictive factor for criminal recidivism in sexual offenses and other types of offenses. High scores on the PCL-R were found to be associated with experiences of neglect and abuse (Kimonis et al., 2011; Schraft et al., 2013; Ometto et al., 2016; Sevecke et al., 2016). Other studies (e.g., Schimmenti et al., 2020) have shown that the relational failure of caregivers in the attachment system, due to experiences of neglect, early abandonment or loss of caregivers, can lead the child to difficulty in interpersonal self-regulation skills. These interpersonal difficulties can in turn represent a risk factor in adults for aggressive behavior, difficulties in emotion regulation and sexual problems, as it can be found in many cases of psychopathy, sadism, or paraphilia.

Such a kaleidoscope of different situations makes it difficult to identify those risk factors that can affect the dysfunctional sexual behavior of sex offenders. Due to the variety of factors that must be considered when studying sexual crimes, investigating sex offenders' criminal career through different risk factors is a topic that still deserves the attention of researchers. Although the evidence about these relationships is still controversial, at least partly, sex offenders seem to show a higher prevalence of physical, sexual, and emotional abuse during their childhood (Lee et al., 2002; Jespersen et al., 2009; Seto and Lalumière, 2010; Drury et al., 2019) and a history of family dysfunctions (Lee et al., 2002), poor parenting style (Sigre-Leirós et al., 2016) and symptoms of social anxiety (Porter et al., 2015). In their review, Kraanen and Emmelkamp (2011) reported that sex offenders' criminal career is associated with substance abuse, alcohol, and drug misuse.

Among the psychometric instruments for professional risk assessment, the Historical, Clinical and Risk Management - 20 item Version 3 (HCR-20 Version 3; Douglas et al., 2013) represents a psychometrically sound instrument, designed to give a comprehensive framework for the entire process of risk assessment (Douglas et al., 2013). The historical items

of the HCR-20V3 provide a series of information on the subject's existential path. The items recall some factors among those mentioned (items H1, H2, H3, H5, H8) that could have a significant role in the criminal career. Moreover, the historical items of HCR-20V3 take into consideration other factors, in particular personality disorders (H7) and major mental disorders (H6). In addition to being correlated with violent behavior (Carabellese et al., 2020a) and sexual offenses (Somma et al., 2020), such disorders can interact with the psychopathic dimension (Wong and Olver, 2016), another personality factor notoriously correlated with the risk of criminal recidivism (Hanson and Morton-Bourgon, 2005). Cartwright et al. (2018) suggested that the HCR-20V3 plays an important role in the assessment and management of sex offenders beyond the assessment of the risk of relapse. The HCR-20V3 has proved to be a valid predictor of violent conduct in perpetrators of crimes, and its use as a predictive tool has also been suggested in sex offenders (Cartwright et al., 2018). The factors that the HCR-20V3 takes into consideration, especially in the historical items, represent a valid support for a professional judgment aimed to develop a personalized therapeutic project (Yates, 2013; Gannon et al., 2019).

The aim of this study was to explore the relevance of life events in criminal outcome, comparing sex offenders with other offenders about historical experiences assessed by the HCR-20V3 related to problems with violence, anti-social behaviors, problems with personal relationships, problems with substance use, traumatic experiences, and parenting style. This is the first study which explored risk factors in sex offenders by using HCR-20V3 in its validated Italian version (Caretto et al., 2019) and one of the few studies which investigated the discriminant role of these life events comparing sex offenders (SO) with other offenders (OO). In addition, given the association between life events and psychopathy, we explored whether the relation between certain life events measured by the HCR-20 V3 and the type of crime (sexual crime vs. other types of crime) might be moderated by psychopathy traits, i.e., interpersonal and affective deficits and antisocial behavior.

## MATERIALS AND METHODS

### Participants and Setting

This research is part of a national multicenter project authorized by the Penitentiary Administration Department of the Ministry of Justice. The study was reviewed and approved by the Director and ethical board of Penitentiary Administration Department of Ministry of Justice in accordance with the current ethical standards and in compliance with the rules concerning the privacy of data related to the perpetrators of sexual crimes. This multicenter study was realized with the collaborations of the penitentiary institutions of six Italian regions (Lombardia, Veneto, Toscana, Lazio, Puglia e Sicilia). The regions involved were chosen for the presence of university centers that planned the enrollment of the sample, the collection and analysis of the data. The researchers had previously been trained in the use of the tools. All the prisoners enrolled in the study received



a final conviction for their crimes. Data were collected during 2015 and 2016 and only the prisoners who had previously given their consent to meet the researchers were included in the study. For legal and privacy-related reasons, data will not be made available.

The exclusion criteria were applied to both the SO and the OO groups and consisted of the lack of provision of the informed consent and the presence of a lifetime psychiatric diagnosis which was considered by the Penitentiary Administration an exclusion criterion to prevent the fact that the relation between life events and sexual crime might be attributed to a psychiatric history as psychiatric disorders are observed in sex offenders (Dunsieth et al., 2004; Carabellese et al., 2012; Eher et al., 2019). The presence of a lifetime psychiatric diagnosis was established by the penitentiary administration if the individual had received or was receiving a psychiatric treatment, i.e., psychiatric medications or psychotherapeutic treatments prescribed or delivered by a mental health professional in any period during his life.

In Italy, the number of sexual offenses leading to the internment of the offenders in the so-called High-Security Forensic Psychiatry Residences (i.e., the psychiatric facilities hosting socially dangerous offenders with a mental disorder) is relatively low (3.4%) (Catanesi et al., 2019). As for the sex offenders with mental disorders not serious enough to exclude criminal responsibility, in Italy they are sentenced in prison, but in this case, we had no data concerning them because the prisoners with psychiatric disorders were excluded from the study by the Penitentiary Administration.

Eighty-eight SO and 102 OO were assessed by researchers trained in the administration of the tools, to guarantee uniformity and homogeneity in data collection. The category SO was declined according to the definition given by Myers et al. (2005), even though the majority (76%) of these inmates were child molesters. The final sample of 88 sex offenders did not commit any other crimes than sexual offenses, possibly in relapse. The data concerning the fact that the SOs had been convicted for the first time or they were recidivists, though, was kept confidential by the prison management. It must also be said that SOs in Italy are either detained in separate prisons (as happens for example in Puglia), or they are placed in special sections within the individual prisons.

The category OO included a heterogeneous set of crimes, such as personal crimes (homicide, assault), property crimes (robbery, fraud), and crimes against the State, but not sex offenses.

A preliminary meeting with prisoners and social workers was scheduled before the assessment, to present the research project and collect participants' written consent (Mandarelli et al., 2017). At this stage, about 18% of prisoners refused to give informed consent and participate. However, the researchers did not know the number of those who had initially refused to participate to the preliminary meeting in which the project was presented. In fact, the request as to whether the prisoners intended to participate to the preliminary meeting had been made by the penitentiary institutions and kept confidential. The various stages of sample recruitment are shown in **Supplementary Material**.

## Measures

The Psychopathy Checklist-Revised (PCL-R; Hare and Neumann, 2006) in its validated Italian version (Caretto et al., 2011) was administered to assess the presence of psychopathy. PCL-R factor 1 captures traits dealing with the interpersonal and affective deficits of psychopathy (e.g., shallow affect, superficial charm, manipulateness, and lack of empathy), whereas factor 2 deals with symptoms relating to antisocial behavior (e.g., criminal versatility, impulsiveness, irresponsibility, poor behavior controls, and juvenile delinquency) (Hare et al., 1989). The scores of the two different components of factors F1 and F2 were recorded, as well as the values of the different components within factors F1 and F2. A threshold score of PCL-R equal to or greater than 25 was established to identify the condition of psychopathy, as indicated in studies conducted on European populations (Grann et al., 1998; Andersen et al., 1999; Jüriloo et al., 2013).

The HCR-20V3 Italian version (Douglas et al., 2013; Caretti et al., 2019), a tool assessing the risk of violence, was administered. Some items of the Historical Scale were considered to analyze the existence of lifetime problematic experiences that can be considered risk factors for the development of sexually based crimes. According to the literature about risk factors for sex offending, the following items were selected among those belonging to the Historical Scale: (a) H1 – problems with violence; (b) H2 – problems with other antisocial behavior; (c) H3 – problems with relationships; (d) H5 – problems with substance use; (e) H8 – problems with traumatic experiences. Items H1 and H2 are divided in sub-items expressing three age classes: (1) child, 12 years and younger; (2) adolescent, 13–17 years; (3) adult, 18 years and older. The item H3 is divided in two sub-items (intimate and non-intimate relationships), and the item H8 is also divided in two sub-items (victimization/trauma and adverse child rearing experiences). Every item is scored 0, 1, or 2: 0 if the item is definitely absent, 1 if the item possibly is present, or present to a minor/moderate degree, and 2 if the item is definitely present. All the researchers involved had been trained through role-playing and internships to administer the tools before the research was initiated.

Together with the assessment scales, the anamnestic and criminological data were collected through the examination of the personal data sheets.

## Statistical Analysis

Descriptive statistics were used to describe subjects' characteristics (mean and standard deviation for continuous measures, frequencies, and relative frequencies for categorical variables). In accordance with the manual of the instrument (Caretto et al., 2019), the presence of the risk factors was measured by the HCR-20V3 Historical item scores which were coded as a categorical variable (i.e., response categories: "No" vs. "Possibly/Partially" vs. "Yes").

The characteristics of incarcerated groups (SO vs. OO) and their risk factors assessed with HCR-20V3 were compared using parametric tests for the continuous variables (Student's *t*-test,

once verified the assumption of normality with Kolmogorov-Smirnov test) and non-parametric tests for categorical variables (Chi-square and Fisher's Exact Test).

A binary logistic model was used to estimate the effect of the HCR-20V3 historical risk factors in predicting criminal careers, with being SO or OO as the dichotomous dependent variable. Only those risk factors that showed a significant difference in the comparison of the two groups were included as predictors in the regression model. The assumptions related to the sample size adequacy, the independence of observations, and the lack of multicollinearity among the independent variables were verified. Model fit was assessed through Hosmer-Lemeshow test. The Wald's statistic was used to analyze the predictors' contribution to the explanation of the dependent variable. The Odds Ratio and their 95% confidence intervals were computed for each predictor's category. A second binary logistic model was fitted to assess the interaction effects with PCL-R's Factors 1 and 2.

Data analysis was performed with SPSS-IBM v25 software, setting significance at  $p < 0.05$ .

## RESULTS

**Table 1** summarizes the characteristics of the two groups of subjects (SO vs. OO). The total mean age was  $45.12 \pm 12.732$ , and it was significantly higher in the SO group ( $t_{(188)} = -3.947$ ;  $p = 0.000$ ). About half of the convicted was unemployed (46.8%), and a percentage of 11.1% showed a diagnosis of psychopathy (PCL-R score  $\geq 25$ ). No association was found between the employment status, or the diagnosis of psychopathy, and the two groups of subjects.

Considering the educational attainment, the secondary school was the most frequent (41.1%), followed by high school (38.4%). A higher school level was associated with the SO group ( $\chi^2_{(3)} = 24.186$ ;  $p = 0.000$ ). Chi-Square *post hoc* tests were performed by checking the significance of the adjusted residuals of the contingency table cells, with Bonferroni correction. The results of the *post hoc* tests showed that SO and OO groups showed significant adjusted residuals for secondary school and university degree (both, respectively:  $p = 0.022$  and  $p = 0.001$ ).

The results of the comparisons on the HCR-20 V3 between SO and OO on the risk factors carried out by non-parametric tests are presented in **Table 2**. *Post hoc* analysis results are displayed in the note of **Table 3**. Some of the risk factors assessed as definitely present (coded as "Yes") showed a high prevalence in the total group of subjects. A history of problems with violence as an adult (18 and over) was detected in the 62.1% of subjects, and problems with antisocial behavior, once again as an adult, pertained to the 46.3% of the prisoners enrolled in the study. Problems with relationships showed a high prevalence in this sample, intimate and non-intimate as well (respectively: 47.9 and 35.8%). A history of problems with substance use was definitely found in the 34.2% of the subjects, whilst risk factors related to traumatic experiences

were detected in a lower proportion: 30.0% experienced a victimization or trauma, and 26.8% reported experiences of adverse child rearing.

Six out of eleven risk factors considered in the analysis displayed a significant association with the groups: (a,b) problems with violence (as a child and as an adult), (c,d) problems with other antisocial behavior (as a child and as an adult), (e) problems with non-intimate relationships and (f) problems with substance use. Prisoners included in the OO group seemed to be portrayed by a history of problems with violence. Considering the subscale "as an adolescent (13–17)" and summing the relative frequencies of the two categories "Possibly/Partially" or "Yes", this risk factor was observed in the 47.1% of the OO group, against the 19.4% of the SO group ( $\chi^2_{(2)} = 19.285$ ;  $p = 0.000$ ). Although a history of problems with violence as an adult was more frequent in the SO group than in the OO group (respectively: 65.9 and 58.8%), the lack of this risk factor proved to be double than that of the OO group (respectively: 20.5 and 11.8%;  $\chi^2_{(2)} = 7.960$ ;  $p = 0.019$ ). Also the other antisocial behaviors characterized the OO group: during the adolescence, this problem was detected ("Possibly/Partially" or "Yes") in the 56.8% of the OO group (SO = 27.2%;  $\chi^2_{(2)} = 17.288$ ;  $p = 0.000$ ), and, as an adult, this percentage was 77.4% (SO = 50.0%;  $\chi^2_{(2)} = 16.615$ ;  $p = 0.000$ ). The last risk factor associated with the OO group concerned substance use ( $\chi^2_{(2)} = 25.697$ ;  $p = 0.000$ ).

Finally, a history of problems with non-intimate relationships was the only risk factor linked to the criminal career of the SO: in this group, it was definitely assessed in the 43.2% of the subjects, against the 29.4% of the OO group ( $\chi^2_{(2)} = 7.416$ ;  $p = 0.025$ ).

The results of Student's *t*-tests showed that as compared with OO, the group of SO had significantly higher and lower scores, respectively, on the PCL-R F1 Interpersonal and Affective Deficits and PCL-R F2 Antisocial Behavior. In both groups, the scores on the PCL-R factors were moderately correlated to each other. The results of the comparisons on the PCL-R factor scores and the correlations in the two groups are presented in **Supplementary Material**.

These six mentioned factors presenting a significant association with the study groups were included as predictors in a binary logistic regression model. The results of the logistic regression analysis are presented in **Table 3** where the role of HCR-20V3 historical risk factors is entered as predictors and the criminal career (defined as being a SO or OO) is entered as dichotomous outcome. The lack of significance of the Hosmer-Lemeshow test ( $\chi^2_{(8)} = 7.078$ ;  $p = 0.528$ ) proved the goodness of the model fitting. The percentage of predicted cases was 73% out of the total group.

Three risk factors did not show a significant contribution to the dependent variable: problems with violence (as an adult) and problems with antisocial behavior (as an adolescent and as an adult).

Two risk factors provided a significant effect on the dependent variable but in favor of the "other offenders" criminal career: the possible, or partial, presence of problems with violence as an adolescent ( $\beta = -1.237$ ; Wald's  $\chi^2_{(1)} = 5.090$ ;  $p = 0.024$ ) and the certain history of substance use ( $\beta = -1.615$ ; Wald's  $\chi^2_{(1)} = 11.092$ ;  $p < 0.001$ ). According to these results, the

**TABLE 1** | “Sex Offenders” (SO) and “Other Offenders” (OO) characteristics: age, employment status, educational attainment, and diagnosis of psychopathy.

		Total	SO (n = 88)	OO (n = 102)	Statistic	p
Age (mean ± SD)		45.12 ± 12.732	48.90 ± 13.281	41.85 ± 11.232	$t_{(188)} = -3.947$	<b>0.000</b>
Employment status n.(%)	Employed	101 (53.2)	50 (56.8)	51 (50.0)	Fisher's Exact Test	0.383
	Unemployed	89 (46.8)	38 (43.2)	51 (50.0)		
Educational attainment n.(%)	Primary school	13 (6.8)	2 (2.3)	11 (10.8)	$\chi^2_{(3)} = 24.186$	<b>0.000</b>
	Secondary school	78 (41.1)	26 (29.5)	52 (51.0)		
	High school	73 (38.4)	39 (44.3)	34 (33.3)		
	University degree	26 (13.7)	21 (23.9)	5 (4.9)		
Diagnosis of psychopathy (PCL-R ≥ 25) n.(%)	Yes	21 (11.1)	9 (10.2)	12 (11.8)	Fisher's Exact Test	0.819
	No	169 (88.9)	79 (89.8)	90 (88.2)		

Bold values represent statistically significant p-values.

detection of these risk factors was associated with a lower likelihood of being “SO”.

The presence of a history of problems with non-intimate relationships was the only significant risk factor explaining the outcome “SO”. The high value of the Wald’s statistic (6.325) expressed its relevant contribution to the regression model. Looking at the odds ratio, the prisoners experiencing problems with non-intimate relationships were 3.610 (95% CI 1.327–9.819) times more likely to be a “SO” than another type of offender.

Although no significant difference was found between SO and OO on their psychopathological conditions, a second logistic regression was estimated, using the only significant predictor for the SO category in interaction with the two PCL-R factors: (F1) interpersonal and affective deficits, (F2) antisocial behavior. The results of the logistic regression analysis are shown in **Table 4** where the interaction effects between the significant risk factor (i.e., Non-Intimate Relationships) and the two PCL-R factors (i.e., Interpersonal and Affective Deficits and Antisocial Behavior, respectively) were included as predictors and the sexual career (i.e., being a SO vs. OO) is included as dichotomous outcome. The lack of significance of the Hosmer-Lemeshow test ( $\chi^2_{(6)} = 2.896$ ;  $p = 0.822$ ) confirmed the goodness of fit, even if the percentage of predicted cases was quite low (66% out of the total group). In other words, a 29% of the variance between the SO and OO groups was attributed to the psychopathy factors when we considered problems with non-intimate relationships.

Both PCL-R factors showed a significant interaction with the existence of problems with the non-intimate relationships detected with HCR-20 V3, but with opposite effects. Increasing values of the PCL-R Factor 1 (interpersonal and affective deficits) provided an increased likelihood of being SO when problems with the non-intimate relationships were possibly/partially or certainly present (“Possibly/partially”:  $\beta = 0.358$ , Wald’s  $\chi^2_{(1)} = 9.493$ ,  $p = 0.002$ ; “Yes”:  $\beta = 0.251$ , Wald’s  $\chi^2_{(1)} = 10.824$ ,  $p = 0.001$ ). On the contrary, increasing values of the PCL-R Factor 2 (antisocial behavior) were associated to a decreased likelihood of being SO when problems with the non-intimate relationships were possibly/partially or certainly present (“Possibly/partially”:

$\beta = -0.533$ , Wald’s  $\chi^2_{(1)} = 13.396$ ,  $p = 0.000$ ; “Yes”:  $\beta = -0.231$ , Wald’s  $\chi^2_{(1)} = 10.291$ ,  $p = 0.001$ ).

## DISCUSSION

The challenge of this study was to border the investigation concerning the association between risk factors and criminal career, to the identification of those lifetime events that can discriminate sex offenders from other offenders. The risk factors were assessed by a set of items of the HCR-20 V3 Historical scale. As compared with the SO, the OO group showed a greater likelihood of having a history of problems with violence and antisocial behavior (as adolescents and adults), together with problems with substance abuse. These findings were in line with the literature evidence. Only one risk factor, i.e., the presence of problems in non-intimate relationships, discriminated the criminal career of sex offenders from other types of criminals. In the HCR-20 V3 manual, non-intimate relationships are depicted as the bonds with the family members, the friends, or with generic acquaintances which do not involve the sexual dimension. Social isolation, emotional distance, instability or conflict, manipulation of others, inappropriate sexualization and violence in non-intimate relationships and escalation of problems are indicators of the presence of such problems. As compared with the OO group, SO showed higher and lower levels, respectively, of psychopathic interpersonal and affective deficits and antisocial behavior. Finally, the present findings confirmed the importance of deficient non-intimate relationships in predicting the criminal career of sex offenders.

Furthermore, this association was boosted by psychopathic traits related to interpersonal and affective deficits, but not by antisocial behavior. The moderator role of interpersonal/affective deficits in the relation between problems in non-intimate relationships and the risk of being SO vs. OO seems to be partially in line with a meta-analysis which indicates that this psychopathy facet is associated with violence (Kennealy et al., 2010). The present findings suggest that during clinical practice the assessment of SO should focus on social isolation,

**TABLE 2 |** Comparison among “sex offenders” (SO) and “other offenders” (OO) about the risk factors assessed with HCR-20-historical scale (items: H1a, H1b, H1c, H2a, H2b, H2c, H3a, H3b, H5, H8a, H8b).

		Total	SO (n = 88)	OO (n = 102)	Statistic	p
HCR-20V3 H1a Violence: as a child (12 and under) n.(%)	No	144 (75.8)	71 (80.7)	73 (71.6)	$\chi^2_{(2)} = 5.436$	0.066
	Possibly/Partially	32 (16.8)	9 (10.2)	23 (22.5)		
	Yes	14 (7.4)	8 (9.1)	6 (5.9)		
HCR-20V3 H1b Violence: as an adolescent (13–17) n.(%)	No	125 (65.8)	71 (80.7)	54 (52.9)	$\chi^2_{(2)} = 19.285$	<b>0.000</b>
	Possibly/Partially	40 (21.1)	7 (8.0)	33 (32.4)		
	Yes	25 (13.2)	10 (11.4)	15 (14.7)		
HCR-20V3 H1c Violence: as an adult (18 and over) n.(%)	No	30 (15.8)	18 (20.5)	12 (11.8)	$\chi^2_{(2)} = 7.960$	<b>0.019</b>
	Possibly/Partially	42 (22.1)	12 (13.6)	30 (29.4)		
	Yes	118 (62.1)	58 (65.9)	60 (58.8)		
HCR-20V3 H2a Other antisocial behavior: as a child (12 and under) n.(%)	No	151 (79.5)	72 (81.8)	79 (77.5)	$\chi^2_{(2)} = 1.882$	0.390
	Possibly/Partially	19 (10.0)	6 (6.8)	13 (12.7)		
	Yes	20 (10.5)	10 (11.4)	10 (9.8)		
HCR-20V3 H2b Other antisocial behavior: as an adolescent (13–17) n.(%)	No	108 (56.8)	64 (72.7)	44 (43.1)	$\chi^2_{(2)} = 17.288$	<b>0.000</b>
	Possibly/Partially	46 (24.2)	12 (13.6)	34 (33.3)		
	Yes	36 (18.9)	12 (13.6)	24 (23.5)		
HCR-20V3 H2c Other antisocial behavior: as an adult (18 and over) n.(%)	No	67 (35.3)	44 (50.0)	23 (22.5)	$\chi^2_{(2)} = 16.615$	<b>0.000</b>
	Possibly/Partially	35 (18.4)	10 (11.4)	25 (24.5)		
	Yes	88 (46.3)	34 (38.6)	54 (52.9)		
HCR-20V3 H3a Relationships: intimate n.(%)	No	43 (22.6)	19 (21.6)	24 (23.5)	$\chi^2_{(2)} = 0.293$	0.864
	Possibly/Partially	56 (29.5)	25 (28.4)	31 (30.4)		
	Yes	91 (47.9)	44 (50.0)	47 (46.1)		
HCR-20V3 H3b Relationships: non-intimate n.(%)	No	68 (35.8)	33 (37.5)	35 (34.3)	$\chi^2_{(2)} = 7.416$	<b>0.025</b>
	Possibly/Partially	54 (28.4)	17 (19.3)	37 (36.3)		
	Yes	68 (35.8)	38 (43.2)	30 (29.4)		
HCR-20V3 H5 Substance use n.(%)	No	88 (46.3)	55 (62.5)	33 (32.4)	$\chi^2_{(2)} = 25.697$	<b>0.000</b>
	Possibly/Partially	37 (19.5)	19 (21.6)	18 (17.6)		
	Yes	65 (34.2)	14 (15.9)	51 (50.0)		
HCR-20V3 H8a Traumatic experiences: victimization/trauma n.(%)	No	97 (51.1)	50 (56.8)	47 (46.1)	$\chi^2_{(2)} = 2.272$	0.321
	Possibly/Partially	36 (18.9)	14 (15.9)	22 (21.6)		
	Yes	57 (30.0)	24 (27.3)	33 (32.4)		
HCR-20V3 H8b Traumatic experiences: adverse child rearing experiences n.(%)	No	82 (43.2)	44 (50.0)	38 (37.3)	$\chi^2_{(2)} = 3.866$	0.145
	Possibly/Partially	57 (30.0)	21 (23.9)	36 (35.3)		
	Yes	51 (26.8)	23 (26.1)	28 (27.5)		

Post hoc tests and the significance of the standardized adjusted residuals (ns = not significant).

a: No-SO:  $p = 0.000$ ; No-OO:  $p = 0.000$ ; Possibly/Partially-SO:  $p = 0.000$ ; Possibly/Partially-OO:  $p = 0.000$ ; Yes-SO = ns; Yes-OO = ns.

b: No-SO:  $p = ns$ ; No-OO:  $p = ns$ ; Possibly/Partially-SO:  $p = ns$ ; Possibly/Partially-OO:  $p = ns$ ; Yes-SO:  $p = ns$ ; Yes-OO:  $p = ns$ .

c: No-SO:  $p = 0.000$ ; No-OO:  $p = 0.000$ ; Possibly/Partially-SO:  $p = 0.008$ ; Possibly/Partially-OO:  $p = 0.000$ ; Yes-SO:  $p = ns$ ; Yes-OO:  $p = ns$ .

d: No-SO:  $p = 0.001$ ; No-OO:  $p = 0.001$ ; Possibly/Partially-SO:  $p = ns$ ; Possibly/Partially-OO:  $p = ns$ ; Yes-SO:  $p = ns$ ; Yes-OO:  $p = ns$ .

e: No-SO:  $p = ns$ ; No-OO:  $p = ns$ ; Possibly/Partially-SO:  $p = ns$ ; Possibly/Partially-OO:  $p = ns$ ; Yes-SO:  $p = ns$ ; Yes-OO:  $p = ns$ .

f: No-SO:  $p = 0.000$ ; No-OO:  $p = 0.000$ ; Possibly/Partially-SO:  $p = ns$ ; Possibly/Partially-OO:  $p = ns$ ; Yes-SO:  $p = 0.000$ ; Yes-OO:  $p = 0.000$ .

Bold values represent statistically significant p-values.



**TABLE 3 |** Results of the binary logistic model fitting: predictive effects of HCR-20V3 Historical items.

Predictors	$\beta$	S.E.	Wald's statistic	<i>p</i>	OR	OR 95% CI	
						Lower limit	Upper limit
<b>HCR-20V3 H1b Violence: as an adolescent (13–17)</b>							
Violence: (13–17) - <i>No</i>			Wald's $\chi^2_{(2)} = 5.100$	0.078			
Violence: (13–17) - <i>Possibly/Partially</i>	-1.237	0.548	Wald's $\chi^2_{(1)} = 5.090$	<b>0.024</b>	0.290	0.099	0.850
Violence: (13–17) - <i>Yes</i>	-0.389	0.617	Wald's $\chi^2_{(1)} = 0.398$	0.528	0.678	0.202	2.270
<b>HCR-20V3 H1c Violence: as an adult (18 and over)</b>							
Violence: (18 and over) - <i>No</i>			Wald's $\chi^2_{(2)} = 2.953$	0.228			
Violence: (18 and over) - <i>Possibly/Partially</i>	-0.508	0.608	Wald's $\chi^2_{(1)} = 0.700$	0.403	0.602	0.183	1.979
Violence: (18 and over) - <i>Yes</i>	0.330	0.495	Wald's $\chi^2_{(1)} = 0.445$	0.505	1.391	0.527	3.672
<b>HCR-20V3 H2b Other antisocial behavior: as an adolescent (13–17)</b>							
Other antisocial behavior: (13–17) - <i>No</i>			Wald's $\chi^2_{(2)} = 0.756$	0.685			
Other antisocial behavior: (13–17) - <i>Possibly/Partially</i>	-0.480	0.579	Wald's $\chi^2_{(1)} = 0.687$	0.407	0.619	0.199	1.926
Other antisocial behavior: (13–17) - <i>Yes</i>	-0.160	0.694	Wald's $\chi^2_{(1)} = 0.053$	0.817	0.852	0.218	3.323
<b>HCR-20V3 H2c Other antisocial behavior: as an adult (18 and over)</b>							
Other antisocial behavior: (18 and over) - <i>No</i>			Wald's $\chi^2_{(2)} = 3.669$	0.160			
Other antisocial behavior: (18 and over) - <i>Possibly/Partially</i>	-0.948	0.567	Wald's $\chi^2_{(1)} = 2.793$	0.095	0.388	0.128	1.178
Other antisocial behavior: (18 and over) - <i>Yes</i>	-0.840	0.537	Wald's $\chi^2_{(1)} = 2.448$	0.118	0.432	0.151	1.236
<b>HCR-20V3 H3b Non-intimate relationships</b>							
Relationships: non-intimate - <i>No</i>			Wald's $\chi^2_{(2)} = 8.127$	<b>0.017</b>			
Relationships: non-intimate - <i>Possibly/Partially</i>	0.005	0.47	Wald's $\chi^2_{(1)} = 0.000$	0.991	1.005	0.400	2.524
Relationships: non-intimate - <i>Yes</i>	1.284	0.51	Wald's $\chi^2_{(1)} = 6.325$	<b>0.012</b>	3.610	1.327	9.819
<b>HCR-20V3 H5 Substance use</b>							
Substance use - <i>No</i>			Wald's $\chi^2_{(2)} = 14.402$	<b>0.001</b>			
Substance use - <i>Possibly/Partially</i>	0.351	0.515	Wald's $\chi^2_{(1)} = 0.465$	0.495	1.421	0.518	3.898
Substance use - <i>Yes</i>	-1.615	0.485	Wald's $\chi^2_{(1)} = 11.092$	<b>0.001</b>	0.199	0.077	0.515

Dichotomous dependent variable: type of group (SO vs. OO).

Abbreviations: HCR-20 V3 = Historical, Clinical and Risk Management, OO = Other offenders, OR = Odds Ratio, SO = Sex Offenders.

Bold values represent statistically significant *p*-values.

emotional distance, instability or conflict, manipulation of others, inappropriate sexualization and violence, particularly in non-intimate relationships. Tailored treatment programs aimed to prevent relapse in SO (Carabellese et al., 2020b; Gualtieri et al., 2020b) should address these deficits in non-intimate relationships and target psychopathic traits, specifically interpersonal and affective traits. Cognitive behavioral therapy has been found to be an effective treatment for psychopathic traits (Salekin et al., 2010). The fact that SO showed specific interpersonal deficits in the domain of non-intimate relationships suggests that a group format of treatment might be more helpful in addressing such difficulties in this population. In a group setting, the process of confronting with the experiences of other offenders might improve emotional awareness and regulation (Jennings and Sawyer, 2003; Levenson et al., 2009), and it might reduce the risk of drop-out from treatment, like for other clinical populations with impulsive traits (Pozza and Dèttore, 2017).

The result showing that SO had higher and lower levels of, respectively, interpersonal and affective deficits and antisocial behavior suggests that psychopathic traits could be differentially related to sex crimes and other types of crimes. This result appears consistent with literature data which extensively showed that sex offenders would be characterized by severe

deficits in interpersonal empathy and emotion regulation (Gillespie et al., 2018; Schuler et al., 2021), while other types of offenders would show antisocial personality traits (Mazzoni et al., 2018; Azevedo et al., 2020).

The greater likelihood of a history of violence and antisocial behavior (as adolescents and adults), together with problems with substance abuse amongst OO as compared with SO, is a result in line with the literature evidence (e.g., Gottfredson et al., 2008). The importance of violence during the adolescence as predictor of offending patterns in adulthood is still debated (Cardwell and Piquero, 2018), even if violent behaviors during the childhood, for example the presence of aggressions (Juon et al., 2006), seem to predict serious offending in adulthood. The link between drug use and criminal behavior has received attention from scholars (Tonry and Wilson, 1990; Bennett et al., 2008; Gottfredson et al., 2008; Liu et al., 2018).

Although several studies related to sex offenders' criminal career provided evidence of the effects of traumatic experiences during their childhood, also defined as Adverse Childhood Experiences (ACE), this relationship was not confirmed by the findings illustrated in this paper. Considering the studies which compare male sex offenders with the general population (Levenson et al., 2016; Kingston et al., 2017), sex offenders

**TABLE 4 |** Results of the binary logistic model with SO/OO as outcome and the HCR20-V3 item H8 non-intimate as predictor, in interaction with the PCL-R Factor 1 Interpersonal and affective deficits and Factor 2 Antisocial behavior; Odds Ratio and 95% confidence interval of the Odds Ratio.

Predictors	$\beta$	S.E.	Wald's statistic	P	OR	OR 95% CI	
						Lower limit	Upper limit
<b>Interaction effects between HCR-20V3 H3b non-intimate relationships and PCL-R factor 1</b>							
Non-intimate relationships: No * PCL-R F1 Interpersonal and Affective Deficits interaction			Wald's $\chi^2_{(2)} = 19.766$	<b>0.000</b>			
Non-intimate relationships: Possibly/Partially * PCL-R F1 Interpersonal and Affective Deficits interaction	0.358	0.116	Wald's $\chi^2_{(1)} = 9.493$	<b>0.002</b>	1.430	1.139	1.796
Non-intimate relationships: Yes * PCL-R F1 Interpersonal and Affective Deficits interaction	0.251	0.076	Wald's $\chi^2_{(1)} = 10.824$	<b>0.001</b>	1.286	1.107	1.493
<b>Interaction effects between HCR-20V3 H3b non-intimate relationships and PCL-R factor 2</b>							
Non-intimate relationships: No * PCL-R F2 Antisocial Behavior interaction			Wald's $\chi^2_{(2)} = 23.521$	<b>0.000</b>			
Non-intimate relationships: Possibly/Partially * PCL-R F2 Antisocial Behavior interaction	−0.533	0.146	Wald's $\chi^2_{(1)} = 13.396$	<b>0.000</b>	0.587	0.441	0.781
Non-intimate relationships: Yes * PCL-R F2 Antisocial Behavior interaction	−0.231	0.072	Wald's $\chi^2_{(1)} = 10.291$	<b>0.001</b>	0.794	0.689	0.914

Abbreviations. HCR-20V3 = Historical, Clinical and Risk Management PCL-R = Psychopathy Checklist-Revised, SO = Sexual offenders, OO = Other offenders, OR = Odds ratio. Bold values represent statistically significant p-values.

showed a larger odd of being victims of sexual abuse, verbal or physical abuse and emotional neglect, but also signals of adverse child-rearing experiences (incarcerated family members, parental dysfunctions, disordered familiar environment). Victimization or other traumatic experiences during the childhood, like physical, sexual and emotional abuse, were more prevalent in sex offenders than in other kinds of offenders (Lee et al., 2002; Jespersen et al., 2009; Seto and Lalumière, 2010; Reavis et al., 2013; Drury et al., 2019; Gualtieri et al., 2020a). In addition, evidence of adverse child-rearing experiences was more frequent as well, like a history of family dysfunctions or a condition of poor parenting style (Lee et al., 2002; Reavis et al., 2013; Sigre-Leirós et al., 2016).

Many reasons can explain the divergent findings reported in this paper. First, the methodological issues that affect this research topic. The review of McMillan et al. (2008), specifically carried out on sexual offenders against children, pointed out a series of problems related to the temporal relationship between a putative risk factor and sexual perpetration, the effects of other variables, and the complexity in modeling developmental phenomena.

Secondarily, this lack of evidence may be due to the measurement scale administered to the participants, in particular

the HCR-20 V3 used to assess the risk factors. The Historical Clinical Risk Management-20 (HCRS-20) has been criticized for its low field validity in clinical forensic psychiatry settings (Jeandarme et al., 2017; Tully, 2017). On the contrary, other studies supported the psychometric validity and the clinical utility of the scale (Judges et al., 2016), highlighting that the scoring subjectivity of the scale did not impair its reliability, above all for the HCR-20 V3 historical scale (Rufino et al., 2011).

A third problem can be associated to the method used by this scale to assess the risk factors, which are described by a wide variety of lifetime events such as trauma or victimization related to parental and non-parental sexual abuse during childhood/adolescence, witnessing of domestic violence, bullying, or lifetime interpersonal victimization. As much heterogeneity of events is also listed to measure the presence of adverse child-rearing experiences (overly rigid parenting styles, unstable family relations, conviction of parents before the subject reached 10 years of age, death of a parent during childhood or adolescence, separation from parents before 17 years of age, parental substance abuse). Probably, this wide set of experiences describing a single indicator can reduce its specificity in detecting the risk factors.

Some limitations of the study should be pointed out. Firstly, the recruitment of the sample might be subjected to a bias as this process took place in agreement with the Penitentiary Administration of the Ministry of Justice. The first stage of recruitment was carried out exclusively by the prison administration, which asked the prisoners if they were interested in participating to a preliminary meeting with the researchers. On that occasion, the researchers presented the project in detail and asked the prisoners for the informed consent. However, other information that could have been useful for the purpose of the research was not provided to the researchers by the prison administration. In particular, no data were provided about the specific types of crime of the OO group or how many of both the groups of offenders were recidivists. However, it was well-established that those prisoners belonging to the group of SO did not commit any other crimes than sexual ones.

Secondly, the cross-sectional design did not allow us to draw firm conclusion about the role of the risk factors in the likelihood of being SO or OO, particularly in the risk of recidivism. Future research should use a longitudinal design to ascertain problems in non-intimate relationships and whether interpersonal/affective deficits can predict a higher risk of recidivism in sexual crime as compared with the risk of recidivism in other types of crime.

Another relevant limitation concerns the fact that individuals with a psychiatric history were excluded. This aspect reduced the external validity of this research. The findings observed in the present sample may be applied to a minority of the SO population. In fact, SO with no other criminal record and no lifetime psychiatric diagnosis typically represent only a small proportion of SO that is lower than 20%, as the lack of psychiatric comorbidities is generally observed in a 7–15% proportion of the SO population (e.g., Raymond et al., 1999; Dunsieath et al., 2004). Future studies should also include individuals with lifetime psychiatric disorders and control the effect of the presence of psychiatric conditions in the risk of being SO or OO, particularly severe psychiatric disorders such as psychosis/bipolar and personality disorders (Van Wijk et al., 2007; Coluccia et al., 2015; Chen et al., 2016; Eastman et al., 2019). However, the role of psychiatric disorders in the risk of violence has been questioned as a dimensional approach is considered more informative (Graz et al., 2009). Finally, an area that deserves further exploration regards the moderator effect of protective factors in the relation between life events and crime type. It would be interesting to examine whether certain protective factors such as the capacity to forgive oneself (Barcaccia et al., 2019) could protect the individual from the criminal behavior.

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## CONCLUSION

The role of life events as risk factors for sexual crime is a complex and long-debated topic in criminological research. The present study is the first contribution which compared SO and OO on the risk factors assessed by the HCR-20V3 and explored the role of psychopathic traits as moderators of the relation between specific life events and the risk of having committed sexual crime or other types of crime. The present findings shed further light on this issue showing the role of deficient non-intimate relationships in predicting the criminal career of sex offenders, and suggesting that specific psychopathic traits, i.e., interpersonal/affective deficits, but not antisocial behavior, can moderate the relation between a history of problems in non-intimate relationships and sexual crime.

## DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Director of Penitentiary Administration Department of Ministry of Justice. The patients/participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

FF performed the statistical analysis. AP interpreted the results of the analyses and wrote the manuscript with support from FF, FuC, and FeC. AS and GS took care of the bibliographic research. FuC was the corresponding author. GM collected the data. GG contributed to the bibliographic research. FeC conceived of the presented idea and collected the data. RC and AC performed a general review. All authors contributed to the article and approved the submitted version.

## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.600370/full#supplementary-material>

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# Acceptance of Sexual Interest in Minors in Self-Referred Individuals Under Treatment – An Exploratory Pilot Study

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Some therapists/scientists argue that “acceptance” of sexual interest in minors (SIM), i.e., the integration of the sexual preference into the individual self-concept, is a prerequisite for dealing with SIM in a responsible way. However, if one assumes that – even in some persons – SIM might change over time, “acceptance” could also run counter to therapeutic targets because the motivation to change as well as the specific self-efficacy for modifying SIM might be reduced. This exploratory pilot study analyzes the relationship between acceptance of SIM and (1) dynamic risk for contact sexual reoffending, (2) SIM and frequency of the use of child/adolescent (sexual abuse) imagery, (3) frequency of sexual desire/behavior toward children/adolescents, and (4) the change of the level of acceptance of SIM during the course of treatment. The majority of the participants ( $N = 79$ ) was not exclusively interested in children (85%) and used child pornography but did not commit child sexual abuse (54%). Acceptance of SIM, frequency of the use of child/adolescent (sexual abuse) imagery and frequency of sexual desire/behavior toward children/adolescents are assessed via self-report questionnaires, dynamic risk for contact sexual reoffending is measured by STABLE-2007. Pretreatment data are analyzed via Spearman’s correlation ( $N = 79$ ). Intragroup analysis compares acceptance of SIM from pre- and posttreatment ( $n = 35$ ). There was no correlation between acceptance of SIM and dynamic risk for contact sexual reoffending. However, there was a medium, positive correlation between acceptance of SIM and the frequency of the use of legal imagery of children, a positive correlation between the item “My inclination is an integral part of my personality” and the frequency of the use of legal imagery of children, and a positive correlation between acceptance of SIM and the frequency of sexual activities with minors. Acceptance of SIM did not change during the course of treatment. The results suggest that “acceptance” of SIM has to be discussed in a differentiated way, i.e., as possibly being associated with positive and negative outcomes as well.

**Keywords:** child abuse material, pedophilia, prevention of child sexual abuse, psychotherapy, risk of offending

## INTRODUCTION

Findings from an online survey with 8,718 German males indicate that 4.1% have sexual fantasies about children and that 3.2% have offended against prepubescent children. But only 0.1% reported a pedophilic sexual preference (Dombert et al., 2016). The sites of the German network “Kein Täter werden” (means: not become an offender) offer treatment for people seeking therapeutic help because of sexual interest in minors (SIM) and distress or a risk of sexual (re-)offending (Netzwerk “Kein Täter werden”, 2018). It is a formal requirement in this network that individuals who receive treatment are currently not in contact with the criminal justice system.

The construct “acceptance,” as it is understood in this exploratory pilot study, means that sexual preference is accepted as a “stable and therefore constantly challenging part of the own personality” which, being “fate rather than choice,” “cannot be changed by any treatment” (Institute for Sexology and Sexual Medicine of the Charité, 2013, pp. 65–66). Going further, it means “the recognition of reality [...], one’s way of easing the pain, when realizing that things are unchangeable [...] [, and] abandonment of the wish to change given reality” (Institute for Sexology and Sexual Medicine of the Charité, 2013, p. 67). Thus, it goes along with an ego syntonic concept of sexual preference which allows therapy right away to focus on aspects other than sexual preference (Institute for Sexology and Sexual Medicine of the Charité, 2013).

Some therapists and scientists argue that “acceptance” of pedophilic interest is needed for individuals with sexual interest in minors (SIM) for dealing in a responsible way with their sexual interest and thus preventing sexual abuse (Ahlers et al., 2008; Institute for Sexology and Sexual Medicine of the Charité, 2013). Other therapists and scientists, however, argue that – even in some persons, and maybe more often in men with non-exclusive pedophilia (Tozdan and Briken, 2019) – SIM might change over time and that “acceptance” might run counter to prevention goals because motivation to change as well the specific self-efficacy for modifying sexual interest in children may be reduced by it (Tozdan and Briken, 2015a; Fedoroff, 2020).

Seto (2012) argues that sexual orientation is characterized by an age of onset before the beginning of puberty and by stability over time, and that pedophilia is similar in these respects. He refers to findings on identified and self-identified child sexual abuse offenders with pedophilia of whom a considerable proportion report an age of onset of sexual interest in children before adulthood (e.g., Li, 1991; Marshall et al., 1991; Freund and Kuban, 1993). Furthermore, he cites studies which suggest that pedophilia is predictive for future sexual behavior involving children even one to three decades later (Hanson et al., 1993), and that treatment-related decrease of sexual arousal related to children does not reduce recidivism rates (Rice et al., 1991), i.e., does not persist (Seto, 2012). Due to these findings, he makes the case for “conceptualizing pedophilia as a type of sexual orientation in males” (Seto, 2012, p. 231). Cantor (2018) also takes the position that pedophilia is immutable. He claims that lines of indirect evidence referring to the following “all have much more parsimonious and mundane

explanations” (Cantor and Fedoroff, 2018, p. 205): “Sex crime rates are dropping [...]. The incidence of sex crime rates decreases as people age [...]. The likelihood that (known) high-risk sex offenders will re-offend decreases the longer they commit no crime [...]. The self-report of men and women with paraphilic disorders [...]. As people grow older, their interests shift to partners similar in age” (Cantor, 2018, p. 205). He argues that these findings reflect “aging populations,” “the decrease in sex drive that accompanies aging,” “the absence of critical thinking,” and “sexual behavior with partners of increasing age as they [people] themselves age” (Cantor, 2018, p. 205). Researchers who assume that pedophilia is immutable usually infer that treatment should “focus on [...] management” of pedophilia (Seto, 2017, p. 18), i.e., on developing the skills that are needed to regulate and control pedophilic urges (Institute for Sexology and Sexual Medicine of the Charité, 2013; Lehmler, 2019).

Marshall (2008) assumes that pedophilia is not immutable because after treatment phallometric data show a reduction of arousal to children and an increase of arousal to adults in “quite deviant child molesters” (Marshall, 2008, p. 42). Marshall et al. (2009) describe behavioral procedures for modifying sexual interests, i.e., different aversion and masturbatory-based techniques, and the evidence base for these procedures. Marshall et al. (2011) opt for identifying “individualized appropriate (i.e., non-deviant) sexual scripts that can serve as both templates for actual sexual relations and as images for masturbation activities” and refer to the fact that “[U]nreinforced habitual behavior (in this case, deviant sexual interests) has been shown to extinguish such habits” (Marshall et al., 2011, p. 152). Recent research on age of onset of sexual interest in children with individuals from different contexts (with and without treatment, explicitly and not explicitly advocating against acting on sexual interest in children) shows broad ranges from 6 to 44 years and 7 to 66 years, with a mean value of 17 and 20 years (Tozdan and Briken, 2015b, 2019). It also shows that a later age of onset is associated with more perceived flexibility of sexual interest in children, that more perceived flexibility is related to more motivation to change sexual interest in children (Tozdan and Briken, 2019), and that an increasing specific self-efficacy for modifying a sexual interest in children is related to a decreasing sexual interest in children in a considerable number of individuals (Tozdan et al., 2018b)<sup>1</sup>. Researchers who assume that pedophilia is mutable usually conclude that therapeutic interventions should target patients’ specific self-efficacy (Briken et al., 2014; Tozdan and Briken, 2015a; Tozdan et al., 2018a), empower them (Fedoroff, 2018), and work on “relationship skills and healthy sexuality [...], self-esteem, empathy, prosocial sexual attitudes, and coping skills”

<sup>1</sup>The findings mentioned were criticized as insufficient because of still unclear definitions (e.g., defining pedohebephilic interests as a SIM who are at least five years younger than oneself vs. defining pedohebephilic interest on the basis of a developmental approach involving biological, social, psychological, and experiential aspects that started before experiencing a SIM for the first time), not enough consideration of developmental processes (e.g., transitional processes, the fact that age of onset is maybe a part of ongoing developmental processes instead of a discrete event) and not sufficiently precise operationalization of age of onset (i.e., asking about age of first SIM might be misunderstood because almost every person is attracted to minors at some point in life) (McPhail, 2018).



(Marshall et al., 2011, p. 152). Briken et al. (2018) argue that, under the assumption of mutability of deviant sexual interests in at least a part of patients, therapists should clarify what their patients' motivation and goal in treatment is. As many patients do not have a desire for change, therapists should be open to adapt treatment to assignment, risk of (re-)offending, and exclusiveness of SIM (Briken et al., 2018).

In summary, at the present stage of research, one can assume that there are patients in which SIM might change over time or not, depending on, for example, flexibility, exclusivity, and age of onset of SIM (Tozdan and Briken, 2019). Hence, it can be expected that acceptance is a differentiated construct, too.

## STUDY AIM

We can safely assume that a therapist's attitude concerning the necessity of accepting SIM is considered rather relevant for the therapeutic process. Indeed, it already has been shown that there is a relation between therapists' attitude toward the immutability of SIM and their patients' self-efficacy to change their SIM (Tozdan et al., 2018a). That means, the more therapists are convinced that SIM is mutable, the more their patients believe they can change it and vice versa. It is lively debated if patients should be told that SIM can change, if patients should be told that SIM is unchangeable (Cantor, 2018; Cantor and Fedoroff, 2018; Fedoroff, 2018), or if this question can only be answered in the course of the therapeutic process, because there are very different courses of SIM.

What we do not know is if the acceptance of SIM is related to patients' motivation to control sexual urges, to change their SIM, or to behavioral treatment outcomes, such as consumption of sexual imagery of minors and/or sexual abuse of minors. Furthermore, it has not yet been studied if there is a difference between acceptance of SIM and behavior outcomes that correspond to pedophilic or to hebephilic interests. We also do not know if acceptance of SIM is related to dynamic risk factors which are linked with sexual self-regulation (Hanson et al., 2007). Moreover, it has not yet been clarified if acceptance of SIM is associated with sexual desire. Furthermore, we do not know if acceptance of SIM changes in the course of treatment, i.e., is affected by treatment.

Therefore, the purpose of this exploratory pilot study is to investigate the following research questions:

- (1) Is there a relationship between the acceptance of SIM and dynamic risk factors?
- (2) (a) Is there a relationship between the acceptance of SIM and the frequency/intensity of the use of child abuse/exploitation material? (b) Is there a relationship between the acceptance of SIM and the frequency/intensity of the use of adolescent abuse/exploitation material?
- (3) Is there a relationship between the acceptance of SIM and the frequency/intensity of sexual desire/behavior toward minors?
- (4) Does the level of acceptance of SIM change in the course of treatment?

## MATERIALS AND METHODS

### Participants

This exploratory pilot study included 84 adult men with SIM who underwent initial diagnostic procedures between autumn 2011 and autumn 2019, gave their informed consent, and started treatment at the Institute for Sex Research, Sexual Medicine and Forensic Psychiatry in Hamburg. Thirteen men who had not given their informed consent were not included. The study was approved by the Ethics Committee of the Chamber of Psychotherapists Hamburg (09/2019-PTK-HH, 02/2015-PTK-HH). Data were prepared for analysis by two researchers (UL and ST) working at the research unit of the institute. Their work was independent of the processes of treatment indication and psychotherapeutic care.

All of the participants fulfilled the preconditions for receiving treatment in the program offered by the Prevention Network "Kein Täter werden" (see **Table 1** one for demographic characteristics of the participants). These are:

- not (yet) having offended and/or never having consumed child sexual abuse images, though fearing doing so, or
- already having offended and/or having consumed child sexual abuse images, but not being known to the legal system, or
- previously having been charged with and/or found guilty of relevant offenses and having fully served any sentence received as a result, and fearing committing further offenses (Netzwerk "Kein Täter werden", 2018).

Treatment involved 90 min of group therapy led by two group therapists weekly, or individual therapy sessions every 1 or 2 weeks. Every individual had to participate in an initial diagnostic procedure that comprised diagnostic interviews, a risk assessment, and a battery of self-report questionnaires. Hereafter, every participant was introduced to the therapeutic team by the therapist who conducted the initial diagnostic procedure. Referral for group vs. individual therapy was debated and decided within the whole team, i.e., medical doctors and psychologists [see Lampalzer et al. (2020) for more detailed information on indicators for group vs. individual treatment in this sample].

The treatment program at the Institute for Sex Research, Sexual Medicine and Forensic Psychiatry is based on the risk-need-responsivity model (Andrews et al., 1990) since, in addition to reducing possible distress from SIM, its main objective is to prevent sexual abuse of children and the use of abusive images. The risk principle determines therapy intensity. According to the need principle therapy focuses on the three most important dynamic risk factors that are related to the individual's modifiable risk of (re-)offending, e.g., in the realm of intimacy deficits or poor self-regulation. With regard to the responsivity principle referral to group vs. individual treatment, therapeutic technique, and decision for psychiatric treatment or medication in addition to psychotherapy are considered important. In the initial phase of treatment motivation and aims are clarified and biography work is done. In the intermediate phase risk factors and behavioral

**TABLE 1 |** Sample characteristics for the total sample ( $N = 79$ ) when undergoing initial diagnostic procedure.

Variables	Total ( $N = 79$ , 100%)	
	$N^a$	% <sup>b</sup>
<b>Education level</b>		
Less than 10 years	13	16.5
More than 10 years	66	83.5
<b>Employed</b>		
Yes	63	79.7
No	16	20.3
<b>Relationship status</b>		
In a relationship	39	49.4
Currently single	40	50.6
<b>Living alone</b>		
Yes	38	48.1
No	41	51.9
<b>Own children</b>		
Yes	17	21.5
No	62	78.5
<b>Self-reported exclusiveness (Interest is . . .)</b>		
. . . exclusively in children	11	13.9
. . . not exclusively in children	67	84.8
. . . not specified	1	1.3
<b>Self-reported age group attracted to</b>		
Prepubertal (pedophile)	1	1.3
Pubertal (hebephile)	3	3.8
Prepubertal and pubertal (pedophile and hebephile)	8	10.1
Prepubertal and adult (pedophile and teleiophile)	4	5.1
Pubertal and adult (hebephile and teleiophile)	27	34.2
Prepubertal, pubertal and adult (pedophile, hebephile, and teleiophile)	35	44.3
Not specified	1	1.3
<b>Self-reported sexual orientation</b>		
Attracted to males	14	17.7
Attracted to females	48	60.8
Attracted to both sexes	16	20.3
Not specified	1	1.3
<b>Self-reported prior lifetime sexual offenses<sup>c</sup></b>		
Non-offending	6	7.6
Child sexual abuse only	7	8.9
Child pornography use only	43	54.4
Mixed offenses	23	29.1
<b>Previously known to justice<sup>c</sup></b>		
Child pornography offenses	11	13.9
Child sexual abuse offenses	5	6.3
Child pornography and child sexual abuse offenses	2	2.5
Not previously known to justice	61	77.2

<sup>a</sup>Absolute share in the sample.<sup>b</sup>Percentage share in the sample.<sup>c</sup>Status when entering the treatment program.

change are focused, particularly sexual self-regulation, emotional congruence with children, awareness and handling of risk situations, abuse related attitudes, hypersexuality and sexual urges, increase in interpersonal abilities, improvement of coping strategies, and empathy. The final phase concentrates on preventing relapses, considering support groups, and developing future plans (Briken et al., 2018).

After their last treatment session participants normally, i.e., if they were willing to do so, underwent a final diagnostic procedure which consisted, except for some updates, of the same questionnaires as the initial diagnostic procedure.

Five participants, who were included in the present study, had not filled in the Inventory of the Acceptance of Sexual Inclination (IASI rev, Mundt et al., 2011). For this reason, they were excluded from the analysis. The final sample consisted of 79 participants. Their age ranged from 19 to 61 years ( $M = 35.99$ ,  $SD = 11.25$ ). One participant did not indicate his age. Twenty-four (30%) participants were still in treatment, and 55 (70%) had partly or fully completed the treatment program. Of these participants who had partly or fully completed the treatment program 35 (64%) had completed the final diagnostic procedure, including IASI rev. Only these 35 men could be included into pre-post comparison analysis. Treatment duration ranged from 7 to 67 months ( $M = 30.66$ ,  $SD = 15.39$ ).

## Measures

### Inventory of the Acceptance of Sexual Inclination

The IASI rev is an unpublished self-report questionnaire designed to assess the extent of acceptance or integration of a sexual inclination into the individual self-concept (Ahlers et al., 2008). Sexual inclination is understood as the third of three axes of sexual preference<sup>2</sup>: “our *sexual inclination* toward a (i) preferred specific *type* of sexual partner and (ii) a preferred specific *mode* of sexual activity” (Schaefer and Ahlers, 2018, p. 88). According to Schaefer and Ahlers, it “resembles the current definition of paraphilias in the DSM-5” which refers to erotic activities (modes) such as spanking and whipping, and erotic targets (types), such as children, corpses or inanimate objects (Schaefer and Ahlers, 2018, p. 89). The IASI rev is a short version of the Inventory of the Acceptance of Sexual Preference (“Inventar zur Akzeptanz der sexuellen Präferenz”; cf. Ahlers et al., 2008) which has four subscales: *Attitude* (subjective attitude toward the acceptance of one’s own sexual preference, extent to which the attitude can become relevant for behavior), *Perceived Acceptance* (extent of real acceptance), *Emotion* (emotional processing of one’s own sexual preference), and *Fantasy and Control* (handling fantasies and needs that correspond to the sexual preference). The IASI rev has 15 items that are answered on a 5-point scale (e.g., “My sexual fantasies scare me.”; “I am aware of my sexual inclination.”) (see **Appendix 1** for an English translation including all items). Total scores range from 15 to 75, with higher values indicating a greater acceptance. The IASI rev has not been validated yet. For the present pilot study the IASI rev was found to be highly reliable (15 items; Cronbach’s  $\alpha = 0.88$ ). The items of the IASI rev do not specifically refer to SIM. However, in the context of the battery of questionnaires that was filled in by the participants of the present study, it is rather unlikely that sexual inclination was not interpreted as SIM. Because the battery is explicitly designated for individuals with SIM and all of the

<sup>2</sup>The other two axes are: “(a) our *sexual orientation* towards the preferred sex of the desired sexual partner [. . .], (b) our *sexual alignment* towards the preferred stage of physical development of the sexual partner’s body” (Schaefer and Ahlers, 2018, p. 88).

participants turned to the network site specifically due to their SIM. In this study, we used the IASI rev total score for analyzing “acceptance” as a multidimensional construct and Item 5 of IASI rev (“My inclination is an integral part of my personality.”) for focusing even more on the aspect of (im-)mutability of SIM. This item of IASI rev (hereinafter also referred to as “Integral Part Item”) most closely corresponds to this aspect.

### STABLE-2007

The STABLE-2007 (Hanson et al., 2007; Matthes and Rettenberger, 2008) is a 13-item risk assessment tool to measure dynamic risk for contact sexual recidivism among adult males who have been charged with a sexual offense. The 13 risk factors are evaluated by third party. They have been shown to be associated with sexual recidivism and are systematized into five sections: *Significant Social Influences*, *Intimacy Deficits* (capacity for relationship stability, emotional identification with children, hostility toward women, general social rejection, lack of concern for others), *General Self-Regulation* (impulsivity, poor problem-solving skills, negative emotionality), *Sexual Self-Regulation* (sex drive and preoccupations, sex as coping, deviant sexual preference), and *Cooperation with Supervision*. All of the items are scored on a 3-point scale. Total scores range from 0 to 26 (exception: emotional identification is not scored for offenders not having a child as a victim so that for them total scores only range to 24), with higher values indicating a higher dynamic risk of recidivism. The STABLE-2007 has proven very good interrater reliability for the English version [ICC = 0.79 (Hanson et al., 2007)] and for the German version [ICC = 0.90 for a population of sex offenders with 50.9% being child molesters (Eher et al., 2012); ICC = 0.90 for a population of child molesters (Rettenberger et al., 2011)], too. It has also demonstrated good predictive validity for recidivism [AUC = 0.67–0.71 for sexual, violent and general recidivism (Eher et al., 2012)]. As mentioned above, the STABLE-2007 is designed for contact sexual offenders who have been charged with a sexual offense. The dynamic risk factors of the STABLE-2007 are not validated for recidivism relating to child/adolescent sexual abuse imagery and not for individuals with SIM without or with undetected offences. Nevertheless, the STABLE-2007 is used in this exploratory pilot study because it measures stable dynamic risk factors and there is no established tool available yet for this specific group with SIM. However, data are analyzed for the group of patients in this sample who reported child/adolescent sexual abuse in their past as well as for the whole group. Because one of the tool's developers, Karl Hanson, explicitly recommended to not use it for internet offenders who only offended with indecent images of children, which might apply to the majority of the sample, and not with identifiable victims (Webb, 2018, p. 107).

### Items Assessing the Frequency of the Use of Child Abuse/Exploitation Material and Frequency of Sexual Desire/Behavior Toward Children

A subset of items of questionnaires of the initial diagnostic procedure which assess the frequency of consumption of (sexual) imagery of children, adolescents, adolescents sexually interacting with children, adults sexually interacting with children, and

adults sexually interacting with adolescents is used, as well as a subset of items assessing the frequency of desire for sexual activities, and actual sexual activities with minors. In order to reduce the number of these items and generate six adequate items for the analysis, we amalgamated the relevant items via taking the score of the highest frequency of the relevant items. The six items are (see **Appendix 2** for the specific questions of three different batteries):

- (1) Frequency of Use of Legal Imagery of Children;
- (2) Frequency of Use of Legal Imagery of Adolescents;
- (3) Frequency of Use of Illegal Child Sexual Abuse Imagery;
- (4) Frequency of Use of Illegal Adolescent Sexual Abuse Imagery;
- (5) Frequency of Desire for Sexual Activities with Minors;
- (6) Frequency of Sexual Activities with Minors.

Via these six items common distinctions in the literature are represented: (1) legal vs. illegal imagery, (2) pedophilic interests vs. hebephilic interests, (3) use of child abuse/exploitation material (hands-off) vs. (drive to) child sexual abuse (hands-on). Frequency is rated on a 5-point-Likert scale, with the following answer options: 1 = “never,” 2 = “few times,” 3 = “monthly,” 4 = “weekly,” 5 = “daily.” For amalgamation, the score of the highest frequency of the relevant items was taken because this corresponds to the answer the participant would have given if he had answered to the amalgamated item. The distinction between legal and illegal imagery follows the COPINE scale (Quayle, 2008), with category 1–3 classified as legal imagery and category 4–10 as illegal imagery. **Table 2** shows that inter-item correlations were significant and between 0.23 and 0.68, except for item 6 that was not significantly correlated to the items 2, 3, and 4.

### Statistical Analysis

As the battery of questionnaires was revised with regard to the current state of research in the course of data collection, not all questionnaires used in the present study were filled in by all participants. As the STABLE-2007 was only added to the battery of questionnaires in 2014, it was filled in for many participants

**TABLE 2 |** Results of Pearson correlation tests for inter-item correlations of the items for frequency of the use of child abuse/exploitation material and frequency of sexual desire/behavior toward children inter-item correlation.

Items	1	2	3	4	5	6
(1) Use of Legal Imagery of Children	1					
(2) Use of Legal Imagery of Adolescents	0.53**	1				
(3) Use of Illegal Child Sexual Abuse Imagery	0.66**	0.42**	1			
(4) Use of Illegal Adolescent Sexual Abuse Imagery	0.33**	0.68**	0.62**	1		
(5) Desire for Sexual Activities with Minors	0.45**	0.26*	0.45**	0.29*	1	
(6) Sexual Activities with Minors	0.23**	−0.06	0.10	−0.12	0.32**	1

\*Correlation is significant at the 0.05 level.

\*\*Correlation is significant at the 0.01 level.



by the therapists at a later time during the course treatment. Only those participants ( $n = 45$ ) were included in the statistical analysis of correlations regarding the STABLE-2007 for whom the STABLE-2007 was completed not more than 6 months after the participant had completed the self-report questionnaires of the battery, assuming that no substantial change in dynamic risk of sexual recidivism has taken place during this time. In a second analysis of correlations regarding the STABLE-2007, only those ( $n = 16$ ) were included who reported child/adolescent sexual abuse in their past (see section “STABLE-2007” for explanation).

First, the relation between acceptance of SIM and dynamic risk for contact sexual recidivism before treatment, i.e., between IASI rev total score/Item 5 IASI rev score and STABLE-2007 total score of the initial diagnostic procedure, was analyzed using the Spearman's correlation coefficient because variables were ordinally scaled (Upton and Cook, 2014). Second, the relation between acceptance of SIM and frequency/intensity of the use of material of abuse/exploitation of minors, i.e., IASI rev total score/Item 5 IASI rev score and the items of the initial diagnostic procedure assessing the frequency of the use of child abuse/exploitation material, was analyzed using the Spearman's correlation coefficient because variables were ordinally scaled, too (Upton and Cook, 2014). Third, a Spearman's correlation was run to determine the relationship between acceptance of SIM and frequency/intensity of sexual desire/behavior toward minors, i.e., IASI rev total score/Item 5 IASI rev score and items assessing the frequency of sexual desire/behavior toward children, because variables were also ordinally scaled (Upton and Cook, 2014). Fourth, a Wilcoxon signed-rank-test was performed to compare acceptance of SIM, i.e., IASI rev total score, between initial and final diagnostic procedure because the data were not normally distributed. Fifth, a paired-samples *t*-test was carried out to compare Item 5 IASI rev score between initial and final diagnostic procedure because the data were normally distributed (Kim, 2015). In the final diagnostic procedure, the IASI rev was completed by 35 participants. Significance was set at a value less than 0.05. All statistical analyses were conducted using SPSS (V 24) (IBM SPSS Statistics, IBM Corporation, Armonk, NY, United States).

## RESULTS

### Relationship Between Inventory of the Acceptance of Sexual Inclination and STABLE-2007

For the whole group, results of the Spearman's correlation indicated that there was no significant correlation between IASI rev total score and STABLE-2007 total score ( $r_s = -0.22$ ,  $n = 43$ ,  $p = 0.166$ ), and that there was no significant correlation between Item 5 IASI rev score and STABLE-2007 total score ( $r_s = 0.07$ ,  $n = 45$ ,  $p = 0.642$ ) (Table 3).

Similarly, for the group of patients who reported child/adolescent sexual abuse in their past, results of the Spearman's correlation indicated that there was no significant correlation between IASI rev total score and STABLE-2007 total

score ( $r_s = 0.01$ ,  $n = 16$ ,  $p = 0.961$ ), and no significant correlation between Item 5 IASI rev score and STABLE-2007 total score ( $r_s = -0.18$ ,  $n = 16$ ,  $p = 0.509$ ), either (Table 3).

### Relationship Between Inventory of the Acceptance of Sexual Inclination and Frequency/Intensity of the Use of Material of Abuse/Exploitation of Minors

Results of the Spearman's correlation indicated that there was a medium<sup>3</sup>, positive correlation between IASI rev total score and Frequency of Use of Legal Imagery of Children score ( $r_s = 0.41$ ,  $n = 72$ ,  $p \leq 0.001$ ), and no significant correlation between IASI rev total score and Frequency of Use of Legal Imagery of Adolescents score ( $r_s = 0.22$ ,  $n = 72$ ,  $p = 0.058$ ). There was also a medium, positive correlation between Item 5 IASI rev score and Frequency of Use of Legal Imagery of Children score ( $r_s = 0.32$ ,  $n = 75$ ,  $p = 0.005$ ), and no significant correlation between Item 5 IASI rev score and Frequency of Use of Legal Imagery of Adolescents score ( $r_s = 0.08$ ,  $n = 75$ ,  $p = 0.474$ ), either. The correlations remained statistically significant after Benjamini–Hochberg correction (Table 3).

Moreover, results of the Spearman's correlation indicated that there was a small, positive correlation between IASI rev total score and Frequency of Use of Illegal Child Sexual Abuse Imagery score ( $r_s = 0.27$ ,  $n = 70$ ,  $p = 0.026$ ), no significant correlation between IASI rev total score and Frequency of Use of Illegal Adolescent Sexual Abuse Imagery score ( $r_s = 0.11$ ,  $n = 71$ ,  $p = 0.367$ ), no significant correlation between Item 5 IASI rev score and Frequency of Use of Illegal Child Sexual Abuse Imagery score ( $r_s = 0.18$ ,  $n = 74$ ,  $p = 0.119$ ), and no significant correlation between Item 5 IASI rev score and Frequency of Use of Illegal Adolescent Sexual Abuse Imagery score ( $r_s = -0.11$ ,  $n = 75$ ,  $p = 0.344$ ). The correlation between IASI rev total score and Frequency of Use of Illegal Child Sexual Abuse Imagery score was not statistically significant after Benjamini–Hochberg correction (Table 3).

### Relationship Between Inventory of the Acceptance of Sexual Inclination and Frequency/Intensity of Sexual Tendencies/Behavior Toward Minors

Results of the Spearman's correlation indicated that there was a small, positive correlation between IASI rev total score and Frequency of Desire for Sexual Activities with Minors score ( $r_s = 0.23$ ,  $n = 75$ ,  $p = 0.044$ ). Results of the Spearman correlation also indicated that there was a medium, positive correlation between IASI rev total score and Frequency of Sexual Activities with Minors score ( $r_s = 0.30$ ,  $n = 75$ ,  $p = 0.008$ ). There was no significant correlation between Item 5 IASI rev score and Frequency of Desire for Sexual Activities with Minors score ( $r_s = 0.18$ ,  $n = 79$ ,  $p = 0.120$ ), and a small, positive correlation between Item 5 IASI rev score and Frequency of Sexual Activities

<sup>3</sup>The Spearman's correlation coefficients are interpreted according to Cohen (1988, 1992).



**TABLE 3 |** Descriptive statistics and correlations between IASI rev (Item 5 IASI rev) and STABLE-2007, Frequency of Use of Legal Imagery of Children, Frequency of Use of Legal Imagery of Adolescents, Frequency of Use of Illegal Child Sexual Abuse Imagery, Frequency of Use of Illegal Adolescent Sexual Abuse Imagery, Frequency of Desire for Sexual Activities with Minors, and Frequency of Sexual Activities with Minors.

Variable	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Range</i>	<i>r</i> <sup>a</sup>	<i>p</i> <sup>a</sup>	FDR adjusted <i>p</i> <sub>BH</sub> <sup>a,b</sup>	<i>n</i> <sup>a</sup>
(1) IASI rev	51.20	11.03	51	28–73	–	–		–
(a) Item 5 IASI rev	3.30	1.21	3	1–5	–	–		–
(2) STABLE-2007								
(a) Total sample	9.49	2.94	9	4–16	–0.215	0.166	0.266	43
					0.071	0.642	0.685	45
(b) Participants with child sexual abuse in the past	10.75	2.72	11	5–15	0.013	0.961	0.961	16
					–0.178	0.509	0.582	16
(3) Frequency of Use of Legal Imagery of Children	2.75	1.53	3	1–5	0.413*	<0.001	<0.001	72
					0.323*	0.005	0.040	75
(4) Frequency of Use of Legal Imagery of Adolescents	2.35	1.43	2	1–5	0.224	0.058	0.133	72
					0.084	0.474	0.582	75
(5) Frequency of Use of Illegal Child Sexual Abuse Imagery	2.86	1.46	3	1–5	0.265	0.026	0.083	70
					0.183	0.119	0.213	74
(6) Frequency of Use of Illegal Adolescent Sexual Abuse Imagery	2.68	1.42	3	1–5	0.109	0.367	0.489	71
					–0.111	0.344	0.489	75
(7) Frequency of Desire for Sexual Activities with Minors	3.09	1.46	4	1–5	0.234	0.044	0.117	75
					0.176	0.120	0.213	79
(8) Frequency of Sexual Activities with Minors	1.57	1.17	1	1–5	0.304*	0.008	0.043	75
					0.264	0.019	0.076	79

\**p*<sub>BH</sub> < 0.05.

<sup>a</sup>The first line refers to IASI rev, the second line refers to Item 5 of IASI rev.

<sup>b</sup>Adjusted *p*-value using the Benjamini–Hochberg procedure (Benjamini and Hochberg, 1995; Hemmerich, 2016).

IASI, Inventory of the Acceptance of Sexual Inclination.

with Minors score ( $r_s = 0.26$ ,  $n = 79$ ,  $p = 0.019$ ). After Benjamini–Hochberg correction, only the correlation between IASI rev total score and Frequency of Sexual Activities with Minors score remained statistically significant (Table 3).

## Pre-post Comparison of Inventory of the Acceptance of Sexual Inclination

Results of the Wilcoxon signed-rank tests indicated no statistical difference between IASI rev total score before ( $Mdn = 54$ ) and after (partial) completion of treatment ( $Mdn = 55$ ),  $T = 261$ ,  $z = -0.26$ ,  $p = 0.799$ ,  $r = -0.03$  (Table 4). A paired-samples *t*-test indicated no statistical difference between the score of Item 5 of IASI rev before beginning treatment ( $M = 3.51$ ,  $SD = 1.07$ ) and the score of Item 5 of IASI rev after (partial) completion of treatment ( $M = 3.57$ ,  $SD = 1.12$ ),  $t(34) = -0.26$ ,  $p = 0.797$ ,  $d = -0.05$ , either (Table 4).

## DISCUSSION

### General Discussion

This exploratory pilot study investigated if acceptance of SIM is associated with pedophilia associated urges and behaviors. Acceptance of SIM as measured by IASI rev total score and the score of the item “My inclination is an integral part of my personality” were not related to dynamic risk factors for contact sexual reoffending as measured by STABLE-2007. It is possible that this is due to the sample which might be characterized by other dynamic risk factors (77% were not previously known to

justice) than forensic samples of contact sexual offenders with a SIM who have been charged with a sexual offense. Maybe the STABLE-2007 is not an adequate instrument for measuring dynamic risk for contact sexual reoffending in this sample. However, there was no correlation between IASI rev total score or Integral Part Item score and STABLE-2007 score, either. This might also be due to a lack of statistical power for finding small effects. Power analyses using G\*Power (Faul et al., 2007) indicated that, with 80% power and  $\alpha = 0.05$ , a sample size of 129 would be required to detect an effect of  $r = 0.215$  that was revealed for the whole sample in the present study, and a sample size of 1,222 for an effect of  $r = 0.071$  that was revealed for the subsample with child sexual abuse in the past.

Results of the current exploratory pilot study indicate a medium, positive correlation between acceptance of SIM and the frequency of the use of legal imagery of children, and a small, positive correlation between acceptance of SIM and the frequency of the use of illegal child sexual abuse imagery. This means, the more participants report to accept their SIM, the more they also report to use legal imagery of children as well as illegal child sexual abuse imagery, or vice versa. However, the findings reveal no correlation between acceptance of SIM and the frequency of use of legal imagery of adolescents, and no correlation between acceptance of SIM and the frequency of the use of illegal adolescent sexual abuse imagery. Furthermore, they show a small, positive correlation between acceptance of SIM and the reported frequency of desire for sexual activities with minors, and a medium positive correlation between acceptance of SIM and the reported frequency of sexual activities with minors.

**TABLE 4 |** Results of Wilcoxon signed-rank test and paired-samples *t*-test and descriptive statistics for IASI rev total score and Item 5 IASI rev score (*n* = 35).

Outcome	Pre-test					Post-test					95% CI for mean difference		<i>Z</i>	<i>t</i>	<i>p</i>	FDR adjusted <i>p</i> <sub>BH</sub> <sup>a</sup>	Effect size <i>r</i>	Effect size <i>d</i>
	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Range</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Range</i>	<i>n</i>								
IASI rev	52.50	10.44	54	28–73	34	52.43	10.32	55	25–69	35			−0.26		0.799	0.799	−0.03	
Item 5 IASI rev	3.51	1.07	4	1–5	35	3.57	1.12	4	1–5	35	−0.51, 0.39		−0.26	0.797	0.799			−0.05

<sup>a</sup>*p*<sub>BH</sub> < 0.05.

<sup>a</sup>Adjusted *p*-value using the Benjamini–Hochberg procedure (Benjamini and Hochberg, 1995; Hemmerich, 2016).

IASI, Inventory of the Acceptance of Sexual Inclination.

The results may suggest that more acceptance of SIM might be associated with more awareness of a SIM, the desire might be more present and associated with more use of legal imagery and even more proneness to sexual abuse. Less acceptance of SIM, however, might be associated with more motivation to work on diminishing pedophilia associated urges and behaviors and thus make individuals reduce the focus on desire for sexual activities with children, use less legal and illegal material and prevent themselves from committing child sexual abuse. Of course, as we solely conducted correlation analyses, we are not able to make any statement about causality.

It is surprising that the correlations that were found for legal and illegal imagery of children were not found for legal and illegal imagery of adolescents. Research suggests that pedophilic, hebephilic and teleiophilic individuals are different from each other, but there is still a lack of research in this field (Sea and Beauregard, 2018). In the present study, the majority of participants (44%) were pedophilic, hebephilic and teleiophilic, or hebephilic and teleiophilic (34%) at the same time. Obviously, these sexual interests cannot be seen as totally distinct from each other. According to the findings of this exploratory pilot study, acceptance of SIM might be different in the context of a pedophilic interest than in the context of a hebephilic interest. Maybe acceptance of a pedophilic interest has a deeper impact on awareness and the frequency of corresponding sexual desire and sexual behavior than acceptance of a hebephilic interest (cf. Prentky and Barbaree, 2011; Calkins Mercado and Beatty, 2012).

Additionally, results of the current exploratory pilot study indicate a medium, positive correlation between the assumption of SIM as an integral part of one's personality and the frequency of the use of legal imagery of children, and a small, positive correlation between this assumption and the frequency of sexual activities with minors, but no correlation between this assumption and any of the other frequency measures used. This means, the more men regard their pedophilic interests as an integral part of their personality, the more they sexualize non-sexual representations of children and commit hands-on child sexual abuse, or vice versa, the more men sexualize non-sexual representations of children and commit hands-on child sexual abuse, the more they regard their pedophilic interests as an integral part of their personality.

It has to be noted that after correction for multiple testing, only the correlation between acceptance of SIM and the frequency of the use of legal imagery of children, the correlation between the

assumption of SIM as an integral part of one's personality and the frequency of the use of legal child sexual abuse imagery, and the correlation between acceptance of SIM and the frequency of sexual activities with minors remained statistically significant.

*Post hoc* power analyses that were conducted using the program G\*Power (Faul et al., 2007) indicated that the statistical power for the correlation analyses of this study (assuming *n* = 70; see Table 2) was 13% for detecting a small effect of *r* = 0.1, 80% for detecting a medium effect of *r* = 0.32 and more than 99% for detecting a large effect of *r* = 0.5 (according to Cohen, 1988, 1992), with  $\alpha$  = 0.05. Thus, there was more than sufficient power (i.e., 80%) at the large effect size level, quite enough power at the medium effect size level and less than sufficient statistical power at the effect size level of less than *r* = 0.32.

The present study also investigated whether acceptance of SIM changed in the course of treatment. Results indicate no difference between before beginning treatment and (partial) completion of treatment. Maybe for a change of acceptance of SIM it would have to be directly targeted in treatment. However, treatment has a particular focus on risk factors (cf. Institute for Sexology and Sexual Medicine of the Charité, 2013; Briken et al., 2018; Netzwerk “Kein Täter werden”, 2018) and acceptance of SIM might not have appeared to be a relevant risk factor. Another reason why acceptance of SIM did not change might be that the period under study was not sufficiently long enough to observe a change in acceptance of SIM. Furthermore, insufficient statistical power because of the small sample size in the present study (*n* = 35) may have played a role in limiting the significance of the pre-post comparison conducted. Effect sizes from a study by Engel et al. (2018) with a sample of the Prevention network “Kein Täter werden” were between *d* = −0.14 and *d* = −0.58 for comparisons of treatment group (*n* = 35) before and after therapy regarding several measures. This supports the expectation for medium effects (according to Cohen, 1988, 1992). For the present study, a power analysis using the program G\*Power (Faul et al., 2007) indicated that a total sample of 35 participants would be needed to detect a medium effect (*d* = 0.5) with 80% power and  $\alpha$  = 0.05. This is equivalent to the sample size of the present study.

## Limitations and Future Studies

The generalizability of the present results is restricted due to the sample size of only 79 participants in the whole sample and only 35 participants in the sample for pre-post comparison. With

this sample size, especially with regard to pre-post comparison, this exploratory pilot study was underpowered for small effects. Therefore, the results of the present study need to be replicated with studies that include larger samples that would guarantee a sufficient statistical power. Generalizability is also limited because of the particular characteristics and institutional context of the “Kein Täter Werden” network site in Hamburg. Furthermore, 13 men could not be included in the study because they had not provided informed consent. Therefore, these data, and maybe specific characteristics, are not represented in the findings of this study.

Concerning validity, our results are limited because almost only self-report measurements with forced-choice categories were used. Forced-choice categories may simplify answers and/or distort information because of the particular choice sets given. The patients’ self-report was not validated by objective measures. Hence, it cannot be ruled out that an effect of social desirability distorted our data. Only the STABLE-2007 items are assessed by third party. For a part of the patients whose STABLE-2007 data were analyzed the STABLE-2007 was only filled in for a period of a few weeks (for 25 patients more than 6 weeks later) up to 6 months after completion of the initial diagnostic procedure, because the STABLE-2007 was not part of the battery of questionnaires right from the beginning of data collection. It cannot be ruled out that this retrospective completion may have been biased. However, as mentioned above, we assume that no substantial change in dynamic risk of sexual recidivism takes place during this time. Moreover, the self-report questionnaires analyzed in this exploratory pilot study are not validated, yet. Thus, as mentioned before, the findings can only be seen as preliminary results.

Until now, acceptance of SIM and its effects are not well researched, yet. There is a need for a validation study of the IASI rev. Furthermore, at this state of research, case studies and qualitative research would help to understand this construct and its impact on individuals better (see Jones et al., 2020 for qualitative research giving some insights into acceptance of pedophilia as a coping strategy of individuals who identify as pedophilic or hebephilic and do not offend). Quantitative research is needed in order to study how closely acceptance of SIM is related to measures of other constructs like the Unconditional Self-Acceptance Questionnaire (Chamberlain and Haaga, 2001), the Emotional Processing Scale (Baker et al., 2015), and/or the Thought Control Questionnaire (Wells and Davies, 1994). For a broader treatment plan, going beyond directly focusing on the main risk factors, research on the relation of acceptance of SIM to constructs associated with emotional well-being should be conducted, e.g., on how closely it is related to the context of personal suffering, including ambivalent identity experience (Blagden et al., 2018) and stigma-related stress (Jahnke et al., 2015; Wagner et al., 2016; Lievesley et al., 2020; Stelzmann et al., 2020).

Since we solely calculated correlation coefficients, we are not able to make any statement about causal relations. This means, it is not clear whether the acceptance of SIM had an impact on the other variables, or vice versa, or whether and how they interact with each other. A further study should include statistical

analyses which allow the examination of causality (e.g., crossed-lagged panel analyses; Frees, 2004).

The present study focused on the question if acceptance of SIM is related to essential treatment outcomes. The outcome measures of the present study, except of “Frequency of Desire for Sexual Activities with Minors,” mainly focus on the frequency of behavior. Further studies could also include outcome measures that focus on the strength of SIM in itself (see Carvalho et al., 2020 for different measures that are available), thus highlighting that not only behavioral changes are notable treatment goals but also change of SIM in itself, in general or via a partial shift from pedophilic to teleiophilic interests, for example. Accordingly, it would be worth studying if the level of SIM is associated with acceptance of SIM.

With larger samples, in the next stage of research, subgroups of men with SIM should be studied in more detail with regard to acceptance of SIM in order to be able to understand their characteristics and personalities better, differentiate better between them, and adapt treatment accordingly. There might be differences between the subgroups of non-offenders, mixed offenders, hands-on sexual offenders, and offenders without hands-on offenses but consumption of material depicting the sexual exploitation of minors. These subgroups were not differentiated in this study. Previous research indicates that these subgroups are, among other things, distinctive from each other regarding indicators of antisociality (Babchishin et al., 2015), criminal history (Long et al., 2013), offense supportive attitudes (Jahnke et al., 2015), stability of life factors, and substance abuse problems (Ly et al., 2018). Maybe they also differ from each other regarding acceptance of SIM. Previous findings suggest that offenders without hands-on offenses but consumption of material depicting the sexual exploitation of minors have greater levels of SIM than hands-on sexual offenders in the sense of greater sexual deviancy (even if going along with greater barriers to hands-on offending), greater likelihood to have problems with sexual preoccupation and sexual self-regulation (Babchishin et al., 2015), and a stronger diagnostic indicator of pedophilia (Seto et al., 2006). Another subgroup worth studying are webcam child sexual abuse offenders (de Tribolet-Hardy et al., 2020).

Differences in acceptance of SIM between individuals who are attracted to children, individuals who are attracted to adolescents, those who are attracted to both, and those who are also attracted to adults also need to be investigated in greater detail. Last but not least, prior research shows that social factors, such as social support and relationship status, affect self-acceptance (Leavy and Adams, 1986; Vincke and Bolton, 1994; Huang et al., 2020). Thus, they might as well affect acceptance of SIM. Therefore, further research should also examine relationships between social factors, e.g., relationship status and living alone vs. not living alone, acceptance of SIM and the effects on treatment outcomes.

## CONCLUSION

The main question of this study was if acceptance of SIM is related to essential treatment outcomes. The findings, on the

one hand, indicate a positive correlation between acceptance of SIM and the use of legal imagery of children. On the other hand, they suggest that acceptance of SIM might be positively correlated with illegal activities, such as the frequency of sexual activities with minors. According to this, more acceptance might reinforce or be reinforced by legal ways of dealing with pedophilic interest, but it might also pave the way for or be increased by an enhancement of illegal activities. Hence, acceptance of SIM should be further investigated before specific recommendations for treatment are made. With our current knowledge, there is a need for individualized treatment plans allowing for a modification of SIM in some patients and, in other patients, for working on acceptance of SIM.

## DATA AVAILABILITY STATEMENT

The datasets for this study are not publicly available due to patient confidentiality and participant privacy. The computer code is available on request to the corresponding author.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethics Committee of the Chamber of

Psychotherapists Hamburg (09/2019-PTK-HH, 02/2015-PTK-HH). The patients/participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

Under the supervision of PB, UL conceptualized the study and was the primary writer of the manuscript. UL and ST prepared the data for analysis. All the authors had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of data analysis, were involved in developing, editing, reviewing, and providing feedback for this manuscript, and have given approval of the final version to be published.

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## APPENDIXES

### APPENDIX 1 | IASI rev (Mundt et al., 2011).

**Instruction:** In the following you are asked to give some information on how you handle your sexual inclination.

This statement is true. . .	Not at all	Little	Moderately	Fairly	Very much
(1) I forbid myself my sexual fantasies.	1	2	3	4	5
(2) I can enjoy my sexual fantasies without a bad conscience.	1	2	3	4	5
(3) I hate my sexual inclination.	1	2	3	4	5
(4) I cannot accept my sexual inclination.	1	2	3	4	5
(5) My inclination is an integral part of my personality.	1	2	3	4	5
(6) I reject my sexual inclination.	1	2	3	4	5
(7) One must resist disagreeable sexual fantasies.	1	2	3	4	5
(8) I allow myself my sexual fantasies.	1	2	3	4	5
(9) I reject myself because I have this sexual inclination.	1	2	3	4	5
(10) My sexual fantasies have nothing to do with me.	1	2	3	4	5
(11) My sexual fantasies scare me.	1	2	3	4	5
(12) I have no sexual fantasies.	1	2	3	4	5
(13) I am aware of my sexual inclination.	1	2	3	4	5
(14) I like to embellish my sexual fantasies.	1	2	3	4	5
(15) I resist my sexual fantasies.	1	2	3	4	5

### APPENDIX 2 | The specific descriptions/questions that the six items represent which assess the frequency of the use of child abuse/exploitation material and frequency of sexual desire/behavior towards children.

(1) Frequency of Use of Legal Imagery of Children	<ul style="list-style-type: none"> <li>How often in the last 6 months did you consume (1) films with, (2) images/photos of lightly dressed children (e.g., in underwear, gym shorts, swimming trunks, leotards, transparent clothing. . .) for (a) masturbation, (b) stimulating pastime?</li> <li>How often in the last 6 months did you consume films with normally dressed children (e.g., children's films, feature films, documentary films. . .) for (a) masturbation, (b) stimulating pastime?</li> <li>How often in the last 6 months did you consume images/photos/portraits of dressed children (e.g., in magazines, on postcards, in illustrated books. . .) for (a) masturbation, (b) stimulating pastime?</li> <li>How often in the last 6 months did you consume imagery of (a) prepubescent, (b) early pubescent children – dressed in non-sexual representations – for masturbation or stimulating pastime?</li> <li>How often in the last 6 months did you consume imagery of (a) prepubescent, (b) early pubescent children – lightly dressed (e.g., in underwear) or naked in non-sexual representations – for masturbation and/or stimulating pastime?</li> <li>In the last 12 months I used media for sexual arousal which depict a child under 14 years of age with a (a) prepubescent, (b) early pubescent, (c) late pubescent body scheme, dressed, lightly dressed (e.g., in underwear) or naked in real non-sexual representations (or natural poses, respectively).</li> </ul>
(2) Frequency of Use of Legal Imagery of Adolescents	<ul style="list-style-type: none"> <li>How often in the last 6 months did you consume (1) films with, (2) images/photos of lightly dressed adolescents (e.g., in underwear, gym shorts, swimming trunks, leotards, transparent clothing. . .) for (a) masturbation, (b) stimulating pastime?</li> <li>How often in the last 6 months did you consume films with normally dressed adolescents (e.g., children's films, feature films, documentary films. . .) for (a) masturbation, (b) stimulating pastime?</li> <li>How often in the last 6 months did you consume images/photos/portraits of dressed adolescents (e.g., in magazines, on postcards, in illustrated books. . .) for (a) masturbation, (b) stimulating pastime?</li> <li>How often in the last 6 months did you consume imagery of late pubescent adolescents – dressed in non-sexual representations – for masturbation and/or stimulating pastime?</li> <li>How often in the last 6 months did you consume imagery of late pubescent adolescents – lightly dressed (e.g., in underwear) or naked in non-sexual representations – for masturbation and/or stimulating pastime?</li> <li>In the last 12 months I used media for sexual arousal which depict an adolescent between 14 and 17 years of age, dressed, lightly dressed (e.g., in underwear) or naked in real non-sexual representations (or natural poses, respectively).</li> </ul>
(3) Frequency of Use of Illegal Child Sexual Abuse Imagery	<ul style="list-style-type: none"> <li>How often in the last 6 months did you consume (1) films with, (2) images/photos of naked children (e.g., on the beach, bathing, medically examined, or posing in front of a camera) for (a) masturbation, (b) stimulating pastime?</li> <li>How often in the last 6 months did you consume images/photos of children who were dressed up or posed styled up (e.g., made up, in special clothing, school uniforms, sailor suits etc.) for (a) masturbation, (b) stimulating pastime?</li> </ul>

(Continued)

## APPENDIX 2 | (Continued)

- How often in the last 6 months did you consume (1) films, (2) images/photos with children in which sexual organs (e.g., buttocks, penis, vagina, breasts...) can be seen in detail and/or in which a child masturbates for (a) masturbation, (b) stimulating pastime?
  - How often in the last 6 months did you consume (1) films, (2) images/photos with children in/on which sexual acts are performed between an adult and a child for (a) masturbation, (b) stimulating pastime?
  - How often in the last 6 months did you consume imagery of (a) prepubescent, (b) early pubescent children – dressed, lightly dressed (e.g., in underwear), or naked in erotic/slinky/provocative poses – for masturbation and/or stimulating pastime?
  - How often in the last 6 months did you consume imagery of (a) prepubescent, (b) early pubescent children which show genital and anal area in detail for masturbation and/or stimulating pastime?
  - How often in the last 6 months did you consume imagery of (a) prepubescent, (b) early pubescent children which show sexual acts between pre-/early pubescent children (touching, masturbation, mutual stimulation, oral/vaginal/anal intercourse) for masturbation and/or stimulating pastime?
  - How often in the last 6 months did you consume imagery of (a) prepubescent, (b) early pubescent children which show sexual acts with an adult (touching, masturbation, mutual stimulation, oral/vaginal/anal intercourse) for masturbation and/or stimulating pastime?
  - In the last 12 months I used media for sexual arousal which depict real children under 14 years of age with a (a) prepubescent, (b) early pubescent, (c) late pubescent body scheme, dressed, lightly dressed (e.g., in underwear) or naked in erotic/slinky/provocative poses.
  - In the last 12 months I used media for sexual arousal which depict real children under 14 years of age with a (a) prepubescent, (b) early pubescent, (c) late pubescent body scheme and show genital and/or anal area in detail or which show sexual acts without adults being involved.
  - In the last 12 months I used media for sexual arousal which depict real children under 14 years of age with a (a) prepubescent, (b) early pubescent, (c) late pubescent body scheme and show sexual acts with adults being involved.
- (4) Frequency of Use of Illegal Adolescent Sexual Abuse Imagery
- How often in the last 6 months did you consume (1) films with, (2) images/photos of naked adolescents (e.g., on the beach, bathing, medically examined, or posing in front of a camera) for (a) masturbation, (b) stimulating pastime?
  - How often in the last 6 months did you consume images/photos of adolescents who were dressed up or posed styled up (e.g., made up, in special clothing, school uniforms, sailor suits etc.) for (a) masturbation, (b) stimulating pastime?
  - How often in the last 6 months did you consume (1) films, (2) images/photos with adolescents in/on which sexual organs (e.g., buttocks, penis, vagina, breasts...) can be seen in detail and/or in which an adolescent masturbates for (a) masturbation, (b) stimulating pastime?
  - How often in the last 6 months did you consume (1) films, (2) images/photos with children in/on which sexual acts are performed between an adult and an adolescent for (a) masturbation, (b) stimulating pastime?
  - How often in the last 6 months did you consume imagery of late pubescent adolescents – dressed, lightly dressed (e.g., in underwear), or naked in erotic/slinky/provocative poses for masturbation and/or stimulating pastime?
  - How often in the last 6 months did you consume imagery of late pubescent adolescents which show genital and anal area in detail for masturbation and/or stimulating pastime?
  - How often in the last 6 months did you consume imagery of late pubescent adolescents which show sexual acts between late pubescent adolescents (touching, masturbation, mutual stimulation, oral/vaginal/anal intercourse) for masturbation and/or stimulating pastime?
  - How often in the last 6 months did you consume imagery of late pubescent adolescents which show sexual acts with an adult (touching, masturbation, mutual stimulation, oral/vaginal/anal intercourse) for masturbation and/or stimulating pastime?
  - In the last 12 months I used media for sexual arousal which depict a real adolescent between 14 and 17 years of age, dressed, lightly dressed (e.g., in underwear) or naked in erotic/slinky/provocative poses.
  - In the last 12 months I used media for sexual arousal which depict real adolescents between 14 and 17 years of age and show genital and/or anal area in detail or which show sexual acts without adults being involved.
  - In the last 12 months I used media for sexual arousal which depict real adolescents between 14 and 17 years of age and show sexual acts with adults being involved.
- (5) Frequency of Desire for Sexual Activities with Minors
- How often do you have a desire for sex with intercourse with a child/adolescent?
  - How often do you have a desire for sex without intercourse with a child/adolescent?
  - How often do you have a desire for intimate body contact with a child/adolescent?
  - I had sexual desire (= a state of a strong longing or strong desire which arises in thought, triggered by, for example, certain encounters, pictures, moods or feelings; not to be equated with masturbation or other sexual acts) with regard to persons with a (a) prepubescent, (b) early pubescent, (c) late pubescent, (d) postpubescent body scheme, whether or not an act followed or not.
- (6) Frequency of Sexual Activities with Minors
- How often do you normally have intercourse with a child/adolescent?
  - How often do you normally have sex without intercourse with a child/adolescent?
  - How often do you normally have intimate body contact with a child/adolescent?
  - In the last 12 months I performed sexual acts without penetration with (a) prepubescent, (b) early pubescent children, (c) late pubescent children under 14 years of age, (d) adolescents between 14 and 17 years of age (e.g., observing/photographing/filming in intimate situations or of charges, peeping, sexualized talk, watching porn together, invitation to (mutual) masturbation, (deep) kiss, masturbation in front of a child/adolescent, rubbing, exposing oneself etc.)
  - In the last 12 months I performed sexual acts with penetration with (a) prepubescent, (b) early pubescent children, (c) late pubescent children under 14 years of age, (d) adolescents between 14 and 17 years of age (e.g., intercourse, i.e., oral intercourse, anal intercourse, vaginal intercourse, penetration with finger and/or objects etc.).



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