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Experiences and psychological health among children exposed to online child sexual abuse – a mixed methods study of court verdicts

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ABSTRACT

Cases of online child sexual abuse (OCSA) are increasing dramatically in number, but research on this relatively new type of crime and its psychological consequences is limited, leading to major challenges for the judiciary. The present mixed methods study investigated 98 legal cases of OCSA (children aged 7–17 years, $M = 12.3$, $SD = 1.92$) in Swedish District Courts to see if and how children's experiences and psychological health were described in the written verdicts. The results revealed that the children's psychological health was mentioned in less than half (48.0%) of the cases. Thematic analyses identified several potential vulnerability factors (e.g. poor psychological health, low self-esteem, loneliness) and several potential psychological consequences (e.g. psychological suffering, self-harming and/or suicidal behavior, internalized self-loathing, impaired relationships) among the children, all of which were similar to what research has shown among victims of offline CSA. The sexual abuse situation was often perceived as threatening, and many children felt that they had no other choice than to comply. In addition, the sexually abusive act was depicted as distressing and sometimes painful. In light of these findings, we suggest that OCSA should not be viewed as essentially different or less severe than offline CSA.




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Online child sexual abuse; psychological consequences; children's experiences; court verdicts

It has long been established that being sexually abused as a child might have severe consequences for the victim (Maniglio, 2009). Digital technology, however, has enabled a new kind of online child sexual abuse (OCSA) that is currently understudied (Wolak et al., 2018), and to some extent underestimated (Hamilton-Giachritsis et al., 2017). Professionals who work in the field of sexual abuse may view OCSA as causing the victim less psychological harm, and thus being of less immediate concern compared to offline abuse (Hamilton-Giachritsis et al., 2017). In the legal context, it has not been considered equally violating to be subjected to online, compared to offline, offenses (Net, 2015; B 11734-1). Consequently,

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victims of OCSA have reported that their abusive experiences are being minimized (Hamilton-Giachritsis et al., 2017). In contrast, a recent study (Jonsson & Svedin, 2017) showed that adolescents with experience of OCSA reported similar levels of post-traumatic stress symptoms to adolescents who had experienced penetrative sexual abuse offline. In addition, when sexual abuse is conducted online, pictures or videos often exist that risk being disseminated. The dissemination of these abusive pictures has, in turn, been shown to correlate with the children's trauma symptoms (Jonsson & Svedin, 2017).

OCSA consists of a wide range of crimes, from having sexual conversations with children, downloading or distributing child sexual abuse images, ordering someone to perform a sexual assault on a child in front of a webcam for the person to watch, or grooming a child with the intention of performing an offline offense later on, to inciting a child to pose naked or perform sexual acts via photo, video or live webcam. In the current study, we will focus on the latter as police reports regarding this type of abuse is increasing dramatically (BRÅ, 2019), but has thus far received limited attention in the research literature (Palmer, 2015).

To date, there is a lack of prevalence studies on the topic. In a Swedish study from 2007 (BRÅ, 2007), 30% of 14- to 15-year-old children (48% of the girls and 18% of the boys) reported that unknown adults had contacted them online and made suggestions of a sexual nature during the last year. A more recent Swedish study of 1653 highschool students showed that 35.7% of the girls and 10% of the boys had experienced pressure to send nude or semi-nude pictures (Burén & Lunde, 2018). In addition, although police reports are limited in their representation of the true prevalence, police data can provide an indication of the extensiveness of OCSA and its development. In Sweden, the number of police reports regarding exploitation of children for sexual posing (The Swedish Penal Code, Chapter 6, Paragraph 8) has increased by 1151% between 2008 and 2018 (BRÅ, 2019). The UK reported a 42%–49% annual increase in the rate of online sexual abuse in recent years (Bentley et al., 2019). Alarming, victims of OCSA seem to be growing dramatically in number as a group (Palmer, 2015), and this is evidently a group of abused children in need of extensive attention.

Previous research on OCSA has focused on sexual solicitation (i.e. unwanted sexual contact online, e.g. Mitchell et al., 2007), online grooming with the intent to meet offline (e.g. Kloess et al., 2014), sextortion (i.e. using threats to expose a sexual image in order to make a person do something, e.g. Wolak & Finkelhor, 2016), and the production or distribution of child sexual abuse images (e.g. Gewirtz-Meydan et al., 2018; Quayle & Jones, 2011). Much of previous research has also asserted that the goal for online perpetrators is to arrange an offline meeting with the child. This assumption, however, ignores the fact that not all online perpetrators aim for an offline meeting (see e.g. Briggs et al., 2011), and disregards the sexual acts that children can be incited to perform online. This paper will therefore focus on a different aspect of OCSA that has previously received little research attention (Palmer, 2015). That is, OCSA in which the child is incited to participate actively in the abuse, for instance by producing nude or semi-nude pictures or performing sexual acts live in front of a webcam. The fact that the child can be perceived as participating in the abuse contributes to the risk of being blamed (Hamilton-Giachritsis et al., 2017). This adds to the importance of further investigating this type of OCSA. To date, knowledge and understanding is limited. By analyzing court verdicts using an explorative approach, we set out to investigate what kinds of sexual acts children are

incited to perform online, and how the courts describe the victim's experiences and psychological health.

Online child sexual abuse – a challenge for the judiciary

Contrary to the common belief that OCSA has less of an adverse impact on the victim, the involvement of technology might complicate the impact of the abuse (Hamilton-Giachritsis et al., 2017). First, children have constant access to the internet via their smartphones. For example, in Sweden it is estimated that 85% of all 9- to 12-year-olds and 97% of all 13- to 18-year-olds have their own smartphone (Swedish Media Council, 2017). In the UK, the numbers are 35% of all 8- to 11-year-olds and 83% of all 12- to 15-year-olds (Ofcom, 2017). Thus, children are constantly accessible to potential perpetrators. Places that could normally be considered 'safe zones', for example the classroom, buses, and the bedroom (depending on who the perpetrator is), are not protected (Jonsson et al., 2009). Second, the child's own involvement in, or their initiative for, sexual contact may increase their feelings of shame and guilt (Jonsson & Svedin, 2017). Third, OCSA is conducted via electronic means and thus often includes pictures and/or videos of the abuse. The risk of these pictures being spread over the internet, a place where pictures never cease to exist, may add to their trauma (Leonard, 2010). Indeed, if pictures of the child are disseminated it is possible for unknown perpetrators all over the world to access pictures of the abuse for an unlimited time. It is probable that this lack of closure will complicate the recovery process. Victims who have pictures of their abuse disseminated online thus face the psychological pressure not only of processing the trauma of the experienced abuse, but also of developing coping strategies to deal with the possible ongoing dissemination (Gewirtz-Meydan et al., 2018; Leonard, 2010). In support of this notion, research has shown that children who know that pictures of their abuse exist, and children who have had their abusive pictures disseminated, report higher levels of post-traumatic stress symptoms than children exposed to undocumented CSA (Jonsson & Svedin, 2017). A tragic real life example of this is the case of a 15-year-old Canadian girl (Houlihan & Weinstein, 2014), who by the age of 11 was pressured into showing her breasts to a stranger online via her webcam. The stranger did not stop here, but blackmailed the girl and sent the explicit photo of her to all her Facebook friends, which resulted in the girl being bullied at school. To escape the harassment she relocated to a new school, but the online stranger followed her every step and disseminated the picture to the girl's new classmates. History repeated itself and the girl changed school again and again, until she could not cope anymore and committed suicide. The stranger – a 36-year-old Dutch man – was sentenced to ten years in prison, and the case received widespread international media coverage as it shed light on the seriousness of online crimes.

According to the Convention on the Rights of the Child (ratified by 196 countries; Sweden ratified it in 1990, and it became Swedish law in 2020), countries are obliged to protect children against all kinds of sexual abuse (Art. 34; Unicef, 1989). However, as technology advances, the legislation is falling behind and most countries lack explicit laws that criminalize online sexually abusive acts (ICMEC, 2017). Arguably, victims of OCSA are not legally protected in the same way as victims of offline CSA (Net, 2015). One obvious difference between online and offline CSA is the person who performs the physical act of touching. In offline sexual abuse, the perpetrators

can fondle or penetrate the victims (e.g. Finkelhor et al., 1990), whereas in online sexual abuse the perpetrators might incite the victims to perform these actions on themselves. This might be an important distinction when legally evaluating these crimes (The Swedish Prosecution Authority, 2016), and so far there is uncertainty about how these cases should be judged.

Sweden's legal response to OCSA

The current study is based on Swedish court verdicts; hence, an introduction to the Swedish legal system and sex crime legislation is necessary. In Sweden, cases of sexual abuse (like all criminal cases) are handled in general courts: the District Court (first level), the Court of Appeal (second level), and the Supreme Court (third and last level). If the complainant or the defendant is not satisfied with the ruling in a lower court, they have the right to appeal to a higher court. However, the Supreme Court only raises cases for review in a small fraction of all appeals and only if there is a need for precedents in the specific area (The Swedish Code of Judicial Procedure, Chapter 54, Paragraph 10). All courts produce written verdicts in which they state the reasons for their ruling and include relevant information that formed the basis for judicial decisions (Swedish Code of Judicial Procedure, Chapter 30, Paragraph 5). Such information often include a description of the testimonial, documentary, or tangible evidence presented in court as well as information about the police investigation, the criminal actions and the complainant's injuries and suffering.

The current Swedish sex crime legislation is not specifically adapted for online crimes. Instead, the general sex crime legislation (The Swedish Penal Code, Chapter 6, Paragraph 8) is applied to all sorts of sexual abuse, regardless of whether it has been conducted online or offline. In the Swedish legislation, the level of sexual violation should be the focus when deciding under which classification to prosecute a crime (Prop., 2004/05:45). Consequently, prosecutors must evaluate whether being forced to perform sexual acts on oneself (which often is the case in OCSA) should be viewed as equally violating as being physically sexually abused by someone else. Previous legal practice has not considered OCSA to be equally serious (Net, 2015; B 11734-17, 2018), and charges with lower penal values have been used in cases of OCSA. The charge, together with the perceived degree of violation, is what damages are based on (The Swedish Crime Victim Compensation and Support Authority, 2017). Also, the charge determines which legal coercive measures can be used. This, in turn, might affect the possibility of conducting a successful investigation that can lead to a conviction.

In conclusion, OCSA is often viewed as less serious than offline CSA (e.g. Hamilton-Giachritsis et al., 2017). New research, however, indicates the opposite (e.g. Jonsson et al., 2019), which makes it imperative to investigate (a) what sexual actions children are incited to perform online, (b) how these acts affect the children's psychological health, and (c) how the legal system treats these cases and the children's victimization.

Aim and research questions

By analyzing court verdicts from cases of OCSA in which children (in this article defined as individuals under the age of 18) were incited to produce nude or semi-nude pictures or

perform sexual acts online, the current study aimed to answer the following research questions:

- (I) How were the age and gender of the child related to (a) the location of the abuse, (b) repeated abuse, and (c) the type of sexual act?
- (II) What sexual acts were the children incited to perform online?
- (III) How were the child's experiences described in the verdicts?
- (IV) How was the child's psychological health described in the verdicts?
- (V) Was the child's psychological health and experiences described in the verdicts?

Method

Design

This study used a secondary study design, as it analyzed existing data in the form of written court verdicts. Secondary sources were judged to represent the best data in relation to the aims of this study, as they provide information about real cases of OCSA, which can otherwise be difficult to obtain due to the sensitive nature of these cases. The court verdicts are written by judges after the court hearing. As court hearings can last for several days, a lot of information about the case must be left out to give room for the most relevant parts. The court verdicts can, thus, provide an insight to which aspects of OCSA and its victims that are considered important. Due to the explorative and descriptive approach of this study, we did not have any hypotheses. We analyzed the material using a mixed methods approach, in which the qualitative analyses constituted the main part, and the quantitative analyses were used to provide a context.

Data collection

Source of data

The source of data for this study was written verdicts from cases of OCSA in which children had been incited to perform sexual acts or sexual posing online. The inclusion criteria were as follows: (I) issued during 2017, (II) including the charge 'exploitation of children for sexual posing', (III) the verdict had to include at least one *online* offense, and (IV) the child had to be aware of the abuse (which for example excluded acts involving a victim being photographed while sleeping). The charge 'exploitation of children for sexual posing' is a non-contact offense where the perpetrator uses solicitation to incite a child to pose sexually (The Swedish Penal Code, Chapter 6, Paragraph 8). The crime can be conducted both online and offline. We chose to use this charge as an inclusion criterion, because when a child is incited to perform sexual acts in front of a camera, the production of the picture leads to it falling under this classification. Thus, this charge is used in most cases of OCSA. This data set is part of a larger research project, investigating OCSA from a victim and an offender perspective. Due to the focus on victims in the current study, one additional inclusion criterion was added: (V) the OCSA was carried out and completed. Thus, all cases of *attempted* exploitation of children for sexual purposes (which constitute a crime according to the Swedish Penal code, Chapter 6, Paragraph 8) were excluded from the current study.

Document search

This study analyzed written court verdicts for OCSA cases issued in a Swedish District Court between 1 January and 31 December 2017. If a case had a subsequent verdict from any of the higher courts, it was included in the data set. Due to time constraints, however, the date of the last search for subsequent verdicts was set to 1 May 2018. After this date, one additional subsequent Court of Appeal verdict had been released. Our data set, thus, includes *all* cases of exploitation of children for sexual posing conducted online from Swedish District Courts, and *all except one* subsequent Court of Appeal verdict during this one-year period. The cases represented 24 of Sweden's 48 District Courts, and five of Sweden's six Courts of Appeal. The written verdicts varied greatly in terms of length (from 6 to 250 pages, $M = 36$ pages) and level of details (from not mentioning the gender or age of the child to including thorough descriptions of the child and extracts from chat logs).

The data collection process involved four stages. In stage one, the first author and a research assistant searched the Karnov database, applying criteria I and II. Karnov is a legal database that includes all written verdicts, issued in 2013 or later, from Swedish District Courts, Courts of Appeal, and the Supreme Court. They performed this procedure twice in order not to miss any relevant written verdicts. This search resulted in 99 hits, of which a first screening identified 66 of the verdicts as meeting inclusion criteria I and II. In the second stage, the first author and a research assistant thoroughly read the selected 66 verdicts against criteria III and IV. Through this process they excluded thirteen verdicts because no crime was conducted online, and three verdicts because the children were unaware of being abused (in one verdict the child was asleep, and in the other two the children were under the age of three). In total, written verdicts from 50 cases (including 122 children) from Swedish District Courts met these inclusion criteria. In stage three, the first author and a research assistant searched for subsequent Court of Appeal or Supreme Court verdicts pertaining to the cases included in the study. Sixteen of the 50 included verdicts were tried in a Court of Appeal and these verdicts were thus added to the material. For the relevant cases, verdicts from the District Court and the Court of Appeal were combined and instances thereafter treated as one entity. None of the current cases was tried in the Supreme court. In stage four, criteria V was applied, excluding the 24 cases of *attempted* abuse (e.g. a defendant asking for pictures but the child refusing). In total, 98 cases (39 defendants targeting 98 children) were included in the following analyses (see Figure 1 in supplementary material for flow chart).

Coding manual

We created a coding manual aimed at extracting both qualitative and quantitative variables from the written verdicts. As a basis for the coding manual, we used a set of variables identical to the one used in the study by Ernberg et al. (2018), investigating court cases of CSA among preschoolers (e.g. charges, legal outcome, age of defendant). In addition, variables specified for OCSA (e.g. Did the child also meet the defendant offline? What kind of actions was the child incited to perform?) and for the specific purpose of this study (e.g. How was the child's psychological health described in the verdicts?) were added. To further develop the first draft of the manual, 16 randomly (i.e. non-systematically) selected written verdicts from years prior to 2017 were coded but not included in the final analysis.

By using this data-driven method, old variables could be refined, and new variables could be added, based on what was found in the verdicts. The procedure worked as follows: First, the first author randomly selected and coded seven verdicts to refine and create new variables. Second, the three first authors discussed the revised coding manual. Subsequently, the first author and a research assistant together coded an additional nine verdicts. Fourth, a second draft of the revised manual was created with new and refined variables. The written verdicts used so far in the creation of the coding manual were not included in the study material, but solely used in the creation of the manual. The fifth, and last, step, however, was conducted on the actual data material. The first author and a research assistant separately coded verdicts and cross-compared the two coding documents. This procedure was repeated three times (on a total of 21 verdicts) until both consensus and saturation were reached. The finalized coding manual contained 103 quantitative and 16 qualitative variables (49 variables copied from the coding manual by Ernberg et al., 2018, and 70 variables added through the aforementioned procedure) and can be found on osf.io/7q9bw/.

Inter-rater agreement

To calculate the level of coder agreement, 20% ($n = 25$) of the cases, selected at random using a random generator, were coded by the first author and a research assistant separately. Subsequently, the codings were compared. Agreement for each variable was coded as either 1 (coders agree) or 0 (coders disagree). The inter-rater agreement was calculated as the number of agreements divided by the number of possible agreements (i.e. number of variables). The total inter-rater agreement for the relevant variables in this study was 0.95.

Measures

Quantitative measures

Five quantitative measures applied to research question I. The first variable was *Location of sexual abuse*. Children who were subjected to online sexual abuse only were coded as 0 and children who were subjected to both online and offline sexual abuse were coded as 1. The second variable was *Type of online act* and described the most serious type of sexual act that the child had been incited to perform. Being incited to pose sexually was coded as 0, and being incited to perform any physical act (such as masturbation or penetration, or to perform such acts on another person or an animal) was coded as 1. The third variable was *Repeated online abuse*. Due to the lack of information in the verdicts, it was not possible to create a continuous scale. Instead, this variable was also dichotomous. Children who were abused on a single occasion were coded as 0, and children who were abused on repeated occasions were coded as 1. The last two variables were *Child gender* (0 = girl, 1 = boy) and *Child age* (continuous). The quantitative variable *Mentioned* (0 = no, 1 = yes) applied to research question V.

Qualitative measures

The qualitative measure applying to research question II was *online sexual act*, which included all information from the written verdict describing the sexual acts that the children had been incited to perform. The variable of main interest to the current study,

applying to research questions III and IV, was *mentions of the child's psychological health*, in which all information from the written verdicts concerning the psychological health of the child was gathered in full sentences.

The written verdicts reflect what was brought up at the court hearing, and are thus summaries of the children's and other witnesses' testimonies. For instance, the information about the children's psychological health was therefore not always direct quotations from the children themselves, but summaries of what they or other witnesses had reported. This could be phrased as 'It appears from her stories that she felt very bad' or 'The plaintiff's mother has said that the plaintiff has had problems with her sleep'. Other descriptions were summaries of what was shown in the technical evidence (e.g. videos of the abuse), such as 'It is evident from the video that X is sad and afraid when she performs the acts'.

Data analysis

Quantitative data analysis

Research questions I and V were analyzed using IBM SPSS Statistics for Windows, Version 25.0. In order to answer research question I, we conducted binary logistic regression analyses. Binary logistic regression is a linear model in which a categorical variable (e.g. Location of abuse) with two outcomes (e.g. Online vs Online and offline) is predicted by a linear combination of one or more predictor variables (e.g. Age of the child, Field, 2018). In order to answer research question V, we used descriptive statistics (in this case percentage counts).

Qualitative data analysis

The qualitative information regarding the online sexual acts that the children were incited to perform (research question II) were organized into different kinds of actions. The different kinds of actions (sexual posing, masturbation, penetration and including other people or animals) were summarized and presented to provide a descriptive account of the online sexual abuse.

The qualitative information regarding what was mentioned about the psychological health of the child (research questions III and IV) was divided into three groups: psychological health of the child (i) before the abuse and (ii) after the abuse, and (iii) how the child experienced the abuse situation. The groups were analyzed separately but according to the same procedure, using thematic analysis. Thematic analysis is a method for identifying, analyzing and reporting patterns within data (Braun & Clarke, 2006, p. 79), and Braun and Clarke proposed a six-step guide to doing so. They emphasize that the analytical procedure involves a constant moving back and forth between the different steps, which include familiarization with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing the report. Our procedure was similar to the one proposed by Braun and Clarke (2006). First, the first author thoroughly read the material several times and then used a data-driven (inductive) approach to code the material semantically. Second, the first author systematically coded the entire dataset and generated initial codes. Third, the first author organized the initial codes into different themes. The themes were then discussed, compared to the original quotations, and named by the first and second authors. After further revision and discussion between

the first and the last author, the themes were renamed. All four authors approved the final draft. After the themes had been established, the first author conducted a systematic quantification of the frequency of the different themes within the two groups (i.e. Online CSA only and Online/offline CSA) to enable frequency comparisons. All quotations were translated into English and have been slightly edited (e.g. adding commas and punctuation, but in no way altering the original meaning) to facilitate reading..

Ethical considerations

The study was pre-registered on Open Science Framework: osf.io/dcjgs/. Due to the sensitive topic of the current study, thorough ethical considerations had to be made. Written verdicts from Swedish Courts are public records. In cases of sexual abuse, all personal information (name, social security number, address, etc.) regarding the complainant is classified in the documents. However, the verdicts do contain personal information about the defendant (e.g. name, social security number). All such information, together with any other identifiable markers, was omitted during the coding process. Thus, no identifiable information can be found in the documents used in this research project. The number assigned to each child and offender in the result section are non-systematically selected and used only for administrative purposes. The reason for including the numbers in the result section is to be transparent about the fact that the quotations are derived from a number of different cases. Furthermore, all quotations have been translated and all identifiable markers have been excluded to avoid possible identification of the children. The project has been approved by the Regional Ethical Review Board in Gothenburg, Sweden.

Results

Case characteristics

To provide a background understanding of the nature of the OCSA cases analyzed in this study, we here present some descriptive characteristics. The final material involved 39 male defendants aged 16–69 ($M = 35.0$, $Median = 28.7$, $SD = 15.8$) and 98 child complainants, primarily girls (86.7% girls, 12.3% boys, 1.0% no information), between 7 and 17 years old ($M = 12.3$, $Median = 13.0$, $SD = 1.92$) at the time of the (first) sexual abuse. For a more detailed description of all the cases, see [Table 1](#).

All 98 children were subjected to OCSA. In addition, 17 of the children (17.3%) also met their defendant offline and were subjected to physical sexual abuse (76.5% [$n = 13$] penetrative abuse, 23.5% [$n = 4$] fondling). All 98 cases are of interest in this study (since all 98 children had been exposed to OCSA), but for clarity we divided them into two groups: children exposed to online sexual abuse only ($n = 81$ henceforth referred to as *Online CSA only*), and children exposed to both online and offline sexual abuse ($n = 17$, henceforth referred to as *Online/offline CSA*). See columns two and three in [Table 1](#) for descriptions of the two groups.

Since the online acts that the children performed varied significantly and some of the children were also subjected to offline sexual abuse, the cases could include additional charges besides exploitation of children for sexual posing (The Swedish Penal Code, Chapter 6, Paragraph 8). For instance, sexual molestation, sexual abuse of a child, rape

Table 1. Child and abuse characteristics categorized by location of abuse.

Characteristics	Location of abuse		Total <i>n</i> = 98
	Online <i>n</i> = 81	Online and offline <i>n</i> = 17	
Child's gender			
Boy	11 (13.6%)	1 (5.9%)	12 (12.3%)
Girl	69 (85.2%)	16 (94.1%)	85 (86.7%)
No information	1 (1.2%)	–	1 (1.0%)
Child's age at (onset of) abuse			
7–9 years	9 (11.1%)	–	9 (9.2%)
10–12 years	18 (22.2%)	2 (11.8%)	20 (20.4%)
13–14 years	34 (42.0%)	13 (76.5%)	47 (48.0%)
15–17 years	1 (1.2%)	2 (11.8%)	3 (3.0%)
No information	19 (23.5%)	–	19 (19.4%)
Duration of sexual abuse ^a			
1 day	42 (51.9%)	–	42 (42.9%)
2–7 days	8 (9.9%)	2 (11.8%)	10 (10.2%)
8–30 days	9 (11.1%)	3 (17.6%)	12 (12.2%)
31–100 days	9 (11.1%)	2 (11.8%)	11 (11.2%)
101–200 days	8 (9.9%)	4 (23.5%)	12 (12.2%)
201–364 days	3 (3.7%)	5 (29.4%)	8 (8.2%)
>365 days	2 (2.4%)	1 (5.9%)	3 (3.1%)
Repeated sexual abuse			
No	43 (53.1%)	–	43 (43.9%)
Yes	38 (46.9%)	17 (100%)	55 (56.1%)
Type of online sexual abuse ^b			
Sexual posing	44 (54.3%)	12 (70.6%)	56 (57.2%)
Masturbation	9 (11.1%)	2 (11.8%)	11 (11.2%)
Penetration	23 (28.4%)	3 (17.6%)	26 (26.5%)
Involving other person or animal	5 (6.2%)	–	5 (5.1%)
Relationship with offender			
Unknown	61 (75.3%)	9 (52.9%)	70 (71.4%)
Briefly acquainted	3 (3.7%)	1 (5.9%)	4 (4.1%)
Acquainted	1 (1.2%)	7 (41.2%)	8 (8.2%)
No information	16 (19.8%)	–	16 (16.3%)

^aNumber of days from first occasion of sexual abuse until last occasion of sexual abuse.

^bShows the most serious type of online sexual abuse that the child has been incited to perform.

of a child, sexual coercion, child pornography offense, purchase of sexual service, indecent sexual assault of a child, and grooming.

How were the age and gender of the child related to the characteristics of the abuse?

The written verdicts yielded very little personal information about the children. Age and gender were often the only personal information available and were thus the variables used as independent variables in the following quantitative analyses. It should be noted that gender was not mentioned in one case and age was not mentioned in 19 cases. These cases were excluded from the relevant analyses (i.e. if age was not mentioned, the case was excluded from the analysis using age as the independent variable).

A series of binary logistic regression analyses with age and gender as the independent variables showed the following results. There was a significant association between the age of the child and the location of abuse, $b = .64$, $Wald(1) = 6.64$, $p < .01$, $OR = 1.90$ (95% CI: 1.17, 3.10), indicating that the likelihood of also being abused offline increased with increasing age. A significant association between the

age of the child and whether the child was abused on more than one occasion was also found, $b = .48$, $Wald(1) = 9.58$, $p = .002$, $OR = 1.62$ (95% CI: 1.19, 2.20). The odds ratio indicated that the older the child was at the time of the first abuse, the higher the likelihood of being subjected to repeated abuse. There was no significant association between the age of the child and the type of online act that the child was incited to perform, $b = .22$, $Wald(1) = 2.71$, $p = .1$, $OR = 1.24$ (95% CI: .96, 1.60). See Table 2 for full results. When using gender as a predictive variable in the aforementioned binary logistic regression analyses, none of the results turned out to be statistically significant, see Table 3.

What sexual acts were the children incited to perform online?

A wide range of abusive situations were described in the verdicts under the umbrella term 'OCSA'. The majority of the children in our study were incited to send sexualized or explicit photos or videos (nude or semi-nude, including the breasts, the genitals, or the buttocks), or to show the equivalent live in front of a webcam. More than a third were persuaded to perform sexual acts on themselves, such as masturbating or penetrating (orally, vaginally, or anally, with fingers or objects) and showing these acts via different means of electronic communication. A few children were coerced to perform sexual acts (e.g. oral sex) on another person (e.g. a younger sibling) or an animal live in front of a webcam. Most often, the perpetrator asked for unspecific pictures/videos (e.g. 'send me a nude picture!'), but on a few occasions the perpetrator explicitly directed the child to send certain pictures/videos or perform certain acts (e.g. 'send me a picture when your butt

Table 2. Statistics from three binary logistic regression analyses with child's age as the independent variable.

Dependent variable	Child's age					
	<i>b</i>	<i>S.E.</i>	<i>p</i> -value	Lower	Odds	Upper
Location of abuse ^a	.64	.25	.01*	1.17	1.90	3.10
Repeated online abuse or not ^b	.48	.16	.002**	1.19	1.62	2.20
Type of online act ^c	.22	.13	.1	.96	1.24	1.60

Note: * $p < .05$ ** $p < .01$.

^a0 = online, 1 = online and offline. $R^2 = .13$ (Cox & Snell) .19 (Nagelkerke). Model $\chi^2(1) = 10.55$, $p = .001$.

^b0 = single occasion, 1 = repeated abuse. $R^2 = .15$ (Cox & Snell) .20 (Nagelkerke). Model $\chi^2(1) = 12.61$, $p < .001$.

^c0 = posing, 1 = physical action (e.g. masturbation, penetration, involving other person or animal). $R^2 = .04$ (Cox & Snell) .05 (Nagelkerke). Model $\chi^2(1) = 2.94$, $p = .086$.

Table 3. Statistics from three binary logistic regression analyses with child's gender as the independent variable.

Dependent variable	Child's gender					
	<i>b</i>	<i>S.E.</i>	<i>p</i> -value	Lower	Odds	Upper
Location of abuse ^a	.94	1.08	.39	.31	2.55	21.21
Repeated online abuse or not ^b	-.27	.62	.67	.23	.77	2.61
Type of online act ^c	.48	.65	.46	.45	1.62	5.78

^a0 = online, 1 = online and offline. $R^2 = .01$ (Cox & Snell) .02 (Nagelkerke). Model $\chi^2(1) = .94$, $p = .33$.

^b0 = single occasion, 1 = repeated abuse. $R^2 = .00$ (Cox & Snell) .00 (Nagelkerke). Model $\chi^2(1) = .18$, $p < .67$.

^c0 = posing, 1 = physical action (e.g. masturbation, penetration, involving other person or animal). $R^2 = .01$ (Cox & Snell) .01 (Nagelkerke). Model $\chi^2(1) = .57$, $p = .45$.

is red from spanking' or 'pull down your underwear, spread your legs and touch your vagina'). See Table 1 for frequencies.

How were the child's experiences described?

In 22.8% ($n = 23$) of all cases, the children's own experiences of the online sexual abuse were described. We divided the descriptions into two themes: (i) how the children experienced the overall situation, and (ii) how the children experienced the sexually abusive act.

Experiences of the situation

Included here are the descriptions of how the children experienced the overall situation of OCSA. We organized this theme into three subthemes: *Threatening situation*, *Fearful that someone would find out*, and *Had no choice*. Each theme will be described briefly below. (See Table 4 for frequencies.)

Threatening situation. In the written verdicts, it was described that many of the children perceived the situation as threatening. For some, the overall situation itself was intimidating enough to make them obey the wishes of the perpetrator: 'She said that she did it because he asked her to, and that she was scared' (Child 9, girl, 12 years old). For others, the perpetrator used explicit threats to incite them to perform certain acts:

From the video recording, it is obvious that the complainant perceived the situation as frightening. She states that he has been threatening her for three days and says 'I am afraid of what you are going to make me do next time' and 'Basically you are raping me'. (Child 99, girl, 13 years old)

Fearful that someone would find out. For some children, it was described that the fear was instead related to the risk of other people discovering the sexual contact. Some of them feared that the perpetrator would tell people or start a rumor about them, while others 'were afraid that the pictures would reach the public' (Child 40, girl, 13 years old).

Had no choice. The most common theme includes accounts that described the coercive nature of OCSA in different ways. In one case, the complainant explicitly stated in the video recording of the abuse that she 'had no choice' (Child 95, girl, age unknown). In most cases, however, this was based on the court's interpretations from the video recordings, as in this example: 'It is apparent from the films that B is forced to act according to the instructions that she receives via her headphones, and that she transfers this sense of force, as well as the instructions, to A' (Child 96, girl 11 years old). In another case, it was described that 'it is clear from the video that she does not act voluntarily. She shows pain and disgust in connection with several acts and begs him to let her stop' (Child 111, girl, 14 years old).

Experiences of the sexually abusive act

This theme includes the descriptions of how the children experienced the sexual acts that they were incited to perform. We organized them into three subthemes: *It was physically painful*; *It was distressing* and *It was both good and bad*. Each subtheme will be described briefly. (For frequencies, see Table 4.)

Table 4. Themes and subthemes of how the children experienced the online CSA. Percentages compared to the total number of cases where experiences of the online CSA were mentioned in the written verdicts.

Themes	Subthemes	Total $n = 23$
<i>Experiences of the situation</i>	Threatening situation	7 (30.4%)
	Feared that someone would find out	4 (17.4%)
	Had no choice	12 (52.2%)
<i>Experiences of the sexual abuse act</i>	It was physically painful	4 (17.4%)
	It was distressing	10 (43.5%)
	It was both good and bad	1 (4.3%)

Note: The same case can contain more than one of the themes and subthemes (i.e. one child can have more than one of the different experiences).

It was physically painful. In four cases, the sexual acts that the children were incited to perform were described as physically painful. The written verdict could for instance include a summary of what could be seen in the video of the abuse: ‘The complainant says “It won’t go all the way”, “Can I use the smaller end?”, “It hurts” and “Do you want to see it in?”, while she is sobbing and making a whining sound’ (Child 104, girl, 14 years old). Another child described how she started bleeding when she penetrated herself (Child 97, girl, 13 years old).

It was distressing. This was the most extensive theme and was often manifested by descriptions of how the child cried in connection with performing the sexual act.

While she is [performing the sexual act] she starts to cry. She nevertheless continues the penetration, even though the crying increases and she says, “I don’t feel good” ... She cries on several occasions, but still continues to do as she is told. (Child 105, girl, age unknown)

It also included descriptions of internal feelings such as anxiety and disgust.

It was both good and bad. In contrast to the previous examples, it was mentioned that one child expressed ambivalent feelings about her experience: ‘It felt both exciting and unpleasant ... At first it was a fun thing, but it became increasingly unpleasant’ (Child 44, girl, 13 years old).

How was the child’s psychological health described?

In total, the children’s psychological health was mentioned in 48.0% ($n = 47$) of all cases. The psychological health of the child was mentioned in 42.0% ($n = 34$) of the cases of Online CSA only, compared to 76.5% ($n = 13$) of the cases of Online/offline CSA. A chi-square test indicated that there was a significant association between the location of the abuse and whether the psychological health of the child was mentioned in the written verdict, $\chi^2 (1) = 6.70, p < .009$. The odds of the written verdict containing information about the child’s psychological health were 4.50 times higher for victims of Online/offline CSA than for victims of Online CSA only, OR 4.50, 95% CI 1.35–14.98.

We divided the information about the child’s psychological health into two groups: before the abuse (henceforth referred to as *potential vulnerability factors*) and after the abuse (henceforth referred to as *potential psychological consequences*).

Potential vulnerability factors

The children's psychological health prior to the abuse was mentioned in 16.3% ($n = 16$) of the cases, and more often for Online/offline CSA (35.3%, $n = 6$) compared to Online CSA only (12.3%, $n = 10$), $p = .03$, Fisher's exact test. These potential vulnerability factors were organized into the following three themes using thematic analysis (Braun & Clarke, 2006): *Personal*, *Relational*, and *Behavioral*, together with six subthemes. Each theme will be described briefly below. For frequencies and comparisons between Online CSA only and Online/offline CSA, see Table 5.

Personal. This theme includes the potential vulnerability factors that related to the child itself.

Poor psychological health. This subtheme was the most comprehensive among the cases that mentioned psychological health pre-abuse. Psychological suffering was very briefly described in all cases, but indicated that the child was suffering psychologically before the abuse took place, such as: 'Before the contact with the accused started, she had already been in contact with the health care system due to her psychological health' (Child 40, girl, 13 years old).

Intellectual disabilities. Three of the children were reported as having cognitive or intellectual impairments. One complainant did not attend a regular school due to her impairments: 'The complainant is in a class for people with special needs, she has some kind of intellectual disability' (Child 120, girl, 13 years old).

Low self-esteem. In some cases, the children were described as having contact with their perpetrator because they were seeking attention: 'The accused has, in a ruthless way, used her loneliness and need for confirmation' (Child 119, girl, 13 years old). In other cases, the children were described as having contact with their perpetrator because they suffered from low self-esteem and felt better as a result of the perpetrator's appreciation.

Relational. This theme includes the potential vulnerability factors that were associated with the child's interpersonal relations.

Loneliness. Some children reportedly had no, or very few, friends. Their loneliness led them to search for someone to talk to online, and in some of these cases the perpetrator fulfilled the role of a listener: 'She had asked her parents to be put in touch with a school

Table 5. Themes and subthemes of the potential vulnerability factors among the victims, categorized by location of abuse. Percentages compared to the total number of cases where pre-abuse psychological health was mentioned in the written verdict.

Themes	Subthemes	Location of abuse		Total $n = 17$
		Online $n = 10$	Online and offline $n = 7$	
<i>Personal</i>	Poor psychological health	6 (60.0%)	4 (57.1%)	10 (58.8%)
	Intellectual disabilities	3 (30.0%)	–	3 (17.6%)
	Low self-esteem	3 (30.0%)	2 (28.6%)	5 (29.4%)
<i>Relational</i>	Loneliness	3 (30.0%)	1 (14.3%)	4 (23.5%)
	Stressful social environment	4 (40.0%)	–	4 (23.5%)
<i>Behavioral</i>	Self-harming behavior	2 (20.0%)	2 (28.6%)	4 (23.5%)

Note: The same case can contain more than one of the themes and subthemes (i.e. one child can display more than one of the different vulnerabilities).

counselor, but nothing happened. She needed someone to talk to. She shut herself in her room and used online chat apps’ (Child 9, girl, 12 years old).

Stressful social environment. The verdicts mentioned that four children described the time before the abuse as being tough in different ways. One child was bullied at school, two children went through ‘a rough period’, and a fourth child was described as having been ‘under a lot of pressure at school and involved in way too many clubs and associations in her spare time’ (Child 8, girl, 13 years old).

Behavioral. This theme includes the potential vulnerability factors associated with the child’s behavior.

Self-harming behavior. It was reported that some children indirectly self-harmed in different ways. One child was involved in ongoing drug abuse, and another child self-harmed by initiating destructive relations with older men:

When she first came into contact with the accused, she was also in contact with several other men aged 20–30. She reached out to these men as part of a self-destructive pattern of behavior. The first conversation with the accused ended abruptly after her father found her with a cell phone. At this point, as a way of protecting her, she was not allowed to have a cell phone. Later on, in October, she contacted all those whom she had previously had contact with, including the accused. At that time, she had left school and was hiding in her family’s old house. (Child 37, girl, 14 years old)

Potential psychological consequences

Overall, the children’s psychological health post-abuse was mentioned in 30.6% ($n = 30$) of all cases. Post-abuse psychological health was more frequently mentioned in Online/offline CSA (76.5%, $n = 13$) compared to Online CSA only (21.0%, $n = 17$), $\chi^2 (1) = 16.59$, $p < .001$, OR 9.04, 95% CI 2.80–29.18.

These potential psychological consequences were organized into the following four themes using thematic analysis: *Personal*, *Relational*, *School*, and *No problems*, together with eleven subthemes. Each theme will be described briefly below. See Table 6 for frequencies and comparisons between Online CSA only and Online/offline CSA.

Table 6. Themes and subthemes of the potential psychological consequences among the victims, categorized by location of abuse. Percentages compared to the total number of cases where psychological health problems post-abuse were mentioned in the written verdict.

Themes	Subthemes	Location of abuse		Total $n = 30$
		Online $n = 17$	Online and offline $n = 13$	
<i>Personal</i>	Psychological suffering	16 (94.1%)	11 (84.6%)	27 (90.0%)
	Self-harming and/or suicidal behavior	2 (11.8%)	1 (7.7%)	3 (10.0%)
	Sleeping problems	5 (29.4%)	1 (7.7%)	6 (20.0%)
	Internalized self-loathing	2 (11.7%)	2 (15.4%)	4 (13.3%)
<i>Relational</i>	Trust issues	1 (5.9%)	1 (7.7%)	2 (6.7%)
	Impaired relationships	2 (11.8%)	–	2 (6.7%)
	Isolating oneself	2 (11.8%)	–	2 (6.7%)
	Fear of being alone	2 (11.8%)	–	2 (6.7%)
<i>School</i>	Difficulties at school	5 (29.4%)	4 (30.8%)	9 (30.0%)
<i>No problems</i>	No negative consequences	–	1 (7.7%)	1 (3.3%)

Note: The same case can contain more than one of the themes and subthemes (i.e. one child can suffer from more than one of the different psychological consequences).

Personal. This theme includes the potential psychological consequences that relate to the child itself.

Psychological suffering. This subtheme was the most frequent in the cases that mentioned the psychological health of the children post-abuse. Some cases were less informative: 'She has been feeling very bad about what happened' (Child 32, girl, 13 years old) or 'She has been seeing a child psychologist' (Child 7, girl, 12 years old), whereas others were more extensive:

She did not want to talk to anyone, because she was feeling so bad ... After the police interview, she went to the juvenile reception to talk. Everything came back to her, she has not been able to let it go, she thinks about it every day. (Child 12, girl, 13 years old)

What unites the quotations is that they all include information that demonstrates psychological suffering due to the abuse. The suffering ranged from descriptions of relatively mild suffering such as 'Afterwards he thought about what had happened and felt bad' (Child 74, boy, 13 years old) to descriptions about how the child developed psychological diagnoses. It was reported that one child 'developed a bulimic eating disorder (...) and has been seeing a psychologist and received the diagnosis of post-traumatic stress symptoms' (Child 82, girl, 11 years old). Another child's psychological health was described as 'initially being heavily impaired with general depression and a variety of disorders (...) and she suffered traumatization as a consequence' (Child 10, girl, 14 years old).

Self-harming and/or suicidal behavior. It was illustrated in the verdicts that a few children developed destructive behaviors. One child self-harmed by 'tearing up wounds on her arms' (Child 8, girl 13 years old). A second child suffered suicidal thoughts, and a third reportedly 'at some point tried to commit suicide, she cut herself' (Child 40, girl, 13 years old).

Sleeping problems. Another way that the psychological consequences could manifest themselves was sleeping problems. This was described by quotations like 'the witness has said that the complainant has had problems with her sleep' (Child 88, girl, age unknown) or 'she still uses sleep medicine' (Child 37, girl, 14 years old).

Internalized self-loathing. The descriptions from some children indicated that their experiences of the abuse made them look at themselves differently. They evaluated themselves in the light of what they had been exposed to. The children could express this by saying that they felt worthless.

Relational. This theme includes the potential psychological consequences that are associated with the child's interpersonal relations.

Trust issues. One way in which the abuse could affect interpersonal relations was by creating distrust in other people. This was evident in two of the children. One child was described as 'having problems trusting other people, especially men' (Child 82, girl, 11 years old). The other child reportedly expressed that she 'did not feel safe anywhere' (Child 119, girl, 13 years old).

Impaired relationships. For two children, it was mentioned that the aftermath of the abuse had affected the child's relationships with family members: 'The complainant and the complainant's mother have a worse relationship now than before the event in question occurred' (Child 8, girl, 11 years old).

Isolating oneself. Two of the children tried to detach themselves from other people after the abuse. It was mentioned that one girl ‘turned off her cellphone after the abuse and did not want to be contacted. She isolated herself’ (Child 88, girl, age unknown).

Fear of being alone. In contrast, two of the children had difficulties being alone. One verdict stated that the child ‘did not dare to do things on her own’ (Child 8, girl, 13 years old) and the other verdict stated that the child ‘could not manage to be alone so a family member accompanied her at school every day for four months, until she received a resource person at school’ (Child 37, girl, 14 years old).

School. This theme includes the potential psychological consequences related to the child’s schooling.

Difficulties at school. Several children were reportedly unable to attend school due to the psychological health problems they suffered after the abuse. Some children were absent from school on and off: ‘only goes to school when she is able to’ (Child 43, girl, 12 years old), whereas others had longer periods of non-attendance: ‘because she is so distressed about this trial, she has taken leave of absence from school’ (Child 10, girl, 14 years old). Other children managed to attend school but were described as having difficulties staying focused: ‘All of this ruined the complainant’s schooling. She would sit and cry when she was supposed to study’ (Child 12, girl, 13 years old).

No problems. This theme includes the children for whom the verdict stated that they did not develop any psychological health problems after the abuse.

No negative consequences. From the descriptions in the verdict, one child was reportedly not negatively affected by the abuse. This girl reported that the sexual contact (both online and offline) was voluntary, and it was stated in the verdict that ‘there is nothing to suggest that the plaintiff was adversely affected by the sexual intercourse’ (Child 86, girl, 14 years old), even though she was under the age of sexual consent.

Discussion

This study aimed to further the knowledge about OCSA and how children’s psychological health and experiences were described in court verdicts. The study showed that the court verdicts only mentioned the children’s experiences and how the abuse had affected them in less than half of the verdicts, and often only briefly. Routinely evaluating the psychological health of the child in all cases of CSA would comply more closely with the requirements of the Convention on the Rights of the Child (Unicef, 1989), which states that every child has the right to express his or her voice in matters concerning them. It would also increase the victims’ chances of receiving legal justice, as damages are based on whether the victim suffered psychological harm due to the offense. Furthermore, it was more common for the child’s psychological health to be mentioned in cases of Online/offline CSA, compared to cases of Online CSA only. One possible explanation for this might be that the courts more often adduce the psychological health of the child in cases of offline CSA by default, because previous legal practice has stated that contact abuse must be considered more sexually violating than non-contact abuse (B 11734-17, 2018). Thus, children exposed to OCSA are not expected to suffer harm to the same extent, and their psychological health is therefore not considered as often. Another possible explanation could be that

cases with several victims provides less space for each individual victim's experience, and it is more common for perpetrators of OCSA to have multiple victims. Both these explanations would be problematic, as they would run the risk of overlooking the psychological suffering that victims of OCSA might experience.

Based on what was written in the verdicts, the study showed that OCSA seemed to be associated with a wide range of health-related consequences that might have serious effects on children's well-being. Many of these psychological consequences are similar to those established in the systematic review of reviews by Maniglio (2009), investigating the consequences of offline CSA. The present findings therefore indicate that OCSA is not to be considered separately from offline CSA, but rather just one of many possible ways in which a child can be exposed to CSA.

The results show that some of the children seemed to suffer from a wide range of problems during the time before the abuse, thus indicating that there are some factors that might make a child more vulnerable to OCSA. Some of these findings are in line with previous studies. Adolescents with experiences of OCSA had poorer psychological health, lower self-esteem and more frequent risk behavior in comparison with a reference group of adolescents (Jonsson et al., 2019). Being socially isolated and having problems at home or at school are found to be risk factors for OCSA (Mitchell et al., 2001; Whittle et al., 2013). These studies found similar vulnerability factors among exposed children, although they differed in terms of the samples used (Jonsson et al., 2019 used a representative sample of adolescents; Mitchell et al., 2001 used a telephone survey of a random sample of young people; Whittle et al., 2013 conducted a review of several studies with different samples) as well as the type of OCSA. This indicates that these vulnerability factors might be general for all forms of OCSA – a finding that can be important for identifying particularly vulnerable risk groups.

Some children experienced the overall abuse situation as threatening in different ways, and many reportedly experienced that they had no other choice than to perform the sexual acts. Evidently, it is important to understand the power and impact that sexual perpetrators exert over their victims (Leonard, 2010), regardless of whether the abuse is conducted offline or online. Similarly, OCSA must also be understood in the context of the child's developmental level. The brain is not fully developed until around the age of 25, and during adolescence the pre-frontal cortex is still undergoing maturation (Steinberg, 2011). This part of the brain is responsible for impulse control, and adolescents have a greater inclination towards sensation-seeking and risk-taking behavior. In addition, children's naivety and less developed self-reflection ability might complicate their capacity to set boundaries (Swedish Agency for Youth and Civil Society, 2009), making them particularly vulnerable.

The study further showed that OCSA encompasses a wide range of sexual acts. This clearly shows the complexity of this crime type and refutes the idea that online abuse is always non-physical. Previous research on CSA has concluded that penetration is one of the most severe forms of CSA, and is associated with higher levels of psychological suffering than non-penetrative abuse (Priebe, 2009). In this study, children performed the penetration themselves, yet seemed to suffer both physically and psychologically. OCSA is evidently not essentially different from more customary forms of CSA. It is only different in the sense that it is executed via the medium of the internet. Hence, the

seriousness of sexual offenses that are committed online should not be trivialized (Shannon, 2008).

It is important to note regarding the age distribution that, according to Swedish legislation, the age of sexual consent is 15 years. Consequently, all sexual acts involving children under the age of 15 are illegal. For children between 15 and 17, an additional condition (whether the act is 'destined to harm the child's health or development'; The Swedish Penal Code) must be met for the act to be considered exploitation of children for sexual posing. This legal definition is likely to explain the dramatic difference in the number of children under 15 years of age compared to the number of children aged between 15 and 17 in this study.

Most of the children in this study were, in line with previous research (Shannon, 2008), between 10 and 14 years old. However, 1 in 10 was as young as 7–9 years old. This needs to be seen in the light of the increased access to the internet and smartphones among this age group (Ofcom, 2017), and clearly demonstrates the importance of also including younger children in preventive work. No effects of gender were found, indicating that the characteristics of OCSA do not necessarily differ between girls and boys. Although girls are over-represented in the statistics, this finding demonstrates the importance of also considering boys as potential victims.

Some children had contact with their perpetrator over a long period of time. This long-term contact, in which the perpetrator often gains the child's trust, is referred to as grooming (e.g. McAlinden, 2006) and is likely to affect the child's experience by leading to ambivalent feelings towards the perpetrator. In contrast, a considerable proportion of the children were only in contact with their perpetrator on one single occasion and were thus exposed to strategies other than grooming (Joleby et al., 2020). The different strategies that the children can be exposed to might be important factors for understanding the child's own feelings of guilt and shame.

Limitations and future research

Since the current study is based on archival data, some limitations need to be addressed before discussing the practical implications of the current results. First, the written verdicts reflect only what was brought up at the court hearing, and thus not all available information in the case. Second, the verdicts are written by judges, and thus rely on their interpretations of all information presented in court. Their interpretations may not reflect the actual intentions of the child's or other witnesses' accounts. Hence, by relying on written secondary accounts, the study may understate or overstate the experiences and psychological health of the children exposed to OCSA. Consequently, the fact that the verdict does not mention a specific topic (e.g. the psychological health of the child) does not necessarily mean that no such information was available. Nor is it possible for us to state with certainty that the vulnerability factors and psychological consequences mentioned in the verdicts were in fact connected to the crime. What the information from the verdicts does tell us, however, is which aspects were considered important enough to be presented at the court hearing, and to be highlighted in the verdict. It also provides objective information about the online abuse, and not only the subjective experience of the child.

Another limitation is the generalizability of the results to other groups of online victims. Our study is based on the small percentage of OCSA cases that are brought to the

attention of the police, and moreover are prosecuted. Therefore, this group of children might be different from victims of similar crimes that never reach the attention of the legal system.

In the analyses using age as the independent variable, it is important to note the relatively high number of cases ($n = 19$) excluded from these analyses due to missing data. While there is no reason to suspect any systematics within the cases missing, the results should be interpreted with caution.

Although the current study contributes to the limited research on CSA that is carried out online, this highly topical issue warrants further research. Some children (excluded from analysis in this study) were subjected to attempted abuse only, meaning that they showed some resilience to the solicitation by refusing to agree to the wishes of the perpetrator. For preventive measures, it is of great interest to investigate whether the difference in resistance is due to the vulnerability and/or the resilience of the child or due to different strategies employed by the perpetrator. In addition, first-hand information from the children about their experiences and psychological health would be a valuable addition to the results in the current study, as would studies on the long-term psychological consequences for victims of these crimes.

Conclusions and practical implications

Our findings show that children exposed to OCSA were subjected to a wide range of sexual acts, some of which were of an extremely violating nature. They also show that the online abuse was associated with many potential psychological consequences that are similar to those of offline CSA. In sum, this indicates that OCSA should not be viewed as less sexually violating than offline CSA.

In addition, our findings show that the children were relatively invisible in the court verdicts. This was especially evident for the children exposed to OCSA only, as their psychological health was mentioned less often compared to the psychological health of children exposed to online and offline CSA, revealing a possible bias in how the courts handle these cases. The courts ought to be consistent in how they gather and evaluate data about the victim's psychological health in all cases of CSA, regardless of whether it was conducted online or offline. To increase awareness of the potential severity of OCSA, we recommend education targeting judicial and legal professionals as an important initial step. Advocacy efforts by child rights practitioners targeting legislators to amend how existing laws treat OCSA could contribute further.

As for preventive measures, school- and community-based education targeting youth should make sure to include OCSA in its curricula. Likewise, routines for action following disclosure of CSA should explicitly also include OCSA. Professionals working with children should receive training about the dynamics and impact of OCSA, in order to develop adequate support and treatment methods for victimized children. Furthermore, the study indicates that some factors might render children more vulnerable and susceptible to OCSA. This knowledge can be used to target particularly vulnerable groups with preventive actions to reduce the risk of them becoming victimized.

In conclusion, the findings from the current study add to the thus far limited knowledge about OCSA and its psychological consequences. As legislators are faced with the difficult challenge of evaluating the level of sexual violation in cases of OCSA, the results can help them to legally evaluate these crimes. This in turn might be a step forward in allowing victims of OCSA to receive redress.

Open Scholarship



This article has earned the [Center for Open Science](#) badge for Preregistered. The materials are openly accessible at <https://osf.io/ma2eu/>.

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Data availability statement

Due to the sensitive nature of this research and to participants of this study not having agreed to have their data shared publicly, supporting data is not available.

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