

Ph.D. Thesis

Technology-assisted child sexual abuse

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DEPARTMENT OF PSYCHOLOGY

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TECHNOLOGY-ASSISTED CHILD SEXUAL ABUSE

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Till mamma och pappa

ABSTRACT

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Internet communication technology has created new ways for adults to sexually abuse children, and as the world becomes more and more digitalized and children are increasingly connected, reports about online child sexual abuse are increasing. The aim of this thesis was to broaden the thus far limited knowledge about technology-assisted child sexual abuse (TA-CSA) and its consequences by using mixed methods to analyze cases (Study I: $N = 122$, Study II: $N = 98$) from Swedish courts (children aged 7–17, offenders aged 16–69), and by performing in-depth interviews with victims of TA-CSA (Study III: $N = 7$, aged 7–13 at the first occasion of TA-CSA, aged 17–24 at the time of the interview). **Study I** investigated which strategies online offenders used to incite children to engage in online sexual activity, identifying the use of (i) pressure and (ii) sweet talk. In contrast to previous research describing the use of pressure as an exception, the findings add support to the claim that there is substantially more pressure and coercion in online offenders' interactions with actual children (compared to decoys). **Study II** examined how the experiences and psychological health of the children were described in the court documents, and which kinds of sexual activities the children were incited to perform online. The results show that some children experienced the abuse as threatening and distressing, and felt that they had no choice but to perform the sexual acts demanded by the offender. The study further revealed a wide range of sexual acts that the children were incited to perform, some of which were of an extremely violating nature. The court documents described several potential vulnerability factors and psychological consequences among the children, which are similar to those shown in research investigating offline child sexual abuse. The aim of **Study III** was to gain a first-person perspective on the experiences of TA-CSA, and a deeper understanding of how it may affect its victims. The interviews revealed that the victimization had profoundly affected the individuals' lives, health, and self-concepts in the short term and the long term. The study highlighted the sometimes long and complex process of understanding the severity of one's experiences, the extensive self-blame, and the anxiety caused by living with the constant fear of pictures from the abuse resurfacing. In sum, this thesis emphasizes that TA-CSA can be a serious crime with potentially severe consequences for its victims. In light of this, it is suggested that TA-CSA should not be viewed as essentially different from, or less severe than, offline CSA.

SWEDISH SUMMARY

Är sexuella övergrepp som sker via nätet mindre allvarliga än de som sker när offer och förövare möts fysiskt? Om man tittar på hur vårt rättssystem hanterat frågan så kan man få uppfattningen att svaret är ja. Internetrelaterade sexualbrott har ansetts vara mindre kränkande, med följderna att förövare kommit undan med mildare straff och lägre skadestånd. Det finns även forskning som visar att yrkesverksamma som arbetar med barn ibland inte anser att det finns lika stor anledning till oro när övergreppen skett via nätet. Forskningen visar också att barn som utsatts upplevt att deras erfarenheter har förminskats.

Resultaten i denna avhandling ifrågasätter uppfattningen att övergrepp som sker via nätet alltid skulle vara mindre allvarliga. Internetrelaterade övergrepp mot barn innefattar en stor bredd av handlingar, där vissa av övergreppen kan vara av ytterst allvarlig och kränkande karaktär. Resultaten visar också att övergreppen kan orsaka stort lidande för de barn som drabbas. De symptom och potentiella konsekvenser som rapporteras i studierna ligger väl i linje med vad forskning på sexuella övergrepp mot barn utanför nätet visar, och symtombilden följer de processer och mönster som beskrivs i traumateori om sexuella övergrepp. Följaktligen finns det inget som tyder på att sexuella övergrepp som sker via nätet är mindre allvarliga enbart för att kontakten med förövaren har skett via internet. Omständigheterna i det enskilda fallet samt hur barnet uppfattar situationen är istället avgörande. Precis som vid sexuella övergrepp som sker utanför nätet så bör därför även internetrelaterade sexualbrott ses som potentiellt traumatiserande händelser med risk att skapa stort lidande. Dessutom – när det gäller just internetrelaterade sexualbrott så finns faktorer som tvärtom kan komplicera påverkan av övergreppen. Nämligen att förövaren har möjlighet att kontakta barnet dygnet runt, rädslan för att bilder eller filmer från övergreppen ska spridas, och känslor av skuld och skam över att ha tvingats ta en aktiv roll i övergreppet.

Att det är viktigt att öka kunskaperna på området tydliggörs av att rapporterna om sexuella övergrepp på nätet ökar i takt med att världen blir mer och mer digitaliserad och barns digitala närvaro blir allt större. Att skydda barn från dessa övergrepp, utan att samtidigt hindra dem från att ta del av den tekniska utvecklingen, är en samhällsutmaning som kräver omedelbar uppmärksamhet. För att kunna sätta in preventiva åtgärder, säkerställa att utsatta barn får tillräckligt stöd samt lagföra förövarna behöver vi veta mycket mer om förhållandena och omständigheterna som omger övergreppen. Hur går internetrelaterade övergrepp till? Vad är det för sexuella handlingar barn förmås att genomföra? Hur påverkar övergreppen barnens psykiska hälsa och välmående både på kort och på lång sikt? Syftet med denna avhandling är att

öka kunskapen om internetrelaterade övergrepp genom att besvara dessa frågor.

Avhandlingen bygger på tre forskningsstudier. Till grund för Studie I och II ligger en analys av samtliga svenska domstolsfall från år 2017 med brottsrubriceringen 'Utnyttjande av barn för sexuell posering' där övergreppet skett på nätet. Domstolsfallen inkluderar barn (ålder 7–17 år) som förmåtts att genomföra sexuella handlingar via internet. I **den första studien** (som analyserade 122 fall) undersökte vi vilka strategier förövare använde för att begå internetrelaterade övergrepp. Det var betydligt vanligare att internetförövare använde *press* (hot, mutor eller tjat) än vad som tidigare antagits. Förövarna använde även *smicker* (komplimanger, att låtsas vara en vän, eller genom att uttrycka kärlek), vilket är vanliga beståndsdelar i grooming. I vår studie framkom dock att både press och smicker kunde användas i situationer där barnet och förövaren enbart hade kontakt vid ett enda tillfälle, och att det således inte krävdes en långvarig kontakt där förövaren bygger upp en relation med barnet. I studien identifierades också vissa samband mellan den strategi förövaren använde och övriga omständigheter kring övergreppen. Generellt så var förövarna som använde press yngre och riktade in sig på äldre barn, jämfört med förövarna som använde smicker. De barn som förmåddes genomföra de mest allvarliga sexuella övergreppen hade alla utsatts för press.

I **den andra studien** (som analyserade 98 fall) undersöktes hur barnens erfarenheter och psykiska hälsa beskrevs i domarna, samt vad för typ av sexuella handlingar barnen hade förmåtts genomföra. Resultaten visar att några barn upplevde att de frivilligt deltog i de sexuella handlingarna. Andra upplevde övergreppen som skrämmande, obehagliga och att de inte hade något annat val än att genomföra de sexuella handlingar som förövarna krävde. Det kunde handla om att visa upp sig halvnakna eller nakna, spela in filmer eller direktsända i webbkamera när de onanerade eller penetrerade sig själva, till att tvingas genomföra sexuella handlingar på syskon eller husdjur. Några av övergreppen beskrevs som fysiskt smärtsamma. Barnets psykiska mående beskrevs i färre än hälften av domarna. I de flesta fall var detta alltså inget som nämndes alls. Värt att notera är att det var nio gånger vanligare att de psykologiska konsekvenserna för barnet togs upp i de fall där barnet varit utsatt för övergrepp också utanför nätet.

I de fall där domarna faktiskt gav insikt i barnets psykiska mående så beskrevs flera olika sätt som övergreppen hade påverkat dem, såsom psykologiskt lidande, sömnproblem, självskadebeteende, internaliserat självhat, problem i skolan och försämrade relationer. Samma som vi ser i övergrepp utanför nätet.

Den tredje studien baseras på djupintervjuer med sju unga kvinnor med erfarenheter av internetrelaterade övergrepp (ålder 17–24 år vid intervjun, 7–13 år vid första övergreppet). Syftet var att fånga intervjupersonernas egna upplevelser och på så sätt ge en djupare förståelse för hur internetrelaterade övergrepp kan påverka dem som utsätts. Den tematiska analysen av intervjuerna visade att övergreppen på ett omfattande sätt hade påverkat intervjupersonernas liv, hälsa och synen på sig själva både på kort och på lång sikt. Temat *Från spännande till kränkande* beskriver hur det kunde vara en lång och komplicerad process att fullt ut inse allvarligheten i övergreppen. För många var det först i efterhand de insåg omfattningen av den manipulation de utsatts för. För vissa av intervjupersonerna var det i samband med att polisen kontaktade dem som de förstod att förövaren hade ljugit om sin identitet och inte var en jämgammal pojke utan i själva verket en vuxen man som hade utnyttjat en stor mängd andra barn. De som på detta sätt ofrivilligt blev föremål för en polisutredning beskrev det som omvälvande och traumatiserande att inse att det fanns bilder, filmer och chattkonversationer som polisen hade tillgång till och som skulle granskas i en rättsprocess. I temat *Negativ påverkan på hälsa och välbefinnande* beskrivs hur intervjupersonerna brottades med depressiva symtom och hade problem att klara av sina vardagliga liv. Intervjupersonernas mående var till stor grad fortfarande negativt påverkat trots att det för de flesta hade passerat flera år sedan övergreppen slutat. Känslor av skam och skuld var vanligt förekommande. Det kunde dels kopplas till tankar om att deras egen sexuella nyfikenhet var något skamligt, till äckel och avsky inför de handlingar de hade förmåtts genomföra, och en känsla av att de borde ha kunnat skydda sig från övergreppen. En stor källa till ångest och oro var rädsla för att bilder av övergreppen skulle spridas, vilket ledde till att eftereffekterna av övergreppen fortsatte långt efter att övergreppen slutat. Slutligen beskriver temat *Ett nytt jag efter övergreppen* hur vissa deltagare upplevde att bilden av dem själva hade förändrats totalt. Detta tog sig uttryck i en svårighet att våga lita på människor och att relationen till ens kropp och sexualitet hade tagit skada.

LIST OF PUBLICATIONS

This thesis is based on the following studies, referred to in the text by their roman numerals:

- I. Joleby, M., Lunde, C., Landström, S., & Jonsson, L. S. (2021). Offender strategies for engaging children in online sexual activity. *Child Abuse & Neglect*, 120, 105214.
- II. Joleby, M., Landström, S., Lunde, C., & Jonsson, L. S (2021). Experiences and psychological health among children exposed to online child sexual abuse: A mixed methods study of court verdicts. *Psychology, Crime and Law*, 27 (2), 159-181.
- III. Joleby, M., Lunde, C., Landström, S., & Jonsson, L. S. (2020). “All of Me Is Completely Different”: Experiences and Consequences Among Victims of Technology-Assisted Child Sexual Abuse. *Frontiers in psychology*, 11, 3432.

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As if this super team was not enough, I have also the pleasure and privilege of being part of not one, but two ambitious and supportive research groups – the research unit for Criminal, Legal and Investigative Psychology (CLIP) and the Gothenburg group for Research In Developmental psychology (GRID). Thank you all for inspiration, collaboration, and fun times.

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According to my high school teachers, I viewed school more as a social activity than anything else. Although my current work motivation is higher than back in high school, I would not love my job if it was not for my wonderful co-workers. Therefore, a special thanks to both my former and current roommates Kerstin Adolfsson and Maria Gröndal for being so loveable and fun and for making the few square meters we share/d together (literally) feel like a home (*Sorry not sorry* for all the stuff Maria). Thanks to Emma Ejelöv, Patrik Michaelsen, Linn Zulka, Èrika Ramos, Sofia Calderon, Emelie Ernberg, Mikaela Magnusson, Jonas Burén as well as Isabelle Hansson for making it fun to go to work and ‘after-work’. Thanks to Karl Ask for first introducing me to the research environment and making me feel at home, to Timothy Luke for having accepted that I have chosen you as my go-to person for all research related thoughts, to Erik Mac Giolla for your endless patience when helping me translating weird and sometimes obscene words, to Leif Strömwall for always having your door open, and to Andrea Valik for explaining trauma theories in an equally pedagogical way to me as to your child patients.

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Malin Joleby
Gothenburg, October 2021

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PROLOGUE

Nellie

When Nellie was 13 years old, an unknown man contacted her online and offered her a voucher worth 190 euros if she showed herself on her webcam. Nellie thought it would be easy money and agreed to pose in her bra, unaware of the consequences that would follow. As soon as Nellie had shown herself on the webcam, the man logged off without giving her the voucher. Nellie became extremely stressed and deleted her account to avoid being contacted by the man again. Time passed by and Nellie did not really think about the incident. But two years later when Nellie was lying in bed about to go to sleep, the same man contacted her again, saying that he had been looking for her. He had taken a screenshot of Nellie in her underwear and he now threatened to send the picture to her parents unless she showed herself on her webcam again. Nellie tried to refuse, but the man kept texting her for several hours and the threats escalated the following day. Nellie was scared about what would happen if she did not do as she was told and felt forced to obey. Later that evening, while her mother was preparing dinner, Nellie told her mother not to enter her bedroom for a while because she needed to “discuss something with someone”. With her mother only a few feet away on the other side of the closed door, Nellie was forced to perform humiliating and painful sexual acts on herself. Nellie would later describe how she felt like a puppet with strings that the man could use to control her.

*Summary based on the radio documentary from Swedish Radio P3
“Nätpedofilen i Husby [The internet pedophile from Husby]”,
Pernilla Wadbäck (reporter) & David Mehr (producer), 2019*

Adam*

When Adam was around seven years old, he got to know a man on an online gaming site. At first, Adam thought it was cool to become his friend, as the man was well known within the game. They became closer and closer friends, but after a while the man started acting strangely and asked Adam for photos. Although Adam did not appreciate the nagging, he was scared of losing the man's friendship. Without the man, Adam was lonely, and he was very persuasive. At first, the man wanted Adam to send pictures of his feet. Adam agreed to this, and the man gave him 10 euros in the game as payment. Later, when looking back on this first picture, Adam described himself as "not very smart" for giving in to the man's request. Adam and the man stayed in contact for two years and got to know each other even better. According to Adam, they were friends. But things escalated. The man requested more pictures of Adam. First of his feet, later of his stomach, and eventually of his penis. Adam thought it felt wrong and initially refused. But he was obsessed with gaming money and the man offered him 50 euros. This was an amount nine-year-old Adam could not resist. After making the man promise he would not show it to anyone, Adam sent a picture of his penis.

*Summary based on the radio documentary from Swedish Radio P1
"Del 3/4: Gamer: Övergrepnen [Part 3/4: Gamer: The abuse]",
Emelie Rosén (reporter) & Ylva Lindgren (producer), 2020*

**The name Adam is fictitious*

INTRODUCTION

Digital technology and widespread access to the internet have rapidly changed the ways in which people communicate (e.g., Venter, 2019). From the perceived safety of our own homes, we can communicate using videos, pictures, or text with people all over the world. This technological development has created tremendous benefits and opportunities, but unfortunately it can also be misused to facilitate the sexual abuse of children. As the world becomes more and more digitalized and children are increasingly connected (Swedish Media Council, 2019; Statista, 2021a; Digital Information World, 2020), reports about online child sexual abuse are increasing (Europol, 2020a; Interpol, 2020). Making sure children are protected from this type of abuse while at the same time not preventing them from being part of technological progress is a societal challenge that requires immediate attention.

Despite stories like the ones about Nellie and Adam in the prologue receiving extensive media attention recently, there is still a scarcity of research studies on the topic, leaving society unprepared to understand and respond to cases of online child sexual abuse. The dominant view seems to be that online child sexual abuse is a less severe form of sexual abuse (e.g., Hamilton-Giachritsis, Hanson, Whittle, Alves-Costa, Pintos, et al., 2021). By contrast, initial research indicates that the psychological consequences for children can be severe (Hamilton-Giachritsis, Hanson, Whittle, Alves-Costa, & Beech, 2020; Hamilton-Giachritsis et al., 2021; Jonsson, Fredlund, Priebe, Wadsby, & Svedin, 2019). However, due to the scarcity of research, many questions remain unanswered. The aim of this thesis is to expand the currently limited knowledge about online child sexual abuse by targeting the following questions: Which strategies do online offenders use when inciting children to engage in online sexual activity? Which sexual acts are children incited to perform? How do victimized children make sense of their experiences? How does the victimization affect their psychological health and wellbeing in the long term and the short term? These issues are important to study further in order to disentangle how society should deal with the challenge of online abuse, how to draw up preventive strategies, how to administer legal justice, and how to provide adequate supportive treatments for victimized children.

The outline of the thesis is as follows. The introduction starts by specifying the types of online child sexual abuse under investigation in this thesis, and presents the current knowledge regarding the prevalence, characteristics, offender strategies, and psychological consequences of these crimes. In order to set the scene for discussing the severity of online child sexual abuse and the assumption of it being a less severe crime, theoretical frameworks on trauma development are then presented. The thesis takes the child's perspective as its point of departure, in the sense that the focus is on

what the children are exposed to and how they are affected by the abuse. In order to fully understand the experiences of online child sexual abuse, we need to learn more about the developmental underpinnings that render young people particularly vulnerable, and cognitively and psychologically less equipped to manage the threat of online victimization. Therefore, the introduction provides an overview of children's and adolescents' biological, psychological, social, and sexual development, and places it in the digital context of today. Furthermore, general risk factors for online sexual victimization, current knowledge regarding online sexual offenders, and the legal challenges arising when investigating and prosecuting this new type of digital crime are also presented. In the general discussion, the results of the three appended studies will be discussed within the broader context of child development, and the assumption that online child sexual abuse is less severe will be examined in the light of the theoretical frameworks of trauma.

Child sexual abuse in a digital context

There are several ways in which the internet can be used to facilitate sexual abuse of children. The main focus in research has been on online offenders who watch and distribute sexual abuse images of children (e.g., Babchishin, Hanson, & VanZuylen, 2015), and online grooming in which the offender aims to arrange an offline meeting to sexually abuse the child (e.g., Gupta, Kumaraguru, & Sureka, 2012; Malesky, 2007). So far, research has largely focused on the offenders and their behavior and motives (Briggs, Simon, & Simonsen, 2011; Taylor, 2017), aiming to create offender typologies (O'Connell, 2003; Tener, Wolak, & Finkelhor, 2015) and analyzing the language used in online grooming (Black, Wollis, Woodworth, & Hancock, 2015; Broome, Izura, & Davies, 2020). However, the internet and digital technology are ever-changing. Today's widespread use of social media platforms, smartphones with built-in cameras, and the ease of communicating live by video afford new opportunities for offenders to interact with children for sexual purposes. This thesis is thus about technology-assisted child sexual abuse (TA-CSA) in which an online offender incites a child to engage in online sexual activity via photo or video, or live via webcam. This type of abuse in which children are forced to take an active part has received limited attention in the research literature. The following section describes what research has taught us so far and identifies the knowledge gaps that need further investigation.

Prevalence and characteristics

In the early 2000s, a few scholars recognized that the internet could be used to facilitate child sexual abuse (Mitchell, Finkelhor, & Wolak, 2001; O'Connell, 2003). Sexual solicitation of children, often defined as requests to engage in sexual activities or sexual talk, has been investigated repeatedly since then (e.g., Baumgartner, Valkenburg, & Peter, 2010; Bergen, 2014; DeHart et al., 2017; Jernbro & Janson, 2017; Madigan et al., 2018; Schulz, Bergen, Schuhmann, Hoyer, & Santtila, 2015; Ybarra & Mitchell, 2008). According to this definition, a response from the child is not required, and little can therefore be said about the situations in which adults have actually achieved a sexualized interaction with a child. In a more recent study, the prevalence of sexualized interactions (cybersex or meeting in person) following sexual solicitation was investigated. In a sample of 2731 Spanish minors (aged 12–15, 50.6% females), 15.6% of girls and 9.3% of boys reported sexual solicitation, and 8.2% of girls and 7.4% of boys reported sexualized interactions with adults during the last year (de Santisteban & Gámez-Guadix, 2018a). The most common sexual interaction was maintaining a flirtatious relationship with an adult (4.2%), followed by talking about sexual things (3.8%), meeting the adult offline (3.6%), sending photos or videos (e.g., via webcam) of sexual content of themselves (1.1%), or meeting the adult offline to have sexual contact (1.1%).

Sharing photos and videos or showing sexual content to an adult via webcam would fall under the definition of TA-CSA used in this thesis. While such image-related acts were the least common in this specific study, there is a general concern that TA-CSA is increasing in volume due to the rise of digital communication technologies. Social media and smartphones with built-in cameras have made it easy to communicate using picture and video, which adult offenders may exploit. It is well known that most children delay or refrain from reporting abusive experiences (Alaggia, Collin-Vézina, & Lateef, 2019), and consequently only a small proportion of the cases come to the attention of the police. Nevertheless, there has been a steady increase of several hundred percent in police reports regarding the crime *exploitation of children for sexual posing* (Swedish Penal Code, chapter 6, § 8) in Sweden during the last 15 years, reaching an all-time high in 2020 (Swedish National Council for Crime Prevention, 2021). In addition, a large ongoing study of Swedish high school students (mean age 18.2) reports that 27.5% of the young people who had engaged in sex online had felt persuaded or pressured (males 12.8%, females 40.5%), which was an increase compared to previous years (Svedin, Landberg, & Jonsson, 2021).

Law enforcement agencies, governments, and non-government organizations globally have expressed concern that the risk of children being sexually abused online has increased following the Covid-19 pandemic, with its social restrictions, extensive lockdowns, and online education. In

connection with the Covid-19 pandemic, online offenders' activity on both the surface web and the dark web has increased (Europol, 2020a; Interpol, 2020; Netclean, 2021), with more child sexual abuse images being shared, offenders discussing how to exploit the lockdowns and isolation of children worldwide, and an increase in attempts to contact children. A recent Norwegian national survey (Hafstad & Augusti, 2020) investigated the psychosocial consequences of Covid-19 and the school lockdown. Among a representative sample of 3575 13–16-year-olds (50.1% girls), 5.3% of the young people (7.7% of girls, 2.2% of boys) reported at least one form of unwanted sexual interaction online during the eight weeks of school closure in spring 2020. Almost half of them reported that they experienced such abuse for the first time during the lockdown. While it is difficult to obtain estimates of exactly how widespread the problem of TA-CSA is, there is much to suggest that it may be increasing.

Several organizations have also noted an increase in self-generated sexual images of children (e.g., sexualized pictures or videos that children have taken of themselves – voluntarily or otherwise) reported to hotlines (ECPAT, 2020; Europol, 2020b; Netclean, 2021). In an analysis of 687 images from the International Child Sexual Exploitation Image Database, two-thirds of the self-taken images were classified as coercive, meaning that there was adult or juvenile coercion involved in the creation of the image (Quayle, Jonsson, Cooper, Traynor, & Svedin, 2018). The analysis included both coercive self-taken images (34%), non-coercive self-taken images (10%), and images taken by others (56%). Regarding the characteristics of the images, the majority depicted nudity or erotic posing (with no sexual activity), and the mean age was 11.1 years ($SD = 4.29$) with children aged 12–17 being more likely to have coercive self-taken images. The study analyzed data from the years 2006–2015, and the results can be compared to a more recent report by the children's rights organization ECPAT. They analyzed 667 self-generated sexual images and videos that had been reported to the ECPAT Hotline (ECPAT, 2019). In this study there was no background information about the images, and based on the images alone it is not usually possible to determine whether a child took the picture voluntarily or was pressured or coerced into taking it, or whether the recipient of the picture was a peer or an adult. Most images and videos depicted explicit or advanced sexual acts, compared to sexual posing which constituted a minority. Most children had reached puberty (66%), and may have engaged in sexual activity online for reasons of curiosity and sexual exploration. If this was carried out with a peer and with consent, it may not be a cause for concern. However, if an adult engaged the child in sexual activity, or if there was pressure involved, it can constitute serious abuse (Kloess, Hamilton-Giachritsis, & Beech, 2017). Worryingly, a large proportion of the images and videos (44%) depicted non-puberty-developed children, highlighting the importance of not neglecting the risk of younger children also falling victim to online sexual abuse. Younger children may be incited to

engage in behaviors that they do not understand the sexual undertones of, but that has a sexual purpose for the offender.

This raises the question of how an adult who is not physically located in the same room can incite a child to engage in sexual activities that they may only have a vague understanding of, are too young to consent to, or may be against their own will. In order to understand TA-CSA fully, we must therefore comprehend the manipulative strategies children are exposed to.

Offender strategies

The internet has created new possibilities for people who want to find children to sexually abuse by removing geographical borders and dramatically increasing the number of potential victims. In theory, any child with access to an online digital device could become a potential victim (WeProtect Global Alliance, 2018), and offenders can communicate with a large number of victims concurrently (Quayle, Allegro, Hutton, Sheath, & Lööf, 2014). During the last two decades, extensive research has investigated online offenders' motives, strategies, and modes of manipulation online (e.g., Beech, Elliott, Birgden, & Findlater, 2008; Black et al., 2015; Briggs et al., 2011; Ioannou, Synnott, Reynolds, & Pearson, 2018; Malesky, 2007; Marcum, 2007; O'Connell, 2003; Williams, Elliott, & Beech, 2013). Online offenders, much like offline offenders, use grooming to prepare children for abuse (Craven, Brown, & Gilchrist, 2006; O'Connell, 2003; Whittle, Hamilton-Giachritsis, & Beech, 2014b). Many characteristics of this grooming are consistent across the online and offline environments, although the order and timing of the different stages may differ (Black et al., 2015). Online grooming is described as a non-linear process (Barber & Bettez, 2020; Gupta et al., 2012; O'Connell, 2003) in which several stages occur simultaneously, speeding up the process compared to offline grooming. Research has shown that online offenders use rapport building to form a relationship (Chiang & Grant, 2017; Gupta, Kumaraguru, & Sureka, 2012; Williams et al., 2013), use flattery and compliments (Lorenzo-Dus & Izura, 2017), and introduce sexual topics to the conversations, either after a sense of trust has been created (O'Connell, 2003) or early in the conversation (Winters et al., 2017).

Most studies have investigated cases where online offenders have in fact been communicating with decoys; that is, adults posing as children. This data has provided an excellent basis for the initial learning about online offenders' motives and communicative strategies, as it represents genuine attempts to sexually abuse children. However, there is growing criticism that interactions with decoys lack the dynamics that a child would provide in such conversations (Briggs et al., 2011; Chiang & Grant, 2018; Kloess, Beech, & Harkins, 2014; Kloess et al., 2019; Schneevogt, Chiang, & Grant, 2018; Seymour-Smith & Kloess, 2021). To begin with, many of the studies have specifically analyzed

transcripts from conversations between online offenders and decoys volunteering for the organization Perverted Justice Foundation (PJ; perverted-justice.com), whose database includes 622 freely accessible cases of offender-decoy interactions. The PJ organization is a self-proclaimed ‘conviction machine’ (Perverted Justice Foundation, 2007) with the goal of decoys gathering enough information about potential offenders to send to the police to enable an arrest. As a result, the decoys respond openly to sexual solicitations (Briggs et al., 2011), appear compliant (Broome, Izura, & Lorenzo-Dus, 2018), and might be more likely than a child to continue with a conversation that felt uncomfortable (Williams et al., 2013). This might affect the strategy used by the offender, as he or she would not encounter any resistance (Chiang & Grant, 2018). In line with this reasoning, initial research indicates that decoy data should not be viewed as an imitation of naturally occurring interactions with actual children. Chiang and Grant (2018) observed overt persuasion (pushing victims into some sort of compliance) and extortion (directly coercive moves, typically involving threats) in interactions with actual children, whereas overtly persuasive language was rare and no extortion occurred in any of the 622 PJ cases (Schneevogt, Chiang, & Grant, 2018). Among the few studies thus far including actual children, Seymour-Smith and Kloess (2021) demonstrated how an offender escalated his threats following the child’s non-compliance and resistance, and Kloess, Hamilton-Giachritsis, and Beech (2019) identified offenders using aggressive, persistent, non-compromising, and pressuring strategies in order to achieve compliance from the child. Force, threats, and coercion have also been reported in different types of decoy data, but only to a limited extent (Barber & Bettez, 2020; O’Connell, 2003; Whittle, Hamilton-Giachritsis, Beech, & Collings, 2013). There are indications that such strategies are more common in conversations with actual children. Thus, despite the extensive research, we still lack an understanding of online offenders’ communication in naturally occurring conversations with real children. Such knowledge is important in order to understand how children can be incited to engage actively in abuse.

Adding to the importance of investigating naturally occurring conversations with actual children is the fact that some, or all, of the 622 PJ transcripts have been used in at least 19 scientific studies. This means that each interaction has been analyzed several times over (on average, each transcript has been analyzed four times), and accordingly that a large part of the research is based on the same data.

When it comes to the motives of the offenders, it has often been assumed that online offenders have the ultimate goal of arranging an offline meeting to sexually abuse the child, and as such the online contact has been viewed only as a preparatory act (Chiang & Grant, 2017). All interactions from the PJ database include attempts to organize an offline meeting, as this has been a requirement for filing a police report, which in turn was a requirement for the

case to be uploaded to the database. This can, perhaps, partly explain this assumption. While an offline meeting is indeed the end goal for some offenders (Lorenzo-Dus, Izura, & Pérez-Tattam, 2016; Winters, Kaylor, & Jeglic, 2017), others use the online contact for cybersex and masturbation (e.g., De Hart et al., 2017). Two classifications of online offenders (based mainly on decoy data) that are often referred to are the sub-groups *contact-driven offenders* and *fantasy-driven offenders*, defined by Briggs and colleagues (2011). They described contact-driven offenders as using the internet as a medium to connect with victims, but with the intention of coordinating a sexual meeting offline. Fantasy-driven offenders, on the other hand, use the internet as a sexual medium with the purpose of engaging the victim in cybersex. However, a systematic review failed to find an empirical basis for this division as both groups engage in online behavior that provides them with sexual gratification (Broome et al., 2018).

Consequences

One result of the focus on the communicative patterns and motives of the offenders, and the use of decoy data, is that the experiences of victimized children have been overshadowed. Knowledge regarding the potential consequences of TA-CSA is therefore still scarce. There seems to be a common assumption that online abuse is a less severe form of sexual abuse against children. For instance, research has shown that professionals demonstrate a limited understanding of online sexual abuse, may view it as less serious, and fail to prioritize its victims by minimizing their abusive experiences (Hamilton-Giachritsis et al., 2021). Victims of TA-CSA have reported receiving unsupportive responses from their school, such as the school not taking sufficient action to protect them, not helping them with their situation, or even blaming them for it (Hamilton-Giachritsis, Hanson, Whittle, & Beech, 2017). Legally, this type of crime is generally viewed as less violating, and leads to more lenient sentences for the offenders (Net, 2015) and lower damages for the victims (The Swedish Crime Victim Compensation and Support Authority, 2017).

When this project began in 2017, there was very little research on the consequences for TA-CSA victims. In recent years, however, a few studies have been published that contradict the idea of TA-CSA as a less severe form of abuse. Adolescents with experience of TA-CSA reported poorer psychological health (measured by trauma symptoms) than a reference group, at least at the same level as adolescents with experience of penetrative offline abuse (Jonsson et al., 2019). A study based on interviews and questionnaires with victims indicated that the emotional, psychological, and behavioral outcomes appeared to be the same for offline CSA and TA-CSA (Hamilton-Giachritsis et al., 2020). Similarly, professionals from the police, social work,

schools, and healthcare services have reported that the impact of TA-CSA could be just as severe as for offline CSA, even though organizations often view it as less serious (Hamilton-Giachritsis et al., 2021). In addition, both studies concluded that when technology was involved, it sometimes complicated the impact of the abuse. More specifically, it could make it more difficult for victims to recognize that they were being abused and increase levels of blame from themselves and others. The fear of the offender still having footage of the abuse and the risk that pictures would be circulated could cause distress and a feeling of utter helplessness (Von Weiler, Haardt-Becker, & Schulte, 2010). The pictures could be used to blackmail, and could cause re-victimization if they were shared with others. These findings resonate with the results showing that children who knew that pictures of their abuse existed, and children who had had pictures of their abuse disseminated, reported higher levels of post-traumatic stress symptoms than children exposed to undocumented CSA (Jonsson & Svedin, 2017). Many of these recent results are in line with what we found in the studies included in this thesis, and will be discussed further in the general discussion section.

In contrast to the limited research on TA-CSA, a large body of research has sought to explain the association between offline CSA and subsequent long- and short-term outcomes. While the methodologies used when investigating the consequences of CSA do not allow causal conclusions to be drawn, numerous reviews and meta-analyses conclude that across methodologies, samples, and measures, those who were sexually abused during childhood are at risk of a wide range of medical, psychological, behavioral, and sexual disorders (Carr, Duff, & Craddock 2020; Hailes, Yu, Danese, & Fazel, 2019; Hillberg, Hamilton-Giachritsis, & Dixon, 2011; Maniglio, 2009). Among the most frequently reported symptoms are PTSD, sexual problems, high-risk sexual behavior, suicidal behaviors, re-victimization, substance misuse, fear and anxiety, poor self-esteem, and interpersonal problems. The symptoms are not only psychological – they can also take physical forms. For example, they can manifest as chronic non-cyclical pelvic pain, non-epileptic seizures, or general somatization (Carr et al., 2020). However, some of the children subjected to CSA do *not* show any symptoms (Cicchetti, 2013). Thus, CSA does not automatically lead to issues later in life. To explain why the consequences of CSA vary so widely between individuals, researchers have sought an answer in the characteristics of the abuse. Penetrative abuse, longer duration, a closer relationship with the offender, and the use of force or threat of force have been associated with greater harm (e.g., Carr et al., 2020; Priebe & Svedin, 2009), although studies rarely control for confounding factors (Ventus, Antfolk, & Salo, 2017). While these characteristics are relevant to consider, they might not be the only explanations for the differences in symptoms. The impact of abuse on each victim looks different, and results from a complex interaction between a

number of factors, including the nature of the abuse, how the victim makes sense of the abuse, previous life experiences, and the reaction and support given following the abuse (Marriott, Hamilton-Giachritsis, & Harrop, 2014).

In sum, children who are sexually abused can suffer a wide range of consequences, but none of the shown symptoms are unique to CSA victims. Therefore, CSA should be considered a general, non-specific risk factor for psychopathology (e.g., Maniglio, 2009). Research has yet to determine whether the same applies to victims of TA-CSA.

Development of trauma

One of the core questions surrounding TA-CSA is how society should view this type of crime. Is it to be considered a less severe form of sexual abuse, or does it have the potential to cause trauma of a similar nature and severity to offline CSA? To understand why trauma occurs and if TA-CSA can cause it, it is imperative to understand what trauma is, and how the body and brain communicate at the signal of danger (Bloom, 1999). The following sections aim to provide a broad background on trauma in general, and to present a theory of trauma caused by sexual abuse specifically.

General theories of trauma

As part of our mammalian heritage, we are biologically equipped to protect ourselves from harm; thus, we automatically respond to threatening or stressful situations to prepare our bodies for an immediate reaction. When facing a potentially dangerous situation, the brain communicates to the body to speed up the heart rate, increase the blood flow, and prepare for a freeze, flight, fight, or fright response (Bracha, Williams, & Bracha, 2004). This stress reaction occurs immediately, taking a short cut without passing through the frontal parts of the brain and, thus, hindering a cognitive evaluation of the potential threat (Kolb & Whishaw, 2001). After this initial reaction, the pre-frontal cortex is given the chance to make a more conscious and refined interpretation. If the perceived threat was a false alarm, the triggered alarm state is aborted (Nordanger & Braarud, 2017; Van der Kolk, 1994). However, if the initial stress is too high, the capacity to engage higher cognitive functions is severely impaired. This makes it difficult to consider the long-term consequences of one's behavior or to weigh up all the possible options before making a decision. Instead, when we find ourselves in stressful or threatening situations, our decisions tend to be impulsive and very poorly constructed (Gok & Atsan, 2016). It is important to note that an individual's reaction is based on how that individual perceives the situation, not on the actual threat. In addition, the sensitivity of our senses is dependent on our previous experiences. The

brain is a social organ, and is shaped in interaction with other people and with our experiences (Bidö, Mannheimer, & Samuelberg, 2018), which makes us differently vulnerable. The exact same situation can be perceived as stressful and traumatic by one individual but not by another (Bidö et al., 2018; Van der Kolk, 1994). Therefore, an event is termed as *traumatic* only when we know that it has led to a trauma reaction. Situations and phenomena that may lead to trauma reactions are instead called *potentially traumatic events* (Michel, 2010). Consequently, to understand whether TA-CSA can cause trauma, one must understand how the child experiences the situation.

Most people are likely to experience some form of potentially traumatic events during their life course, such as serious accidents, violence, robbery, or abuse (Aho, Proczkowska-Björklund, & Svedin, 2016; Felitti et al., 2019), but not everyone develops trauma symptoms apart from the initial stress reaction. In a large study of 5960 Swedish high school students (mean age = 17.3, 50.4% males), a majority reported at least one event, and the mean number of experienced events was four (Aho, Proczkowska-Björklund, & Svedin, 2016). The study showed a relatively linear increase in psychological ill health (measured by trauma symptoms) with the increased number of experienced events, suggesting the possibility that polyvictimization explains trauma symptoms to a large degree.

One of the most influential models aiming to explain why some individuals develop psychopathology, while others do not, is Zubin and Spring's (1977) stress and vulnerability model. According to this model, everyone has a unique threshold for stress due to a combination of inborn (such as genetic setup) and acquired attributes (such as life experiences, or previous trauma). If the stress exceeds this threshold, the individual will fail to cope and adapt to the situation, and is likely to enter an episode of psychopathological illness. Similarly, the developmental psychopathology perspective (Toth & Cicchetti, 2013) utilizes a multilevel view to understand the emergence of psychopathology. More specifically, the perspective emphasizes the need to integrate psychological, biological, and social processes in order to understand the link between childhood maltreatment and later psychopathology, and why some individuals develop in a resilient fashion despite the significant stress they experience. In sum, different individuals react differently to the same situation, depending on a range of factors such as their individual attributes and previous life experiences.

The four traumagenic dynamics model

Compared to childhood physical abuse, the effect of CSA on long-term mental health outcomes has been shown to be stronger and more consistent (Fergusson, Boden, & Horwood, 2008). What is it about CSA that makes it different from other types of abuse? The previous section described general

theories of trauma development. This section will address how trauma can be caused by sexual abuse more specifically, by presenting a theoretical explanation of the processes and mediating factors between CSA victimization and later symptoms.

Finkelhor and Browne (1985) proposed one of the first and most influential conceptualizations of the link between the experience of CSA and its sequelae. Their model – called the four traumagenic dynamics model – specifies how and why sexual abuse results in the various kinds of trauma that have been widely noted (e.g., Carr et al., 2020; Maniglio, 2009).

Traumatic sexualization refers to the process by which sexual abuse shapes a child's sexuality in developmentally inappropriate and interpersonally dysfunctional ways. This can happen in a variety of ways. When a child receives affection, attention, privileges, and gifts as rewards for sexual behaviors, the child may learn to view it as the normal way to give and obtain affection. Traumatic sexualization may also occur when frightening memories become associated with sexual activity in the child's mind. According to the model, children who have been traumatically sexualized might develop confusion and misconceptions about their sexual self-concepts and negative and abnormal associations with sexual activities. Finkelhor and Browne (1985) further emphasize that experiences in which the child is enticed into participating in the abuse are likely to be more sexualizing than those in which brute force is used.

Betrayal refers to the discovery that someone whom the child trusted, or was even dependent upon, has caused them harm. Not only is betrayal dependent on the closeness of the relationship with the abuser; an equally important factor is the extent to which the child felt taken in by the offender (Finkelhor, 1987). If a child felt loved and nurtured by the initial contact, the betrayal feels stronger than if the child was suspicious from the start. Moreover, feelings of betrayal are not limited to the abuser, and can also result if family members were unable or unwilling to protect the child from harm, or if the child was mistrusted when disclosing the abuse (Finkelhor & Browne, 1985).

Powerlessness refers to the process in which the child's will, desire, and sense of efficacy are repeatedly overruled; for instance, when the child's territory and body space are invaded against their will. Finkelhor and Browne (1985) argue that the sense of powerlessness is probably reinforced if the child experiences threats, coercion, violence, or fear.

Stigmatization refers to the negative connotations that surround sexual abuse and its victims. These include feelings of badness, shame, guilt, and worthlessness, which become incorporated into the child's self-image. Much of this stigmatization stems from the attitudes and moral judgments that the victims hear from those around them, and is reinforced if people react with shock, hysteria, or blame after the child's disclosure (Finkelhor & Browne,

1985). However, even if the child is not subjected to blame from those around them, simply being a victim of CSA is likely to raise questions within the child, who may search for self-attributions to explain why it happened to them (Finkelhor, 1987).

According to this model, the four traumagenic dynamics are experiences that alter a child's cognitive or emotional orientation to the world and cause trauma by distorting the child's self-concept, worldview, and affective capacities (Finkelhor, 1987; Finkelhor & Browne, 1985). Consequently, when the child tries to cope with the world through these distortions, psychological and behavioral problems occur. More specifically, the model describes how traumatic sexualization might lead, for example, to sexualized behavior among children, sexual problems in adulthood, and negative attitudes toward one's own sexuality or body. Betrayal might cause depression, extreme dependency, hostility, anger, or distrust of men or intimate relationships in general. Powerlessness can be associated with fear, anxiety, symptoms of PTSD, sleep problems, learning problems, difficulties at school, and general depression. Stigmatization may be related to isolation, low self-esteem, self-destructive behavior, and/or suicide attempts.

Furthermore, the model is process-oriented (in contrast to event-oriented) and conceptualizes CSA as an ongoing dynamic process within the child (Finkelhor, 1987). The dynamics are thus not limited to the abuse situation itself. The four dynamics should be understood in relation to the child's life beforehand, and what happens afterwards. To exemplify, much of the stigmatization involved in CSA stems from the reactions at the time of disclosure. A child might be relatively unstigmatized by the abuse itself, but may experience massive stigmatization if blamed by their family. Likewise, a child with substantial experiences of betrayal prior to the abuse (e.g., coming from an unstable family where the loyalty of family members is continually in doubt) may experience the betrayal of sexual abuse as more serious than a child without experiences of prior betrayal. In this sense, the four traumagenic dynamics model also includes a vulnerability aspect to explain why children react differently to similar experiences.

Since its introduction in the 1980s, the four traumagenic dynamics model (Finkelhor & Browne, 1985) has become one of the most popular and influential models, and has had such impact on the field that it has been proposed to be used to develop therapy, assessment instruments, and research interviews around the four dynamics. The model has also been empirically tested (although to a limited extent, e.g., Cantón-Cortés, Cortés, & Cantón, 2012; Coffey, Leitenberg, Henning, Turner, & Bennet, 1996; Kallstrom-Fuqua, Weston, & Marshall, 2004) and further developed by researchers. Feiring and colleagues (2007; 2010; 2007; 2009; 1996, 1999, 2002; 2005; 2002; 1998) expanded the model to include the victim's view of the abuse (whether they attributed the blame to themselves or to the offender) and

specified shame as the core emotion of stigmatization. Their model proposed that sexual abuse leads to stigmatization through the mediation of shame and cognitive attributions about the abuse, and that these mediating factors in turn lead to poor adjustment. Feiring and colleagues tested this empirically in several studies which are all based on a sample of 137–160 children (depending on the study) aged between 8 and 15 on discovery of the abuse. Participants were measured at three different time points: eight weeks after discovery, one year after discovery, and six years after discovery. (Earlier studies included two measurement points, while later studies included all three measurement points.) Feiring and colleagues showed that abuse-specific internal attributions (such as “This happened to me because I was not a careful person”) were related to higher levels of psychopathology and predicted PTSD symptoms, even when controlling for age, gender, abuse events, and general attribution style (Feiring et al., 2002). Individuals who experienced high levels of shame were more likely to report PTSD symptoms within several years of abuse discovery (Feiring & Taska, 2005). Moreover, abuse-specific stigmatization could predict subsequent sexual difficulties, dating aggression (Feiring et al., 2009), delinquent behavior (Feiring et al., 2007), and dissociative symptoms (Feiring et al., 2010). It could also explain variation in subsequent adjustment (Feiring et al., 2002), even when controlling for adjustment on discovery. In sum, Feiring and colleagues concluded that abuse-specific stigmatization had the greatest impact on symptom development, more than abuse severity (e.g., penetration, number of events, parent as offender, force, or long duration).

The theory behind the four traumagenic dynamics model and its adaptation is appealing, as it provides an explanation of the processes and mediating factors between victimization and its sequelae. This creates a hopeful and solution-oriented view. Instead of putting the focus on the static, unchangeable characteristics of the abuse, it identifies aspects that can be influenced and worked with in treatment, making children active agents in their stories. By, for instance, working to counteract feelings of guilt and shame, we may perhaps influence which later psychological symptoms arise. As with the general theories of trauma, the situation itself is not decisive for trauma, but an individual’s interpretation and reaction are. In light of this, it seems plausible that the theory would also apply to TA-CSA. In the discussion, the results from this thesis will therefore be analyzed under the theoretical framework of the four traumagenic dynamics model.

Child and adolescent development

In order to understand victimized children’s experiences and how they may be affected by abuse, it is paramount to take into account the developmental context. The radical developmental changes that children and

adolescents undergo and the fact that they are not yet fully cognitively or emotionally developed can lead to an increased risk and make them particularly vulnerable to TA-CSA.

According to the legal definition, individuals under the age of 18 are referred to as children, and that is the definition generally used in this thesis. However, this thesis is based on data concerning children who were subjected to TA-CSA between the ages of 7 and 17, and the developmental differences between 7-year-olds and 17-year-olds are enormous. It is therefore relevant to differentiate between younger children (i.e., middle childhood) and adolescents. The following sections will describe the major aspects of change during childhood and adolescence – biological, psychological, and social – and will discuss the challenges that may arise when maturity in the different domains is not achieved concurrently, and how all this is relevant for understanding their experiences of TA-CSA.

Development in different domains

As children grow up and become adolescents, they go through considerable biological, psychological, and social changes, and are faced with the task of coming to terms with a ‘new’ body, mind, and social status, as well as with developing a positive sense of self. The core aspect of the biological changes is the onset of puberty (Hollenstein & Loughheed, 2013), which releases a range of hormones into the body and brain that initiate significant changes in physical appearance (Berk, 2010; Susman & Dorn, 2009) and a transition from a sterile child’s body to a fertile adult body. These marked changes in physical appearance may temporarily threaten the adolescent’s self-image (McCabe, Ricciardelli, & Finemore, 2002; Wertheim & Paxton, 2011), and sharing nude pictures online to receive affirmation about one’s looks can be a way to cope with the changed appearance (Jonsson, Cooper, Quayle, Svedin, & Hervy, 2015; Longobardi, Fabris, Prino, & Settanni, 2021). With the new adult body come new bodily functions (Häggström-Nordin & Magnusson, 2016), such as increased sexual interest and sex drive (Temple-Smith, Moore, & Rosenthal, 2015). As a result, adolescence is a time of sexual curiosity and, for many, their initial engagement in sexual activity (Diamond & Savin-Williams, 2009). Adults who want to sexually abuse children may take advantage of young people’s developmentally normal curiosity about sex, their susceptibility to attention, and their willingness to take risks, making young people vulnerable to becoming victims of TA-CSA. It goes without saying that regardless of the young person’s curiosity or initiative taking, the responsibility for the sexual abuse of children always lies with the offender.

The biological changes also involve maturation of the brain, enabling more complex and sophisticated cognitive processes, which in turn alter the ways in which children and adolescents think about the world. Together with

increased social awareness, during their younger school years children learn to develop a much more realistic and nuanced understanding of who they are (Berger, 2018), and develop their own morality to which they can compare their own behavior (Killen & Smetana, 2014). Self-conscious emotions such as pride, shame, and guilt also become more prominent (Lewis & Sullivan, 2005). For adolescents, the shift in perspective leads to what is described as *adolescent egocentrism* (Elkind, 1967). Due to their newfound ability to introspect, adolescents tend to focus on themselves and what others think of them. This heightened self-consciousness displays two thinking patterns, called ‘the imaginary audience’ and ‘the personal fable’. In short, the imaginary audience shows a tendency to believe oneself to be the focus of everyone’s attention, and always being judged by others. In the context of TA-CSA, the threat that someone might distribute compromising information may be perceived as an overwhelming disaster in the psychological world of adolescents. The personal fable refers to being unable to recognize one’s small role in the grand scheme of the world, instead believing that one is special, unique, and invulnerable. Egocentric thinking has been associated with both general risk-taking behavior (e.g., Alberts, Elkind, & Ginsberg, 2007) and online risk-taking, such as sharing passwords, opening email attachments from strangers, and friending a stranger online (Popovac & Hadlington, 2020).

Although numerous cognitive improvements occur during childhood and adolescence, the brain continues to mature into the early adult years and is not fully developed until around the mid-20s (Kolb & Whishaw, 2001). The last region to mature is the prefrontal cortex, which is responsible for higher executive functions such as decision-making, impulse control, stress-regulation, and risk-taking. At the same time, hormonal changes make adolescents more easily emotionally aroused, more responsive to stress, and more likely to engage in reward-seeking and sensation-seeking behavior (Van Leijenhorst et al., 2010). This disproportionality in development can be described as having a well-developed engine, but poorly functioning brakes (Steinberg, 2011). This means that children and adolescents may be getting into risky online situations, as it is difficult for them to foresee and adequately assess potential threats online, and the consequences that may follow their actions. Harmful situations can quickly escalate, with little time for a young person to assess what is happening.

Amidst the biological and psychological changes, simultaneous changes occur in the social context in which children find themselves. They gradually separate themselves from parental control and gain a new social status with increased freedom, responsibility, and independence (Lerner & Steinberg, 2009). This drive for independence expands their social world. The peer group becomes more important for both children and adolescents (Gifford-Smith & Brownell, 2003), and the peer group is where they turn for guidance regarding attitudes and behaviors (Temple-Smith et al., 2015). Therefore, children are

(sometimes painfully) aware of the opinions, judgements, and accomplishments of their peers (Berger, 2018), and – especially for adolescents – fitting in and being accepted by peers emerges as one of the most central concerns (Steinberg, 2011). Thus, the need for affirmation is increasingly important, and the risk of having a rumor or compromising information spread about them might be experienced as far more wounding for adolescents than for adults.

Maturity gap

The changes in the different domains do not necessarily occur simultaneously. It is therefore likely that an individual will mature in some domains sooner than in others, leaving the individual in what can be described as a *maturity gap* (Moffitt, 1993). As Steinberg (2011, p. 6) puts it: “an individual can be a child in some ways, an adolescent in other ways, and an adult in still others”. To exemplify, one individual might develop an adult-like, fertile body and experience sexual interest during the early years of adolescence, while still having the cognition of a child and facing the social expectations of sexual abstinence. As a result, an adolescent might experience feelings and urges like an adult, without yet having received the social privilege of acting on them. On the other side of the coin, an adolescent might be seen and treated as more adult than they perceive themselves to be. For example, with an adult-like body, an adolescent might become an object for other people’s sexuality and receive attention and sexual invitations, despite not being cognitively mature or ready for them. Taken together, these aspects of the maturity gap risk making adolescents particularly vulnerable to risky situations.

Identity formation and self-concept

Two of the most important developmental tasks during adolescence are identity formation (Erikson, 1959; Kroger & Marcia, 2011) and the development of a positive self-concept (Berger, 2018). Identity can be defined as a subjective experience of who one is (Kroger & Marcia, 2011), and is coherent across time, place, and social situations (Erikson, 1959). The identity formation is a lifelong process, but is especially important for adolescents adapting to a changing body, new intellectual capabilities, and new social situations, while no longer being able to keep the childhood identifications or identify with one’s parents (Erikson, 1956). Finding a place that is free from adult supervision is a key aspect of identity development in adolescence, and the online context has accordingly brought about substantially changed conditions for identity development by providing new opportunities for identity explorations, means for self-presentation, and conditions for social

interaction (Wängqvist & Frisé, 2016). Self-concept refers to the way we think about, evaluate, and perceive ourselves (Baumeister, 1999), and during childhood and adolescence we develop the basis of a self-concept that to some extent may stay with us for the rest of our lives.

Negative sexual experiences during this sensitive period of the development of both identity and a positive self-concept may have particularly crucial implications. In a study on barriers for disclosing CSA, many participants expressed that their experiences with CSA influenced the way they thought about, identified, and understood themselves, as well as how they thought others perceived them (Halvorsen, Solberg, & Stige, 2020). As touched upon in the previous section about the theory of sexual trauma, sexual abuse may lead to feelings of shame and guilt, which in turn might affect how one's self-concept is formed (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).

Child and adolescent sexual development

Along with the major biological, psychological, and social changes during childhood and adolescence, establishing one's sexuality is considered by many to be one of the most important developmental tasks (e.g., Hensel, Fortenberry, Sullivan, & Orr 2011; Ross, Godeau & Dias, 2004; Wrangsjö & Winberg Salomonsson, 2006; Temple-Smith, Moore, & Rosenthal, 2016), and is related to how identity is formed in adolescence (Erickson, 1968). While sexuality is by no means an entirely new issue to appear during adolescence (sexual questions, conflicts, and crises might well arise before), puberty and adolescence are fundamentally important for this development (Temple-Smith et al., 2015). One of the key tasks is to figure out how to deal with sexual desire and to incorporate sex into some of one's relationships (Diamond & Savin-Williams, 2009). Despite this, the discourse around adolescents' sexuality in modern Western societies has been that of sexuality as something dangerous that should be avoided, rather than a natural part of adolescents' development into adults (Lerner & Steinberg, 2009). In an international context, however, Sweden stands out as a sexually liberal country (Edgards, 2002), for instance being the first country in the world to have compulsory sex education at school. In recent years, there has been a shift in focus, with more research concentrating on positive aspects of young people's sexuality. Sexual health has been associated with overall physical, social, and mental health, especially among adults (Galinsky & Sonenstein, 2011; Laumann et al., 2006), but also among adolescents (Espinosa-Hernandez, Vasilenko, McPherson, Gutierrez, & Rodriguez, 2017; Hensel, Nance, & Fortenberry, 2016). Considering this, it

is particularly important that sexual development takes place in a healthy way. But what exactly does healthy sexual development mean?

Young children already engage in different forms of sexual behaviors that seem to be normative and developmentally related (Kastbom, Larsson, & Svedin, 2012; Lamb & Coakley, 1993; Larsson & Svedin, 2001). Sexual activity during childhood is mainly based on spontaneous curiosity. In adolescence, it takes on a more deliberate and explicit form. Autoerotic activities (sexual behavior that is experienced alone) are still common, but as sexuality and dating are given a new social meaning, many adolescents also start to experiment with sexual activity with other people. Similar to previous generations, today's adolescents engage in gradually increasing intimate activities (e.g., kissing, making out, fondling, touching breasts and genitals through clothes, touching naked breasts and genitals) before engaging in oral sex or sexual intercourse (Diamond & Savin-Williams, 2009). As will be described in the next section, today's adolescents might also turn to the internet as an outlet for sexual activity, as engaging in online sexual activity without physical contact might seem like a safe introduction for teens who are not ready to engage in physical sexual activity (Anastassiou, 2017).

Theoretical work has defined adolescent sexual wellbeing as including four developmental challenges (Brooks-Gunn & Paikoff, 1993). The first is feeling comfortable, satisfied, and attractive in terms of one's physical appearance. This is dependent on both their own experience of the changes into a sexually mature, adult-like body, and how others respond to this new body. The second is feeling that one's sexual desire is normal and acceptable. The third is feeling comfortable about choosing to engage (or not to engage) in sexual behavior (alone or together with another person) and understanding that all sexual activity is voluntary. And lastly, the challenge of understanding the importance of safe sexual practices.

In sum, sexual development is challenging even without the experience of abuse, as it requires the synthesis of many different aspects of the self and interpersonal relationships. Evidently, being lured into engaging in sexual activity with an adult or being forced to perform sexual acts against one's will may potentially harm sexual wellbeing.

Growing up in the new digital landscape

Since this thesis focuses on child sexual abuse that is conducted through the means of internet, it is paramount to recognize the important role that the internet plays in the lives of today's youth. Today's youth will face the same developmental challenges as their predecessors, but they will do so amidst new worlds for communication (Ito et al., 2009; Venter, 2019). This new digital landscape will thus affect the extent to which the internet will be used when

exploring new aspects of life, such as building relationships, freeing oneself from the adult world, forming one's identity, and exploring one's sexuality; in short, the ways in which today's youth will develop into adults.

Today's society is an 'always on' society (Harris, 2014) in which the media is so pervasive and ubiquitous that people generally do not even register its presence in their lives. As a result, children and adolescents do not make any distinction between life offline and life online (Swedish Media Council, 2017). Within a relatively brief window of time, the new communications technologies – with smartphones at the forefront – have created a new social landscape and fundamentally altered the ways in which we all communicate. Online information and services have become so important that several national governments even recognize internet access as a human right (Szozskiewicz, 2018). The estimated number of internet users around the globe is an impressive 3.97 billion people (Statista, 2021a), which is half the world's population (Statista, 2021b). The number of internet users worldwide has doubled in just eight years (Statista, 2021a), demonstrating the tremendous speed of this development. In Sweden, 95% of the total population uses the internet, and among 12–25-year-olds this figure is 99–100% (Internetstiftelsen, 2019), with similar figures in other modern Western countries (Statista, 2021c). This development can be described as a digital revolution, to say the least.

Despite the fact that adults, including myself, grew up in the pre-digital era and have been able to monitor digital developments, it is difficult to pay attention to the revolutionary changes that have taken place in such a short time. Not long ago, the internet was something that one actively 'logged on' to, and subsequently 'logged off' from when leaving the computer. By contrast, today's youth are always online and were born into the digital world and have spent their entire lives surrounded by and using computers, videogames, cellphones, and other digital devices (Orben, 2020). Children are introduced to the internet at a young age (Swedish Media Council, 2020) and they use it as a natural arena for communication. Four out of ten 7-year-olds use their own mobile phone to send pictures and texts. Nine out of ten 10-year-olds own their own phone, and from around this age the use of social networking sites becomes more and more popular. More than half of Sweden's 10-year-olds use social networking sites (Internetstiftelsen, 2018), and increasing age is related to increasing use. Thirty-seven percent of 9–12-year-olds use social networking sites daily, compared to 88% of 13–18-year-olds (Swedish Media Council, 2019). In summary, children's and adolescents' everyday lives are heavily digitalized, and the data suggests that, as time goes on, children are going online more often, for longer periods, at younger ages, and for different purposes (Tracey & Francesca, 2019).

Why is all this relevant? Life outside the internet is often referred to as IRL ('in real life'), which implies that things that happen online are less 'real'.

This in turn most likely contributes to the view of TA-CSA as a less severe form of abuse. Judging from the pervasive and ubiquitous digital context we live in, the clear-cut distinction between online and offline life – and the view of interactions and relationships online as less real – is nonetheless outdated, especially for the generations who were born into the digital age and do not know life without the presence of the internet.

Adolescents' sexual exploration online

The internet has become a natural part of many young people's sexual exploration, as it offers a multiplicity of means and arenas for children's and adolescents' sex education, exploration, and development of intimacy and sexuality. Adolescents can use online discussion groups to ask questions or seek advice about sex (Daneback & Löfberg, 2011), view porn for informational purposes or for sexual excitement (Svedin et al., 2021), or enter chatrooms to discuss sex (Subrahmanyam et al., 2006). Furthermore, digital technologies have become an integral part of young people's romantic relationships (McGeeney & Hanson, 2017). For instance, online communication provides a private space to talk to a romantic interest away from the gaze of the peer group, and has been described as less stressful environment in which to flirt as it allows for the contemplation of responses. As such, digital flirting has been described as a good place to start a relationship, and less emotionally risky as it would be easier to handle the embarrassment of being turned down online.

With digital developments moving forward, much online communication now includes sending photos or engaging in live communication through video, including when it comes to engaging in online sexual activity with other people. One way of engaging in sexual activity with other people that has received a lot of research interest is sexting, which refers to the sending and receiving of sexually explicit imagery via some form of virtual messaging (Anastassiou, 2017). The prevalence of sexting varies from very low to quite high, depending on definition, methodology, and cultural context (Baumgartner, Sumter, Peter, Valkenburg, & Livingstone, 2014). In a systematic review and meta-analysis, the mean prevalence among youth (*mean age* = 15.16, *range*: 11.9–17.0) was 27.4% (95% CI, 23.1%–31.7%) for receiving sexts and 14.8% (95% CI, 12.8%–16.8%) for sending sexts (Madigan, Ly, Rash, Van Ouytsel, & Temple, 2018). Among Swedish 18-year-olds, 36.9% had sent a picture or video in which breasts, genitals or the behind was showing (Svedin et al., 2021). The prevalence overall seems to have increased in recent years (Madigan et al., 2018; Svedin et al., 2021).

Adolescents' participation in online sexual activities has led to widespread concern among parents, educators, and the media alike

(Anastassiou, 2017), who worry about the potential negative effects. On the one hand, research has shown that most online sexual contacts are positive experiences (Jonsson et al., 2019). For instance, sexting has been described as a way of flirting and meeting new people, seeking affirmation, and having fun (Svedin et al., 2021; Wood, Barter, Stanley, Aghtaj, & Larkins, 2015), and as part of a sexual experimentation phase for adolescents who are not yet ready to engage in offline sexual activity (Anastassiou, 2017). Within a consensual and age-appropriate relationship, sexting can be understood as a normal behavior where youth are developing, growing, and establishing sexual agency (Döring, 2014). On the other hand, some research has shown that sexting is associated with mental health problems such as anxiety and depression, and with risky sexual behavior (Mori, Temple, Browne, & Madigan, 2019). The negative outcomes are much more common among certain groups (preteenagers or very young teenagers), and among those who experience negative pressure and coercion to engage in sexting (Englander, 2019). Individuals may experience both internal and external pressure to become involved in sexting (Englander, 2019; Walker, Sanci, & Temple-Smith, 2013). Almost one third of Swedish 18-year-olds who had engaged in online sex reported feeling persuaded, pressured, or forced (Svedin et al., 2021), which in turn might constitute a crime. The sexual development adolescents go through includes wishes for sexual and intimate experiences (Subrahmanyam & Greenfield, 2008), and receiving sexual attention online might be exciting, even if it comes from an adult. In a sample of 2731 adolescents (aged 12–15), 7.9% reported having sexualized interactions with adults (de Santisteban & Gámez-Guadix, 2018a), which is problematic as adults possess much more sexual maturity and experience and may introduce the young person to sexual behaviors that they are not mature enough to consent to. Most cases of sexting are no cause for concern, as most sexting takes place with a peer and is not associated with poor outcomes (Englander, 2012). However, it is of course important to be wary of its potential risks. Sexting can highlight potential vulnerability to victimization (Cooper, Quayle, Jonsson, & Svedin, 2016), and can risk leading to more serious issues, such as being lured into a sexual relationship with an adult (de Santisteban & Gámez-Guadix, 2018a), or the risk of the pictures being used for blackmail (Wolak, Finkelhor, Walsh, & Treitman, 2017).

Discussing the online sexual behaviors of adolescents involves moving within a broad spectrum between natural and non-harmful sexual exploration, and situations that constitute serious forms of abuse. It is important to identify the demarcation between these experiences without limiting and blaming adolescents for their natural exploration.

Risk factors for online sexual victimization

In order to prevent sexual victimization, it is important to identify potential risk factors and particularly vulnerable groups. As of yet, there is little research on risk factors for TA-CSA specifically, but there is some knowledge regarding risk factors for general online sexual victimization which will be presented here.

Age and gender are the most obvious risk factors, with girls reporting more victimization than boys (de Santisteban & Gámez-Guadix, 2018a; Mitchell, Finkelhor, & Wolak, 2007), and older children (approximately 13–17 years) reporting more frequent victimization than younger children (Mitchell, Jones, Finkelhor, & Wolak, 2014; Montiel, Carbonell, & Pereda, 2016). A longitudinal study showed that depressive symptoms predicted later sexual solicitation and interaction with adults (De Santisteban & Gámez-Guadix, 2018b). There are also indications that LBGQT youth, as well as adolescents with developmental disorders, may be at a higher risk (Palmer, 2015; Priebe & Svedin, 2012). Other factors that have been reported to correlate with online victimization are low self-esteem, low life satisfaction, loneliness, online risk-taking (e.g., sharing personal information, interacting with strangers), offline risk-taking (e.g., drinking alcohol, skipping school), problematic family relations, problems at school, being bullied online, previous abuse experiences, and sensation seeking (Baumgartner, Sumter, Peter, & Valkenburg, 2012; de Santisteban & Gámez-Guadix, 2018a; Jonsson et al., 2019; Livingstone & Görzig, 2014; Mitchell, Finkelhor, & Wolak, 2001; Whittle et al., 2014a). Children who are in vulnerable life situations may be especially vulnerable due to their need for confirmation, care, and attention, which they may search for online.

In general, risk factors are complicated and co-vary (Finkelhor, Ormrod, & Turner, 2007; Schoon, 2006). One specific risk factor may not lead to victimization, but more risk factors may add to the vulnerability. To refer back to the stress and vulnerability model (Zubin & Spring, 1977) described in the previous section on trauma, an individual's threshold for stress is lowered with each risk factor, leaving the individual less equipped to cope with a stressful situation, such as being exposed to sexual solicitation.

A study of eight young people who had been victims of online grooming leading to online and/or offline abuse (Whittle et al., 2014b) identified three vulnerability scenarios: i) having multiple long-term risk factors, ii) experiencing trigger events that temporarily heightened their vulnerability, and iii) engaging in online risky behavior. The first two groups were described as being at an increased risk of both online and offline victimization, whereas the third group was only considered to be at risk of online victimization. Online and offline sexual risk behavior are related (Baumgartner et al., 2012), and some vulnerabilities are specific to the online context.

Online offenders

The introduction has thus far mainly focused on the victims. Child sexual abuse would however never occur without offenders. Therefore, this section will focus on the individuals who commit these crimes.

Generally, there is no such thing as a ‘typical’ sex offender, as they are an extremely heterogeneous group (Seto, Babchishin, & Pullman, 2015). They can be male or female, young or old, married or single, employed or unemployed, close friends or strangers, and have previous criminal records or no criminal record. There is a pronounced idea that only men commit sexual offences (Denov, 2001). While men make up the vast majority of sexual offenders, it is important to acknowledge that women can also commit such crimes (and that boys and men can be victims – see e.g., Cortoni, Babchishin, & Rat, 2017). No single factor can explain why someone offends sexually, though some factors may combine to increase an individual’s tendency to offend. These factors can be biological, sociocultural, environmental, and circumstantial (Seto, 2008). Common risk factors for sexual offending (e.g., McCann & Lussier, 2008; Seto, 2017; Szumski, Bartles, Beech, & Fisher, 2018) are sexual deviancy (e.g., pedophilia, sexual sadism, hypersexuality), certain attitudes and thought patterns (e.g., antisocial attitudes, offence supportive cognitions), self-regulation difficulties (e.g., impulsivity, anger management issues), and lack of intimacy (e.g., difficulties creating and maintaining well-functioning relationships with other people).

In regard to online child sex offenders, there is to date only a limited number of studies (Seto, 2017), most of which have focused on offenders who watch and distribute child sexual abuse material, so-called ‘child pornography’ (DeMarco, Sharrock, Crowther, & Barnard, 2018). There have been debates about whether online offenders are distinct from offline offenders. On the one hand, some scholars argue that such a division overemphasizes the instrumentality of the internet, declaring that the internet is not a determining factor for the abuse – just a tool to facilitate the crime (Shelton, Eakin, Hoffer, Muirhead, & Owens, 2016). As such, they argue that the underlying motivation and behavior is relatively constant between online and offline offenders, but that some offenders adapt to a digital environment that offers new tools for abuse. Some offenders may move from the consumption of legal adult pornography to illegal consumption of child sexual abuse images, later transitioning into contact child sexual abuse and the production of abuse images (Fortin, Paquette, & Dupont, 2018). A significant overlap between online and offline offenses by the same offender has been reported (Shelton et al., 2016), and that online offenders share many characteristics with offline offenders (Elliott & Ashfield, 2011; Johnson, 2019). On the other hand, other scholars have argued that online offenders constitute a separate group compared to offline offenders, demonstrating less severe criminogenic factors

(Briggs, Simon, & Simonsen, 2011). Online offenders have been shown to be more likely to be Caucasian and slightly younger, and to have greater victim empathy, greater sexual deviancy, lower antisociality, fewer general cognitive distortions, and lower impression management than offline offenders (Babchishin, Hanson, & Hermann, 2011; Babchishin, Hanson, & VanZuylen, 2015; Elliott, Beech, Mandeville-Norden, & Hayes, 2009). As mentioned, the studies are, however, mainly based on online offenders who consume and distribute child sexual abuse images, and not on offenders who engage children in online sexual activity. As such, many of the findings (such as more victim empathy, lower antisociality) may potentially only apply to this specific group of online offenders. All internet-facilitated crimes cannot be grouped together as they can be fundamentally different in terms of function, process, outcome, and offender characteristics (Kloess et al., 2014; Navarro & Jasinski, 2015). Therefore, we still do not know how the different types of online offenders differ from or are similar to each other and offenders of offline child sexual abuse.

It can be argued that the internet facilitates the sexual abuse of children in different ways by lowering the threshold for committing crimes. The internet offers anonymity and perhaps a perceived safe space for individuals with child sexual abuse tendencies who previously have avoided acting on them (Soldino, Merdian, Bartels, & Bradshaw, 2019; Özçalık & Atakoğlu, 2021). Cognitive distortions regarding the nature of harm (“it is only images”) or the view of the internet as separate from ‘real life’ (Steel, Newman, O’Rourke, & Quayle, 2020) may further lower the threshold for crossing the border to abuse. Initial legal internet use can spiral out of control and result in online sexual behavior of a compulsive nature that takes up more and more time (Kloess, Larkin, Beech, & Hamilton-Giachritsis, 2018). In addition, the internet – and especially platforms on the dark web – offers opportunities to communicate with like-minded people and thereby receive advice and suggestions on how to approach and interact with children, where to find abuse material, and how to avoid detection (Europol, 2020b; Fortin et al., 2018; Woodhams, Kloess, & Hamilton-Giachritsis, 2021).

On a more general note, many individuals with sexual risk behavior, a sexual attraction to children, or other unwanted sexuality are open to receiving help, and with psychological and pharmaceutical treatment, it is possible to reduce the risk of sexual abuse (Beier et al., 2009; Preventell, 2015). One step to increase the likelihood of help-seeking is to reduce the stigmatization of people with pedophilic sexual interests (Jahnke, 2018). Child sex offenders are often referred to as pedophiles (or online pedophiles). Pedophilia is however a psychiatric diagnosis (American Psychiatric Association, 2013), and misconceptions about the diagnosis are highly prevalent (Jahnke, 2018). The term is often used incorrectly in everyday language and media reports. Pedophilia refers to a primary sexual attraction to pre-pubertal children, but far

from all pedophiles abuse children and not all adults who abuse children are pedophiles (Seto, 2008). The way we talk about sexual offenders is important, as the stigma-related stress might negatively affect cognitive distortions and emotional and social functioning, and prevent individuals at risk from seeking help (Jahnke, Schmidt, Geradt, & Hoyer, 2015). In addition, if we want to understand and be able to identify potential child sex offenders, we need to recognize all different motives behind offending and not only focus on individuals with paraphilic interests. In summary, there are no easy explanations why someone sexually offends, and yet we know little about online offenders, especially those who engage children in sexual activity online.

Challenges for the judiciary

The great and rapid shift toward a digitalized world places high demands on the legal system. In some cases, new cybercrime laws must be introduced. In other cases, laws that are not designed for a digital context need to be used and adapted to crimes committed via the internet. This can create unforeseen loopholes in the system and, by extension, lead to poorer legal protection in the digital environment compared to the offline environment. The following section will start off by describing how society aims to protect children from sexual abuse and go on to highlight some of the challenges the judiciary around the globe, and specifically in Sweden, may encounter in this task.

The United Nations' Convention on the Rights of the Child (UNICEF, 1989) has been ratified by 196 countries across the globe (the USA being the only country not to do so), and was implemented as law in Sweden in January 2020 (Swedish Social Committee, 2018). The convention explicitly states that all parties shall undertake all appropriate legislative, administrative, social, and educational measures – national, bilateral, or multilateral – to protect children from *all forms* of sexual exploitation and sexual abuse. In a general comment in 2021, the UN Committee on the Rights of the Child (United Nations, 2021) emphasized that states should regularly update and enforce legislation to ensure that children are also protected from harm in the digital environment. There is thus worldwide agreement that children should be protected from all forms of CSA. Nevertheless, 133 of the 196 countries have no specific legislation regarding the online grooming of children (ICMEC, 2017). As an important first step, the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse, referred to as the Lanzarote Convention, was the first international legal instrument to explicitly address child sexual abuse through information and communication technologies (Council of Europe, 2007). However, the Lanzarote Convention defines the criminalized behavior as when an adult proposes to meet a child

offline, and the proposal has been followed by material acts leading to such a meeting. The requirement of “material acts leading to such a meeting” is problematic, as abuse can take place during online contact, and not all offenders aim for such a meeting (e.g., Briggs et al., 2011). This requirement thus risks leaving children legally unprotected in many cases of online sexual abuse. On realizing that abuse committed exclusively online may not be adequately recognized as criminal and therefore may go unpunished, the Lanzarote Committee published an opinion urging states to consider extending their criminalization to include cases where no offline meeting is proposed or prepared (Council of Europe, 2015). Nevertheless, by 2017 only 34 countries worldwide had criminalized online grooming *regardless* of the intent to meet the child offline (ICMEC, 2017). However, the lack of specific legislation does not necessarily mean that some forms of online abuse are not criminalized in other parts of a country’s legislation. Seeing that the initial aim was to criminalize the *preparation* of the offence (thereby preventing the actual abuse from taking place), it reveals a tendency to expect that the real harm is averted as long as no offline contact takes place. To exemplify, we can look at the case of the UK. Following a national campaign by the children’s rights organization NSPCC (NSPCC, 2014), a new section was added to the Sexual Offences Act 2003. The aim was to criminalize sexual communication with a child (Sexual Offences Act 2003, Section 15a), which is now punishable by a prison sentence of up to two years (Sexual Offences Act 2003, Section 15a). By comparison, the offence of meeting a child following sexual grooming is punishable by a prison sentence of up to ten years (Sexual Offences Act 2003, Section 15). This implicitly highlights that the law fails to acknowledge that the online communication in and of itself is a form of abuse (Kloess, Wade, & Hamilton-Giachritsis, 2019).

Digital technologies also bring additional complexity to the investigation of online crimes. The sheer number of sexual abuse images of children circulating online makes it a time-consuming and difficult task (Europol, 2020b). Seeing that most children do not report their abuse to the authorities (Alaggia et al., 2019), identifying children from online abuse images may be the best way to intervene and terminate ongoing abuse. A study based on interviews with 65 law enforcement agents in the US (Cullen, Zug Ernst, Dawes, Binford, & Dimitropoulos, 2020) identified several challenges involved in working with investigating and prosecuting cases with child sexual abuse material. First, keeping up with the technology and identifying new apps, software, and programs commonly used by online offenders. Second, collaborating with technology companies, as they sometimes seemed to prioritize their users’ privacy over assisting the police with accessing information. Third, not having enough resources to deal with the high caseloads. Lastly, the participants pointed out that the laws were outdated, that

they did not reflect the changing nature of technology, and that it was difficult to obtain appropriate sentencing.

A completely different – but equally important – legal aspect is how to view the actions of the child. In a case from 2017 in the UK, a 12-year-old girl was coerced into sending topless images of herself to an adult man. When her mother alerted the police, she was informed that her daughter might face charges (Independent Digital News and Media, 2017). In some countries (e.g., the UK and many states in the US), the laws on child pornography do not take the age of the person producing the image into account (e.g., PROTECT Act of 2003; Sexual Offense Act, 2003). Consequently, children who take and share sexually explicit images of themselves are technically committing a child pornography offence. Police are encouraged to take a ‘common sense approach’ and to present a proportionate response (e.g., making a report but not taking any formal action) in cases that are considered non-abusive (Home Office, Outcome 21), and arrest is not typical in such cases (Wolak, Finkelhor, & Mitchell, 2012). Nevertheless, many legal scholars advocate for decriminalization and to stop considering all sexual images of youth as child pornography (Johnston, 2016; Slane, Martin, & Rimer, 2021). This makes sense both in cases of voluntary sexting among peers and when a child is incited to send images to an adult. On the other hand, some police unit personnel view potential legal consequences as having a deterrent effect, discouraging youth from engaging in both consensual and non-consensual image sharing (Dodge & Spencer, 2018). Youth, however, advocate for rehabilitative over punitive sanctions (Strohmaier, Murphy, & DeMatteo, 2014). In sum, these challenges shed light on the complexities of legally dealing with this relatively new type of crime and on how to view developmentally normal sexual activities between peers.

Legal challenges in the Swedish context

This thesis is based on Swedish data. In this section, I will therefore dive deeper into the Swedish legislation, how Swedish courts currently judge in cases of online child sexual abuse, and which challenges they may encounter. TA-CSA consists of a wide range of experiences that constitute crimes of varying severity. If an adult incites a child to expose body parts on photo/video or via a webcam, this will be classified as exploitation of children for sexual posing (Swedish Penal Code, chapter 6, § 8). In cases where a child is instead incited to engage in more severe acts, such as masturbation or penetration, other parts of the legislation will be applied, such as sexual assault of a child (Swedish Penal Code, chapter 6, § 6) or rape of a child (Swedish Penal Code, chapter 6, § 4). However, the current sex crime legislation was not developed with digital crimes in mind, and there are thus some challenges when applying it to TA-CSA.

The first challenge was to adjudicate whether sexual assault and/or rape could be carried out remotely, that is without the offender being physically present in the same room as the victim. In 2015, the Swedish Supreme Court ruled that these crimes could be carried out remotely (NJA, 2015, p. 501).

The second challenge was to adjudicate which types of online sexual acts could be classified as rape. In Swedish sex crime legislation, the definition of rape of a child is having sexual intercourse with a child under the age of 15 (the age of sexual consent), or performing another sexual act which, in terms of the severity of the offense, is comparable to intercourse (Swedish Penal Code, chapter 6, § 1). This means that acts such as penetration with fingers or objects can be considered rape. Historically, penetration has referred to penetration by the offender's fingers, or objects held by the offender. In the case of TA-CSA, however, children are incited to penetrate themselves with their own fingers or other objects. Consequently, judges are left with the task of evaluating whether it should be viewed as equally violating for a child to penetrate himself/herself following the instructions of an offender, as when the offender performs such acts on the child. To date, there is no legal precedent from the Swedish Supreme Court regarding which circumstances should guide this evaluation. According to case law, it is to be considered less sexually violating when a child penetrates himself/herself with fingers, as the child is considered to have more control than when an offender performs the penetration (Göta Court of Appeal, 2021). For the violation to be considered equally severe as intercourse, the penetration must cause pain or injury. Note that pain or injury is not a legal requisite if the penetration is performed by the offender, but is an added requirement when a child is incited to penetrate himself/herself.

In 2018, for the first time in Swedish history, a Swedish court of appeal sentenced a man for the rape of a child, for crimes that had been conducted solely online (Svea Court of Appeal, 2018). The man, while located in Sweden, had coerced children in the UK, the USA, and Canada into performing sexual acts on themselves. The sexual acts that were considered rape included lengthy penetration with objects that were carried out under threat from the offender, and that caused pain and bleeding. This sentence set an important precedent for other Swedish courts, as it clarified that even the most serious sexual crime (rape) can be committed via the internet. Nevertheless, it is clear that the requirements for an act to be counted as rape are set higher when the abuse is committed via the internet (it has to cause pain and injury) than when the offender performs similar acts in the physical environment (no pain or injury needed).

The third challenge involved when the online crime does not occur in real time. In 2018, the Swedish Supreme Court ruled that it cannot constitute rape or sexual assault if there is no direct contact between the child and the offender at the time of the production of the photo or video (NJA, 2018,

p. 1103), regardless of the offender inciting or forcing the child to produce the video/photo. Consequently, a sexual act that would have been considered rape if it was performed live via a webcam (a child being incited to perform painful penetration on himself/herself) cannot constitute that crime solely due to not being in live contact during the production. Instead, the rape and sexual assault charges are dismissed, and the offender can at most be sentenced for aggravated exploitation of children for sexual posing (Swedish Penal Code, chapter 6, § 8), which does not require the offender's presence in real time.

So why does the classification of the crime matter? The charge determines the penal value and thus the length of the imprisonment. Moreover, the charge together with the perceived degree of violation determines the damages (The Swedish Crime Victim Compensation and Support Authority, 2017). The charge also determines which legal coercive measures can be used (for instance, interception of phone calls, searching premises, the right to detain), which might affect the possibility of conducting a successful investigation that can lead to a conviction. Consequently, the charge has the potential to greatly impact upon the ability of the child to receive justice. As is evident from the above descriptions, some challenges may arise when applying the current sex crime legislation to crimes committed via the internet. This issue will be further illuminated in the general discussion section.

SUMMARY OF STUDIES

Overall aim

Research from previous decades has thoroughly investigated offline CSA and established its usual characteristics and potential sequelae. By contrast, the knowledge regarding TA-CSA is limited. The overall aim of the exploratory and descriptive studies in this thesis was thus to increase the knowledge regarding TA-CSA in which a child is incited to engage in sexual activity online (e.g., perform sexual acts or pose naked) and its consequences. More specifically, by analyzing court documents, Study I investigated which strategies the online offenders used when inciting actual children to engage in online sexual activity, and whether these strategies were related to the characteristics of the abuse, the offender, or the victim. Study II investigated which sexual acts the abuse entailed, and how the psychological health of the victimized children was described in the court documents. Study III analyzed in-depth interviews with young women with experience of TA-CSA before the age of 18, capturing the interviewees' own stories about how they made sense of their experiences over time, and what impact the victimization had on them in the short and long terms. All three studies obtained ethical approval – see under Ethical considerations.

Rationale for choice of data sources

Studies I and II analyzed existing data in the form of court documents. Swedish court documents include descriptions of the criminal acts, summaries of the testimonies, evaluations of the presented evidence, and information about the basis for the judicial decision of the court. Court documents vary in terms of length (from a few pages to several hundred pages) and level of detail. There were three main reasons for using this type of data. Firstly, it is a major challenge to obtain data in cases of child sexual abuse. Children often delay disclosure of abuse (or never disclose it) to the authorities or adults (e.g., Alaggia et al., 2019). A common way to investigate CSA is therefore by using retrospective studies in which adults report abusive experiences from their childhoods. However, digital technology is developing quickly and there is a need for immediate knowledge about up-to-date cases of TA-CSA, making court cases valuable when it comes to increasing knowledge about the current situation. Another way to investigate CSA is by surveying a community sample to identify sub-groups with experience of CSA. Many victims of TA-CSA are very young (from around seven years of age), and from an ethical perspective it would be problematic to ask sensitive questions about abusive experiences to such young people, especially in a survey without the

opportunity to deal with any emotions that the participants may experience. Consequently, a community sample survey would fail to target a large proportion of the victim group, as the youngest children would have to be excluded from the survey.

A second reason for using court cases is that they include detailed descriptions of the sexual abuse (because TA-CSA contains technical evidence such as photos, videos, or chat logs in almost all cases). Such details are generally difficult to obtain. When disclosing abuse, children’s stories tend to be incomplete or fragmentary, and children tend to omit sexual information and sometimes even deny being part of sexual acts even in cases where the abuse is documented (e.g., Leander, Christianson, & Granhag, 2007). By using court documents, we could obtain such details in a non-intrusive way.

The last reason for using court documents is that they provide additional insights into which aspects of the abuse and its victims the court considered important. Court hearings can last for several days, and the written court documents only contain the most relevant parts from a legal perspective.

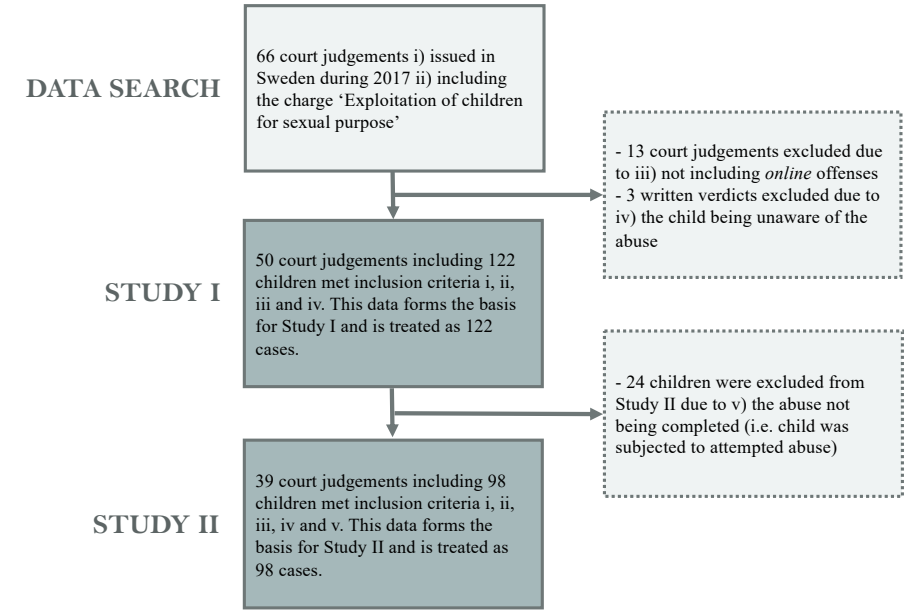


Figure 1. Flow chart showing data selection in relation to the inclusion criteria for Study I and Study II. The inclusion criteria were as follows: i) court case issued during 2017, ii) including the charge ‘exploitation of children for sexual posing’, iii) including at least one *online* offense, iv) the child had to be aware of the abuse (which excluded, for example, acts involving a victim being photographed while sleeping), and v) the TA-CSA was completed (thus excluding cases of ‘attempted exploitation of children for sexual purposes’).

Court documents do of course also have some limitations. The main limitation is that they only include summaries of what has been presented in court. For instance, a child victim’s testimony will be summarized and thus interpreted through the lens of someone else (i.e., the judge writing the document). To compensate for this limitation, the third study is based on in-depth interviews with victims, in order to receive a first-person perspective on their experiences of TA-CSA and a deeper understanding of the way the abuse has affected them.

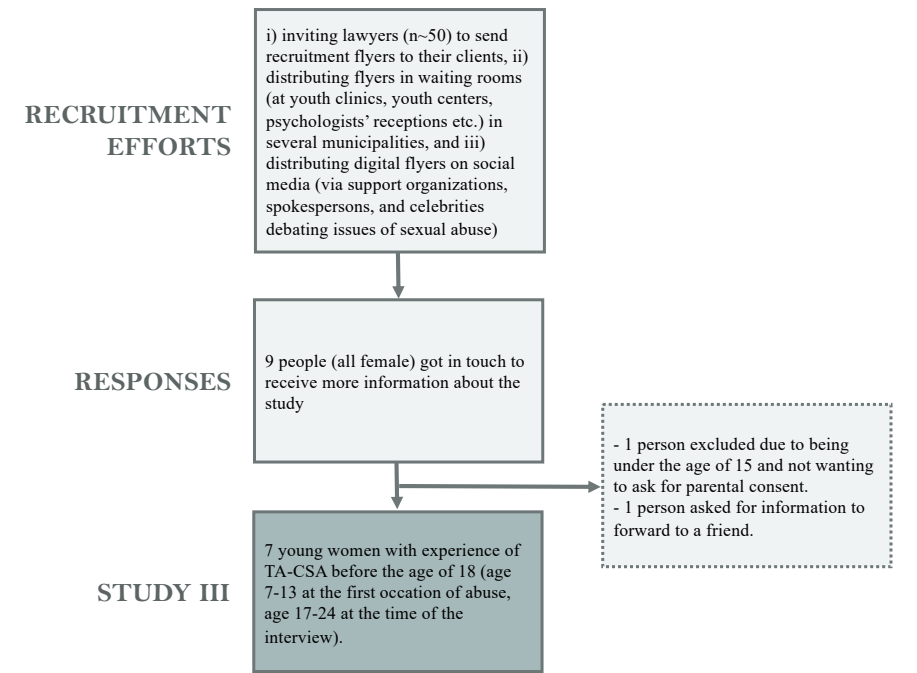


Figure 2. Flow chart showing recruitment of participants to Study III.

Design and general methods

This thesis employed a mixed methods approach, the core concept of which is the integration of different methods. Synthesizing all and any convenient data to reach a conclusion has been argued to be the most logical and intuitive way to approach a research question, as it allows researchers to more fully describe phenomena, and combines the strengths of each methodology and minimizes the weaknesses (Creswell & Plano Clark, 2017; Gorard, 2010; Landrum & Garza, 2015). Mixed methods is not a specific research design, but is instead an approach that can include many different

designs. A single study can be a mixed methods study, mixed methods can be applied more broadly to a larger research project with both quantitative and qualitative studies, or mixed methods can be the way a researcher approaches his or her work in general (Creswell & Plano Clark, 2017).

Mixed methods can be described as belonging to the philosophical paradigm called pragmatism (e.g., Jonsson & Gray, 2010), which is a problem-focused approach. Pragmatism means rejecting the ideological alignment that you are either a positivist, with all the associated assumptions and beliefs, or a constructivist, with all its assumptions and beliefs, and that these sides are impossible to combine. According to the pragmatist worldview, mixed methods are thus independent of philosophy and theory, and this is simply a method in which the different methods are viewed as different tools to choose between when appropriate (Gorard, 2010). As such, according to the pragmatist view, the first step should always be to formulate the research question, and the second step should be to decide which method is needed to answer the research question.

This research project had an overall fixed embedded mixed methods (Creswell & Plano Clark, 2017) multi-informant design. A fixed design means that the use of mixed methods is predetermined and planned at the start of a project. An embedded design means that the different methods aim to answer different research questions. In this project, there is an emphasis on the qualitative part, as the qualitative analyses will answer most of the research questions and make up the largest part of the results. Creswell and Plano Clark (2017) suggest the use of a notation system to clarify this. The research project making up this thesis fits into the following mixed methods framework: QUAL + quan embedded mixed methods design, see Figure 3. Due to the novelty of the research field, the studies are explorative and descriptive with the aim of identifying patterns that can be used to guide further research.

As thematic analysis was used in all three studies, I here provide a brief description of how it was conducted in general. For a more detailed description on the specific procedure for each study, see the appended manuscripts. Thematic analysis is a method for identifying, analyzing, and reporting patterns within data (Braun & Clarke, 2006). All studies employed an inductive (data-driven) approach, which generates themes that are strongly linked to the data, rather than overlaying a theoretical perspective. The themes were generated on a semantic level, focusing on the surface meaning of the data. The procedures undertaken to ensure a rigorous thematic analysis followed the recommendations of Braun and Clarke (2006). 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 and revising themes, checking the fit with the original data, defining and naming themes, and producing the report (Braun & Clarke, 2013). In all three studies, I had the main responsibility for

conducting the thematic analyses, and an iterative process of repeated discussions with the other authors during the analytic process ensured that the data was reliably interpreted and that findings were credible and dependable. Extracts from the data were used as illustrative examples to support the analytical claims (Braun and Clarke, 2013).

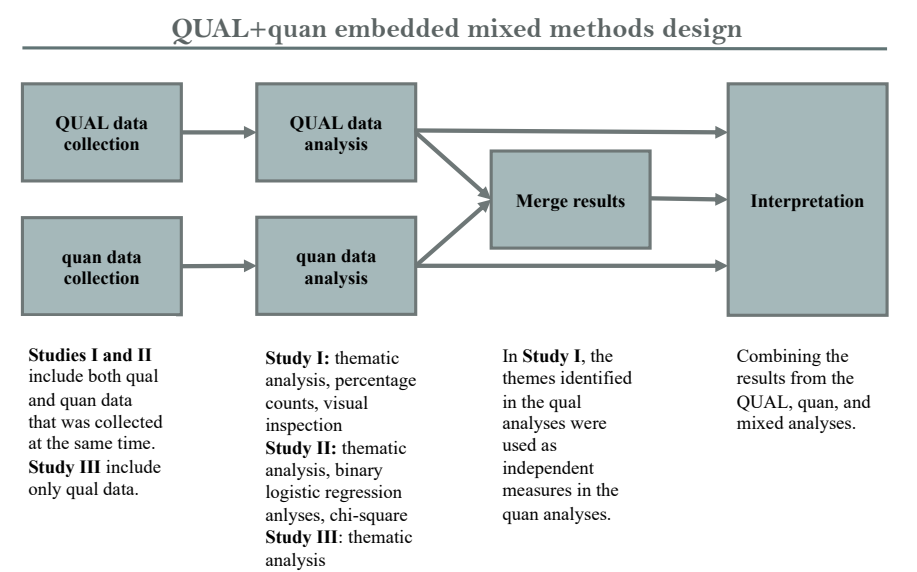


Figure 3. Overview of a QUAL+quan embedded mixed methods design and how it relates to this research project. Inspired by Creswell and Plano Clark (2017).

Study I

Aim

The aim of Study I was to describe online offenders’ interactions with actual children when inciting them to engage in online sexual activity, and to examine whether the strategy used was related to the characteristics of the abuse, the offender, or the victim. Due to the explorative and descriptive approach of this study, we did not produce any hypotheses.

Cases and method

Studies I and II are based on the same dataset, which consists of all court cases of exploitation of children for sexual posing conducted online in Sweden during a one-year period. To generate the data set, I created a manual for the extraction of data, which was used to extract all relevant information from the court cases. The data set was organized so that each case had a separate row,

in which all relevant information for all variables was inserted under the appropriate column. To exemplify, all text extracts from the court document that in any way mentioned the interaction between the offender and child were inserted in the column for the string variable 'offender strategy'. If the offender also abused the child offline in addition to the online abuse, this was indicated as 'online and offline abuse' in the column for the categorical variable 'location of abuse'.

The manual was based on a set of variables used by Ernberg and colleagues (2018) when investigating court cases of CSA among preschoolers, and was expanded with variables specified for online child sexual abuse and for the specific purpose of this study. The manual was further developed by using a data-driven approach and coding randomly selected court documents from years prior to the one investigated in the studies. By using this data-driven method, old variables were redefined and new variables were added. After this process, the manual had reached saturation, and included 103 quantitative variables and 16 variables including text extracts that captured all relevant information in the court documents. To ensure the inter-rater reliability of the manual, and that all relevant information had been extracted, a research assistant and I separately and blindly coded 20% of the cases (selected using a random generator) and compared the coding documents. The level of coder agreement was 93% for the variables used in Study I, and 95% for the variables used in Study II. The final dataset contained all relevant information from all the court documents, organized as 122 separate cases.

Study I included 122 cases (50 male defendants aged 16–69, *Mean* = 34.0, *Median* = 28.9, *SD* = 15.3, and 122 children aged 7–17, *Mean* = 12.35, *Median* = 13.0, *SD* = 1.93, 87% girls).

To analyze the data, we used an embedded mixed methods design (Creswell & Plano Clark, 2017), in which qualitative data (text extracts from the court documents) regarding contact between the offender and the child were analyzed using thematic analysis in accordance with Braun and Clarke's six-step model (2006) to ensure a rigorous analysis. The results of this thematic analysis formed the main part of the study. The themes that were generated in the qualitative analysis were further analyzed using quantitative measures. We used visual inspection and descriptive statistics (percentage counts, histograms, bar charts) to explore the relationship between the strategy used by the offender and the characteristics of i) the abuse, ii) the victim, and iii) the offender.

Main findings and conclusions

Study I reports two types of strategies that the children were exposed to: pressure (threats, bribes, or nagging, *N* = 56) and sweet talk (flattery, acting as a friend, or expressing love, *N* = 25). For a full overview of the themes and

sub-themes, see Table 1. Overall, the offenders who used pressure were younger and targeted older children than the offenders who used sweet talk. The children who were incited to perform the most severe sexual acts (including another person or an animal) had been subjected to pressure. Two-fifths of the children were abused on a single occasion, while others were in contact with the offender and were abused over the course of several years. It was roughly as common for offenders to use pressure to abuse a child on one occasion only (43.2%) as it was for offenders to use sweet talk (45%). All offenders in this study tried to engage children in some kind of online sexual activity, while only a few arranged an offline meeting with the child. It was somewhat less common for children subjected to pressuring strategies to meet their offender offline (9.9%), compared to the children subjected to sweet talk strategies (20.0%).

Table 1. Themes, sub-themes, and example quotations of offender strategies in Study I.

THEMES AND SUB-THEMES FROM STUDY I	
Strategies used by the offenders to incite children to engage in online sexual activity	
Pressure	
Using threats	<p>“He regularly reminded her that he intended to publish photos of her on Instagram if she did not participate.”</p> <p>“The threats have consisted of the defendant claiming that he would injure or kill the complainant or other people close to her.”</p>
Using bribes	<p>“She has been incited, for an offer of SEK 200 [approximately USD 20], to take semi-nude/nude pictures of herself and send the pictures to the defendant.”</p>
Repeatedly nagging	<p>“... and then requests were sent to see the complainant in underwear or swimwear, and there was a lot of systematic nagging.”</p>
Sweet talk	
Using flattery	<p>“He wrote to her that she was good-looking, has a nice body and that he likes her.”</p>
Acting as a friend	<p>“The conversation with the defendant was initially innocent. [...] They talked on the chat function every day and sent perhaps around two to three hundred messages to each other.”</p>
Expressing love	<p>“What if I got to see your boobs without a bra teehee love you.”</p> <p>“When they fell in love it was as if they became addicted to each other. They could be in contact with each other for eight hours a day, four hours in the morning and four hours in the evening.”</p>

Study I expands the existing knowledge about the variety of manipulative strategies online offenders use, and adds support to the claim that online offenders use more pressure, coercion, and persuasive language in their interactions with actual children than in their interactions with decoys (Schneevogt et al., 2018). Consequently, this indicates that pressure may be more common than previously assumed, as the majority of the research within this field builds on decoy data. In addition, Study I showed a sweet talk strategy in which offenders used flattery, friendship, or love to manipulate children into participation, confirming many previous findings on online grooming. However, both pressure and sweet talk could be employed both in one-time contacts and after a relationship had been established. In sum, the study

illustrates that there is no clear distinction between the two strategies when it comes to the length of contact, and highlights that the interaction between online offenders and their victims extends beyond grooming as we know it.

Study II

Aim

The aim of Study II was threefold. First, we wanted to describe the characteristics of TA-CSA, specifically which sexual activities the children were incited to engage in, and to investigate whether and how the age and gender of the child was related to the characteristics of the abuse (the location of abuse, whether it happened on repeated occasions, and the type of sexual acts that the child performed). The second thing we wanted to investigate was how the children's experiences were described in the court documents. Lastly, we wanted to examine how the psychological health of the children was described in the court documents. This latter goal had two purposes. One, we wanted to identify potential vulnerability factors for, and consequences of, TA-CSA. Two, we wanted to provide insights into how often the psychological health of the children was considered important enough to be included in the court document. Due to the exploratory and descriptive approach of this study, we did not produce any hypotheses.

Cases and method

Study II was based on the same dataset as Study I, but used one additional inclusion criterion: the TA-CSA had to be completed, hence excluding cases of 'attempted exploitation of children for sexual purposes'. Study II included 98 cases (39 male defendants aged 16–69, *Mean* = 35.0, *Median* = 28.7, *SD* = 15.8, and 98 children aged 7–17, *Mean* = 12.3, *Median* = 13.0, *SD* = 1.92, 87% girls).

To analyze the data, we used an embedded mixed methods approach (Creswell & Plano Clark, 2017). We thematically analyzed qualitative data (i.e., text extracts from the court documents) regarding the psychological health of the children, and their experiences of the abuse, using the six steps proposed by Braun and Clarke (2006) to ensure a rigorous analysis. The results of the thematic analysis constituted the main part of this study. In order to investigate how often the psychological health of the child was mentioned in the written court documents, we used descriptive statistics (percentage counts) as well as statistical analyses comparing cases of TA-CSA only with cases including both TA-CSA and offline CSA. In addition, we described the sexual acts that the children were incited to perform. In order to further describe the

characteristics of TA-CSA, we analyzed quantitative data using binary logistic regression analyses to identify potential relationships between the age and gender of the child and i) the location of the abuse, ii) the type of online act, and iii) repeated abuse.

Main findings and conclusions

Study II showed that the abuse situation could be experienced as threatening in different ways, and as not giving any choice except to perform the sexual acts demanded by the offender. In turn, the TA-CSA included a wide spectrum of experiences, ranging from seemingly voluntary semi-nude posing to involuntary anal penetration with objects or performing sexual acts on an animal or sibling. The sexual acts were sometimes performed under extremely violating and humiliating circumstances, and were sometimes physically painful. In addition to the online abuse, about one-fifth of the children were also subjected to offline sexual abuse (penetrative abuse or fondling) by their online offender.

The court documents described several individual factors that might have rendered the children particularly vulnerable to the abuse (e.g., poor psychological health, low self-esteem, loneliness) and several potential psychological consequences among the children following the abuse (e.g., psychological suffering, self-harming and/or suicidal behavior, internalized self-loathing, impaired relationships), many of which are similar to the findings of previous research investigating offline CSA. For a full overview of the themes and sub-themes, see Table 2.

The binary logistic regression analyses revealed that the likelihood of also being abused offline increased with increasing age, and 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, and there were no gender differences.

Study II further revealed that the psychological health of the child was only mentioned in less than half of the cases. Psychological health was 4.5 times more likely to be described in cases where the child had been sexually abused both online and offline, compared to cases in which the child had solely been abused online. When looking at psychological health *after* the abuse only, it was nine times more likely to be described in cases of both offline and online abuse.

In sum, Study II demonstrates that TA-CSA includes a spectrum of experiences. At one end, there were a few children who did not believe that they had been subjected to something problematic, whereas the other end included severely traumatizing experiences. The potential psychological consequences reported in the court documents revealed a wide range of health-

related issues that seriously affected the child’s wellbeing, and are similar to what has been established in research investigating offline CSA, indicating that TA-CSA could potentially lead to consequences of the same nature and seriousness.

Table 2. Themes and sub-themes in Study II.

THEMES AND SUB-THEMES FROM STUDY II	
Children’s experiences of technology-assisted child sexual abuse	
Experiences of the situation	Had no choice Threatening situation Feared that someone would find out
Experiences of the sexual abuse act	It was physically painful It was distressing It was both good and bad
Potential vulnerability factors	
Personal	Poor psychological health Low self-esteem Intellectual disabilities
Relational	Loneliness Stressful social environment
Behavioral	Self-harming behavior
Potential consequences	
Personal	Psychological suffering Sleeping problems Self-harming and/or suicidal behavior Internalized self-loathing
Relational	Trust issues Impaired relationships Isolating oneself Fear of being alone
School	Difficulties at school
No problems	No negative consequences

Study III

Aim

The aim of Study III was to provide a deeper understanding of the experiences and potential consequences of TA-CSA. More specifically, the aim was 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.

Cases and method

Seven young women with experience of TA-CSA before the age of 18 participated in individual in-depth interviews (aged 7–13 at the first occasion of TA-CSA, and aged 17–24 at the time of the interview) to provide a rich first-

person perspective on being subjected to TA-CSA. The participants self-identified as victims of TA-CSA and were recruited through recruitment flyers advertised in different forums (e.g., on social media or in waiting rooms at youth clinics). The interviews were teller-focused with the aim of capturing the interviewee’s own story about their life before, during, and after the abuse.

The study employed a qualitative design, using thematic analysis (Braun & Clarke, 2006; 2013) with a case-based approach. I conducted, audio-recorded, and transcribed all the interviews verbatim, and thus had a high degree of familiarity with the data prior to the commencement of coding. The interviews covered the lives and psychological health of the participants before, during, and after the abuse. 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 and each initial code was viewed in the context of the participant’s whole story.

Table 3. Themes and sub-themes in Study III.

THEMES, SUB-THEMES AND DESCRIPTIONS FROM STUDY III	
From thrilling to abusive	
Falling into the hands of the offender	All participants had been lured, manipulated, or forced into engaging in online sexual activities in different ways, although some participants expressed that they believed at the time that they engaged in the sexual activities voluntarily.
Realizing the severity	Most participants had a different understanding of their abuse looking back at it, as it was only in retrospect that they understood the full severity of what they had been exposed to.
Negative effect on health and wellbeing	
Everything collapsed	Despite having different backgrounds and 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 had significantly affected – and continued to 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 taking an active role in the sexual activities, to shame at not having been able to shield themselves from the online abuse.
Fear of pictures resurfacing	The reality – or the fear – of 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 wellbeing of the participants for a long time, and for some it also affected the decisions they took regarding their future careers.
A new self after the abuse	
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 people, and thus created a discrepancy between who they really were and what they 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 regarding 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 participants’ relationships with and feelings toward their bodies in several ways, from leading to difficulties viewing or enjoying their bodies or sexualities, to a failure to listen to their own boundaries or bodily needs.

Main findings and conclusions

Study III reports three dominant themes: *From thrilling to abusive*, *Negative effect on health and wellbeing*, and *A new self after the abuse* (see

Table 3 for a description of themes and subthemes). The impact of the abuse could be both direct and delayed, depending on the participant's understanding of the abusive situation. Some participants did not initially experience the sexual abuse itself as something negative, but described the trauma when they subsequently realized that they had been manipulated (sometimes in relation to being contacted by the police). Others described how they were threatened to engage in the online sexual activity and were distressed while doing it. Despite the participants' different experiences of the abuse, all participants but one described extensive and severe negative consequences following the abuse. Study III identified both immediate and long-lasting negative impacts on the psychological health of the participants, as the abuse impacted on several aspects of their lives, such as their relationships with others, their self-respect, their view of themselves, and their ability to cope with everyday life. The constant fear of pictures from the abuse resurfacing was one of the major causes of anxiety and contributed to the long-term effects of the abuse.

Study III provides an insight into the underlying processes between TA-CSA victimization and psychological suffering. 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.

GENERAL DISCUSSION

The overall aim of this thesis was to increase the thus far limited knowledge regarding TA-CSA. More specifically, Study I described online offenders' interactions with actual children when inciting them to engage in online sexual activity. In Study II, the aim was to map the sexual activities that children were incited to engage in, and to investigate how the experiences and psychological health of the victimized children were described in court documents. Study III provided a first-person perspective on how victims of TA-CSA made sense of their experiences over time, and how the abuse affected them in the short and long terms. In the following sections, I will integrate the main results with each other and discuss them in the light of previous research on child sexual abuse, the context of child development, and theoretical frameworks of trauma.

A wide spectrum of experiences

Initially, it can be hard to comprehend the wide spectrum of online sexual activities that TA-CSA can entail, and Study II expands on the limited research by providing more detailed descriptions of these acts. As reported in Study II, children can be persuaded to engage in online sexual activities such as semi-nude posing, exposing body parts, engaging in sexual touching or penetration, including oral, vaginal, or anal penetration with fingers or objects, or other extreme sexual activities that are humiliating, such as performing sexual acts on a sibling or a pet (Kloess et al., 2019). Similar to the analysis of images reported to the ECPAT Hotline (ECPAT, 2019), Study II showed that nude or semi-nude posing was most common, followed by masturbation and penetration, while involving others was rare. In contrast to the earlier assumption that online offenders generally have the goal of arranging an offline meeting (Black et al., 2015; Gupta et al., 2012), the studies in this thesis illustrate that the vast majority of offenders did not meet their victim offline and solely engaged the child in online sexual activities (Briggs et al., 2011; Kloess et al., 2019). Clearly, TA-CSA cannot be reduced to merely a precursor to offline abuse (in line with common definitions of grooming), as this trivializes the abusive acts that children can be incited to engage in through online technology. It is important to get away from the view of TA-CSA as something that 'happens online'. Although the communication occurs through digital media, the abusive acts are conducted on the child's body in the physical world.

TA-CSA affects children with no (or very little) sexual experience. Some children are too young to understand the sexual undertones of what they are subjected to. Some children are curious and find it exciting. Some are scared and disgusted. Taken together, TA-CSA includes a spectrum of activities, where one side includes seemingly voluntary semi-nude posing, and the other outer edge constitutes very unpleasant actions, including humiliation and pain – characteristics that are generally rare in offline CSA. When it comes to offline CSA, research has identified a few abuse characteristics that have been associated with greater harm, namely penetrative abuse, longer duration, a closer relationship with the offender, and the use of force or threats (Carr et al., 2020; Priebe & Svedin, 2009). The three studies in this thesis show that all of these aggravating characteristics could also be present in TA-CSA, with the exception that it is the child who performs the penetration. This all indicates that TA-CSA can be humiliating, overtly physical, and very serious in nature.

Similar consequences to offline CSA

In contrast to the assumption that TA-CSA is a less severe form of abuse (Hamilton-Giachritsis et al., 2021), initial research indicates that it can lead to severe consequences (Hamilton-Giachritsis et al., 2020; Hamilton-Giachritsis, et al., 2021), similar to those of offline CSA (Jonsson et al., 2019). Studies II and III add to these initial results, by reporting potential consequences that were both personal (e.g., depression, sleeping problems, self-harming, and suicidal behavior) and interpersonal (e.g., trust issues, isolation, impaired relationships), affected the victims in both the short term and the long term, and had consequences on everyday life such as leading to the child being unable to cope with school work or needing to be on sick leave. These results echo findings from research on victims of offline CSA (e.g., Carr et al., 2020; Maniglio, 2009). When it comes to offline CSA, there is no unique syndrome to identify all victims, but a plethora of potential symptoms and consequences. Therefore, there is widespread agreement that offline CSA should be considered a general, non-specific risk factor for psychopathology (e.g., Maniglio, 2009). Or, to use the vocabulary of trauma theory, CSA should be viewed as a potentially traumatic experience with the risk of causing trauma symptoms. Judging from the previous initial research together with the results from this thesis, TA-CSA should also be viewed as a potentially traumatic experience.

The methodologies used in this thesis and in research on child sexual abuse in general cannot establish causality in the same way as experimental studies. (For further discussions on this issue, see Methodological considerations.) Nevertheless, the studies report subjective experiences of causality, which will be the reality in which the victims of TA-CSA live. In

addition, the cases follow the same pattern as what we see reported on the nature of the outcomes and what is explained in theory in research on child sexual abuse in an offline context. In line with conclusions in the field of offline child sexual abuse, I therefore argue that the causality is plausible.

Symptoms following offline CSA differ greatly between individuals, and as many as one-third of victims do not report any symptoms (Kendall-Tackett et al., 1993; Spaccarelli, 1994). Nevertheless, almost no one questions the idea of offline CSA being a severe type of crime with the risk of causing tremendous suffering. To help explain how and why sexual abuse can result in various kinds of trauma symptoms and to reveal the underlying processes between victimization and psychological suffering, trauma theory can be applied. The dominant and well-established trauma theories presented in this thesis were developed several decades ago, long before the internet as we know it today. Nevertheless, the theories are broad and general, and may also have a bearing on TA-CSA. To explore this, I will analyze the results from the studies in this thesis under the framework of trauma theory.

To reiterate from the introduction, the four traumagenic dynamics model (Finkelhor & Browne, 1985) identifies four dynamics as the core of the psychological suffering inflicted by CSA. The first dynamic – traumatic sexualization – refers to the process by which sexual abuse can shape a child's sexuality in developmentally and interpersonally inappropriate ways. A child who receives affection, attention, privileges, or gifts in exchange for sexual behavior may learn to view sexual behaviors as a normal way to obtain affection. Studies I and III showed that offenders used both bribes and gifts to engage children in online sexual activity, as well as paying them attention in the form of friendship, flattery, or love. Study III described how the abuse had caused participants to overstep their own boundaries and let others make decisions about their bodies. One participant described how receiving attention felt more important than how the acts made her feel. Also in accordance with the model, Study III identified sexual problems such as difficulties enjoying sex or feelings of shame surrounding the body or sexual desires. The model furthermore states that children who have been enticed into participating in abuse are likely to be more traumatically sexualized than those who have been forced into it brutally (Finkelhor & Browne, 1985). The children in Study II and Study III actively engaged in the abuse in different ways (by exposing body parts or engaging in sexual activity). The very nature of TA-CSA includes children's active participation, which – according to the reasoning of the model – indicates that victims may be at a heightened risk of developing sexualized traumatization.

The second dynamic – betrayal – refers to the discovery that someone whom the child trusted, relied on for love and affection, or was even dependent upon, has manipulated them through lies, or caused them harm. The betrayal is not only dependent on the closeness of the relationship, but can also depend

on how taken-in the child felt themselves to have been by the offender. In the three studies in this thesis, most of the children did not know the offender prior to the online contact, and thus the relationship between victim and offender may generally be less close than in cases of offline CSA, where the offender is often a family member or someone else close to the child (Ullman, 2007). However, the fact that some children were in contact with the offender for a long time, and sometimes had intense contact, might indicate that a strong bond can also be developed online. The more detailed first-person perspectives from Study III revealed how some perceived the relationship as involving true love and care. In some cases, the offender lied about his identity and posed as a peer, which added to the sense of betrayal and shock on realizing the offender's true identity ("it was a slap in the face"; Study III). Depression, trust issues, isolation, re-victimization, and anger were reported in the studies, which – according to the model – may stem from the shock of discovering the betrayal. As described by Finkelhor and Brown (1985), betrayal does not always refer to the betrayal of the offender, but can also include mistrust when disclosing the abuse, or feeling that family members failed to protect them. In TA-CSA, children are often abused in the perceived safety of their own bedroom or bathroom at home (ECPAT, 2020), sometimes with their parents in the next room. As such, feeling betrayed by family members' failure to protect them might be relevant to cases of TA-CSA.

The third dynamic – powerlessness – refers to the process by which a child's desire, will, and sense of efficacy are repeatedly overruled. According to the model, this sense of powerlessness is probably reinforced if the child experiences threats, coercion, violence, or fear, or on realizing that they are trapped in the situation. In the studies in this thesis, many offenders used threats and coercion, some children experienced fear, and many felt trapped by the offenders' threat to disseminate pictures or start rumors. Furthermore, Finkelhor and Browne (1985) described how powerlessness may occur when a child's territory and body space are invaded against their will. Descriptions from Study III showed that the abuse had taught some of the children to ignore their own will ("I just did what people told me to"). The offender is not physically present in TA-CSA and the child thus has to perform the act. Nevertheless, several quotations from Study II clearly demonstrate that the child's bodily space was indeed invaded. The quotations included, for instance, descriptions of children expressing pain, crying, or begging to be allowed to stop, while penetrating themselves against their will. Several of the problems that Finkelhor and Browne (1985) associated with powerlessness were also identified in Studies II and III, namely sleep problems, school difficulties, fear, anxiety, suicidality, and general depression.

The last dynamic – stigmatization – refers to the negative connotations (badness, shame, guilt) that surround sexual abuse and its victims, and can become incorporated into the child's self-image. According to Feiring and

colleagues (e.g., 1996), shame is the core emotion of stigmatization. In Study III, shame was the most prominent feeling reported. In line with the model proposed by Finkelhor and Brown (1985), this shame was described as emerging from a sense that sexual curiosity was inappropriate and taboo, or from having been fooled and manipulated. Some participants in Study III expressed how they felt stupid and blamed themselves. In addition, there are indications that victims of TA-CSA are sometimes blamed more than victims of offline CSA (Hamilton-Giachritsis et al., 2020), and abuse-specific stigmatization has been reported to have the greatest impact on symptom development (more than abuse severity; Feiring et al., 2002). The model (Finkelhor & Browne, 1985) mentions that stigmatization can cause isolation, self-destructive behavior, low self-esteem, and suicide attempts, all of which were identified in Studies II and III.

The four traumagenic dynamics model (Finkelhor & Brown, 1985) is comprehensive and has been developed based on large amounts of research on offline CSA, using a variety of different methodologies. The model thus includes a wide range of potential processes and symptoms. Some of them were not identified in the three studies included in this thesis. However, the studies were explorative and were not designed to evaluate the model's applicability to TA-CSA. Neither the method nor the research questions were thus designed to identify all symptoms described by the model. Nevertheless, when retrospectively organizing the results from the three studies under the framework of this model, it seems that the experiences and consequences of TA-CSA follow many of the same patterns as those for offline CSA.

It is worth briefly mentioning that around half of the participants in Study III reported higher levels of potentially traumatizing life events (especially interpersonal events and adverse childhood circumstances) than a community sample (LYLES – Linköping Youth Life Experience Scale: Nilsson, Gustafsson, Larsson, & Svedin, 2010). Polyvictimization is a risk factor for re-victimization (Finkelhor et al., 2007) and increases the risk of developing trauma symptoms (Aho et al., 2016). Consequently, clinicians should consider that victims may carry more than one abusive experience, and should ensure that they address all these experiences in therapy. In a study on disclosure among seven TA-CSA victims (based on the same interviews as Study III), some participants described how they had been in therapy for several years (sometimes in relation to offline sexual abuse), but never disclosed their online abusive experiences (Joley, Lunde, Landström, & Jonsson, 2021), indicating that TA-CSA may be particularly difficult to talk about.

Additional complicating factors

As described, many of the processes surrounding TA-CSA are evidently similar to those of offline CSA. Nevertheless, there are three aspects that stand out and can add to the complexity of the abuse. First, and most obviously, is that the abuse is often documented. From a legal point of view, this can be positive as it constitutes strong evidence (often lacking in offline CSA) and means increased opportunities to prosecute the offender. For the victim, however, the documentation can be a source of distress and anxiety. The existence of pictures was one of the major causes of anxiety reported in Study III, and other studies have reported that the fear of the offender still having footage of the abuse and the risk that pictures would be circulated can contribute to the impact of the abuse (Hamilton-Giachritsis et al., 2020; Hamilton-Giachritsis et al., 2021; Jonsson et al., 2019). The images could cause additional psychological stress due to the total loss of control and utter helplessness if they were uploaded, and being preoccupied with worry about what may happen with the images or concern about being recognized in public can lead to a lack of resolution (Von Weiler et al., 2010). In addition to the anxiety and worry that the abuse images can cause for the individual child, the images are also part of a larger problem. The number of online child sexual abuse images is increasing (especially self-produced images: Europol, 2020b; Interpol, 2020; Quayle et al., 2018). In 2018, 45 million images were reported by tech companies according to the New York Times (Keller & Dance, 2019). Law enforcement authorities in the EU report being overwhelmed by the volume of sexual abuse images to the extent that it has become unmanageable for many of the units dealing with this crime (Europol, 2020b). Furthermore, offender communities are continuously evolving, and increased encryption of many digital communication channels means that it is becoming more and more challenging for law enforcement to detect and investigate these crimes. For the child, this means that the abuse is not over when the abuse situation ends, and there is a risk of the child being continuously re-victimized every time the abuse images are being shared or distributed (Leonard, 2010). Moreover, young adults who have had sexual images of themselves distributed have reported being publicly humiliated and shamed, being harassed and stalked, losing their jobs, and having difficulties securing new employment (Citron, 2014). In Study II, two participants described how the fear of their abuse pictures made them choose careers in which they did not become public figures. As expressed by one self-identified survivor of child sexual abuse images active in the debate on the right to have one's images removed from social media platforms: "I have to live with the knowledge that my abuse will never end, and that every second of every day, someone could be – almost certainly is – watching my torture and abuse. Even once I'm dead, my degradation will continue. I will never be able to escape it. This trauma is

infinite.” (cited in Salter & Hanson, 2021). Evidently, the severity of the images should not be underestimated.

The images and documentation of the abuse can also cause secondary victimization (Campbell & Raja, 1999), depending on how professionals and institutions such as the legal system deal with the victim. As is evident from the studies in this thesis, it is common for TA-CSA to be discovered by a parent or through a police investigation (rather than being reported by the victim). In such cases, the victim loses control of his or her story, as the disclosure is not their own choice but forced upon them. In Study III, several participants described the shock and trauma experienced when they realized that they were part of a police investigation and that the sexual conversations, images, and videos were being viewed by other people. One victim of TA-CSA described that the most traumatizing thing she had ever experienced was having to walk into the courtroom knowing that everyone in the room had just watched the videos of her abuse (Joleby et al., 2021). Another victim described the horror of having to listen to page after page of the chat conversations she had had with the offender being read aloud during the court trial. As such, it seems that a large part of the trauma could stem from the social shame of having a secret revealed, and not only the realization that one had been subjected to abuse.

A second additional complicating factor reported in Study III, as in previous studies, is that the technology also can be a facilitator of abuse by simplifying access to the victim, and the possibility of using images to escalate the abuse, blackmail the child into compliance, and silence victims (Hamilton-Giachritsis et al., 2020). The endless internet connection means that the children are in constant reach of the offenders, regardless of place and time (Hamilton-Giachritsis et al., 2020; Jonsson & Svedin, 2017). This means that the abuse can occur at home, in the bathroom, in the bedroom, on the bus, and at school – places where the child should be able to feel safe. There is also the risk of re-victimization from a wider audience in the form of increased attention from other offenders who think they have found an easy prey.

A third additional complicating aspect of TA-CSA is the increased feelings of self-blame and blame from others due to the child having to take an active role in the abuse in the physical absence of the offender (Hamilton-Giachritsis et al., 2020). An image from an abusive situation does not always depict the manipulation, fear, or coercion that may be behind it, which entails a risk of the child being perceived as participating voluntarily (Leonard, 2010). Self-blaming was one of the themes generated in Study III, as clearly illustrated by the following quotation: “I have not been subjected to anything, but it is like I have subjected myself to it.” Abuse-specific internal attributions have in turn been associated with higher levels of psychopathology (Feiring & Cleland, 2007). This illustrates how important it is for professionals to meet victimized children and work to counter feelings of blame (Hamilton-Giachritsis et al., 2017), especially in cases of TA-CSA.

Online offenders' manipulative strategies

Initial findings showing persuasion, pressure, and force in online offenders' interactions with actual children (Chiang & Grant, 2018; Kloess et al., 2019; Seymour-Smith & Kloess, 2021), while being rare or non-existent in interactions with decoys (Schneevogt et al., 2018), has given rise to the view that decoy data does not imitate naturally occurring conversations. Study I adds support to this view, as pressure involving threats, bribes, and nagging were common elements in the data. Previously, offenders have been described as using pressure in response to the child's resistance and non-compliance (Chiang & Grant, 2018; Seymour-Smith & Kloess, 2021). Studies I and III found some support for this relationship, but Study I also found that some offenders used serious threats in the initial contact with a child. Thus, using pressure could be either a response to being rejected or an initial strategy for some offenders. Studies I and III also confirmed the extensive research identifying grooming-like strategies employed by online offenders (e.g., O'Connell, 2003; Whittle et al., 2013a). However, grooming is described as a slow process in which the offender gradually gains the child's compliance and prepares the child for abuse (Craven et al., 2006). This was true for some offenders who invested a lot of time and effort in building a relationship with the child, while others were only in contact with the child on a single occasion. This demonstrates that some strategies that are generally part of grooming (flattery, expressing love, and acting as a friend) can be utilized even in short, one-time online contacts. Accordingly, neither pressure nor sweet talk could be defined by the length of contact. In sum, this provides an insight into the varied nature of offender interactions and indicates that it is difficult to make clear-cut distinctions between the strategies they employ. Study I thus broadens the view of online offenders' manipulative strategies, showing that the interaction between online offenders and their victims extends beyond grooming, and that many offenders do not aim for an offline meeting.

From a developmental perspective, there are several explanations for the effectiveness of online offenders' manipulative strategies. Children are limited in their ability to process highly complex cognition tasks such as risk-assessment, impulse control, and to some extent abstract or hypothetical concepts (e.g., Halpern-Felsher, 2009), due to the brain not being fully developed until the mid-20s. When, for instance, an offender threatens to reveal compromising information, start a rumor, or hurt a loved one (Studies I and III), children are not able to make as well-considered a risk-assessment as an adult could. In addition, the stress caused by such threats further impairs the capacity for higher cognitive functions (Gok & Atsan, 2016). The child's decision to send the images demanded by the offender may therefore be based on a short-term desire to escape the frightening situation, and a limited opportunity to make a long-term risk assessment of the power the offender

gains through access to the image. In addition, according to so-called adolescent egocentrism (Elkind, 1967), adolescents have a tendency to focus on themselves and what others think of them. Since they believe themselves to be the center of attention, always being judged by others ('the imaginary audience'), the potential consequences of having compromising information disseminated might be perceived as even more serious.

When an offender instead uses sweet talk as a way to manipulate the child into engaging in online sexual activity, they exploit the child's burgeoning sexuality and natural need for affection and attention. In Study III, several participants described initial positive feelings of belonging and being understood, which has also been reported among adolescent victims of grooming (Lewis, 2020). The fact that offenders can hide their identity online and perhaps pose as a peer, as reported in Study III, adds to the possibility for an adult with much greater sexual maturity to take advantage of children's and adolescents' curiosity and naivety.

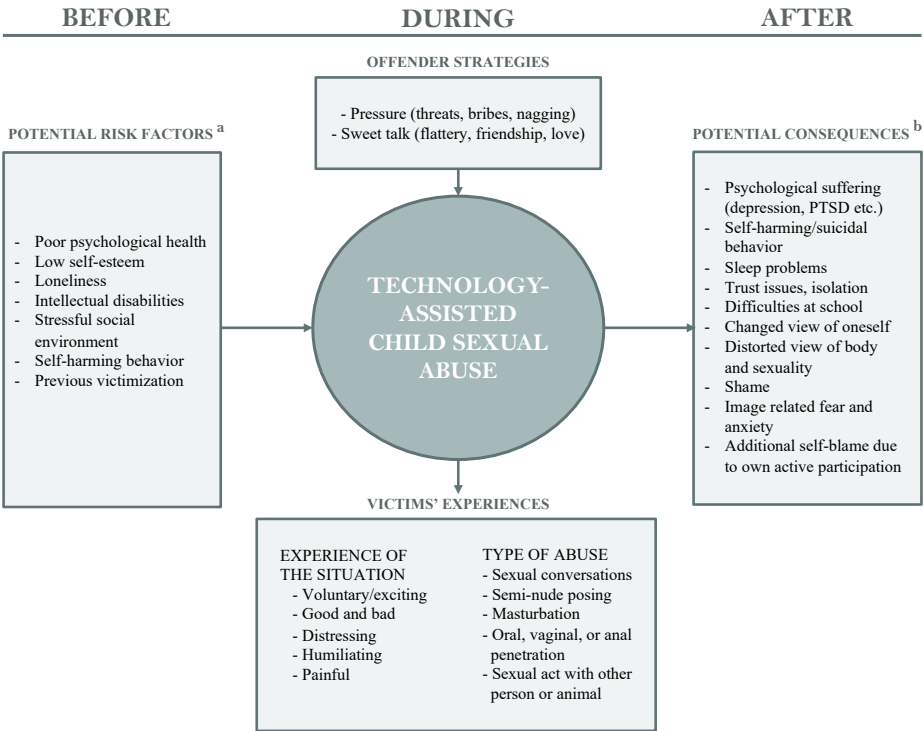
Online offenders' use of (sometimes immediate) pressure and threats indicates that the new digital landscape – with its access to a large number of potential victims – has created a new possibility structure. Offline offenders might need to be more deliberate in order not to scare off their potential victims, whereas online offenders can 'afford' to try different strategies. With so many potential victims, it may not be necessary to devote time to building a relationship. This reasoning is supported by cases in which offenders have used a 'scatter-gun' approach (Broome et al., 2018) by sending messages to hundreds of different children at the same time, waiting for some of them to take the bait (see for example Ulricehamn Tidning, 2017; FBI, 2015). Such strategies would not be possible without the internet, and consequently the digital development has led to new offender strategies.

Potential vulnerabilities

Similar to previous research (Mitchell et al., 2014; Montiel et al., 2016), girls were overrepresented and TA-CSA seemed to increase with age in Study II. However, almost a tenth of the children were aged between 7 and 9 at the onset of abuse, highlighting the importance of not neglecting the risk posed to younger children, who are in danger of being lured into sexual activities that they may only have a vague understanding of. Furthermore, Study II identified many of the previously reported potential risk factors, such as depressive symptoms, low self-esteem, loneliness, problematic family relations, problems at school, and being bullied (de Santisteban & Gámez-Guadix, 2018a; Jonsson et al., 2019; Livingstone & Görzig, 2014; Mitchell et al., 2001; Whittle et al., 2014a), and it is possible that these factors rendered the children particularly vulnerable to the abuse. Online risk-taking was not explicitly studied in this

thesis, but as reported in Study I, a few of the children came into contact with their offender through sexually suggestive online chat platforms, indicating that their sexual curiosity might have led them to engage in risky online behaviors.

Study II identified certain factors among the children that Whittle and colleagues (2014b) have described as risk factors for abuse. Some children reported multiple long-term risk factors, and a few experienced trigger events which may have temporarily heightened their vulnerability. Importantly, however, one group did not report any previous psychological problems, described their childhood as good and safe, and had no other apparent risk factors. Nevertheless, they fell victims to TA-CSA. While it is important to identify factors that could potentially heighten a child’s vulnerability in order to provide support and prevention for particularly vulnerable groups, we have to bear in mind that individuals with no apparent vulnerabilities can also be exposed and that there is no ‘typical victim’ (UNICEF, 2012). In Figure 4, you find a summary of the findings from the three studies in this thesis.



^a Note that for some victims there were no reported risk factors
^b Note that for some victims there were no reported consequences

Figure 4. Visualization of the results from Studies I, II and III categorized by before, during and after the technology-assisted child sexual abuse.

Reflections on the legal challenges

Judging from the United Nations Convention on the Rights of the Child (UNICEF, 1989) and the Lanzarote Convention (Council of Europe, 2007), there is worldwide agreement that children should be protected from all forms of CSA. The question is whether our laws are adequate for the investigation and prosecution of TA-CSA (Wittes et al., 2016). Evidently, there are some limitations in the legislative documents (ICMEC, 2017) which pose challenges when applying them to cases of TA-CSA. The first issue to address is that 162 countries worldwide (ICMEC, 2017) have failed to criminalize online grooming regardless of the existence of intent for an offline meeting. Considering the findings in this thesis showing (i) that a large proportion of online offenders do not abuse the child offline (Study I), (ii) the seriousness of some of the sexual activities that children can be coerced into engaging in online (Study II), and (iii) the extensive psychological impact the online abuse can cause (Studies II and III), this is problematic. It is important to note, however, that the lack of explicit laws criminalizing TA-CSA does not necessarily mean that other laws (e.g., sexual assault, sexual exploitation) cannot be used to target these offenses. Nevertheless, the phrasing of the Lanzarote Convention (Council of Europe, 2007) and other legislative documents has an important signal value for viewing and evaluating these crimes. The implication is that the online contact is subordinate, and that the danger does not occur until the offender proposes meeting the child offline and when the proposal has been followed by material acts leading to such a meeting (Council of Europe, 2007). Study II showed that it was more likely for the psychological health of a child to be mentioned in cases where the child was subjected to offline CSA in addition to the TA-CSA, compared to cases where the child was solely subjected to TA-CSA. 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 (Svea Court of Appeal, 2018). Thus, children exposed to TA-CSA are not expected to suffer harm to the same extent, and their psychological health is therefore not considered as often. Another possible explanation is that cases of TA-CSA more often include several victims, which may lead to less of a focus on each individual complainant. Both these explanations are problematic because they run the risk of overlooking the psychological suffering that victims of TA-CSA might experience. The findings in this thesis contradict the view of TA-CSA as a less severe form of abuse and highlight the importance of legally viewing the online interaction itself as a potentially serious offense.

Regarding the issue of applying the current Swedish sex crime legislation to crimes that are not committed in real time, it is clear that a

situation deemed by the court to be equally sexually violating as rape, cannot be sentenced as such only due to the offender not being present in real time. Consequently, many potentially harmful online sexual activities that children can be coerced into performing are not sufficiently criminalized, and two children who have been subjected to very similar abusive situations – with the only difference being whether or not it happened in real time – will receive two completely different legal outcomes under the current Swedish legislation. A recent Swedish legal case demonstrates this. The court explicitly states that the online crimes were of such severity that it is “almost a stroke of luck that is should not instead be assessed as aggravated rape of a child” (Vänersborg District Court, B 1787-20, p. 35). Rape has a minimum sentence of four years’ imprisonment (Swedish Penal Code, chapter 6, § 4). Despite this, the court in the subsequent sentence contradicts this by stating that the penalty value for the crimes is two and a half years. From a psychological point of view and from the child’s perspective, one could question whether the fact that the offender is not present at the time of the production of the image (but coercing the child to produce it) really reduces the level of violation that the child experiences. Since the classification of the crime has the potential to greatly impact the ability for the child to receive justice (i.e., the charge determines the penal value, damages, and the right to use legal coercive measures), our laws must be reformulated with digital crimes in mind to prevent legal loopholes like these.

In sum, Swedish legal practice has not considered TA-CSA to be as severe as offline CSA (Net, 2015; Svea Court of Appeal, 2018). The overall results of this thesis indicate that it is not reasonable to make such a general statement. TA-CSA is a complex phenomenon with the potential to lead to a wide range of psychological consequences. For this reason, there is no universal assessment applicable to all cases; rather, the specific circumstances must be considered in each case. In the most severe cases, the abuse itself and the psychological consequences for the child can indeed be of similar severity to offline CSA. In addition, the dissemination of abuse images not only adds to the psychological distress of TA-CSA victims, but may also lead to severe consequences such as stigmatization, harassment, and public humiliation (Citron, 2014). Consequently, in cases where the offender has uploaded or disseminated sexual abuse images, the penal value should be increased.

Methodological considerations

The studies employed different methodologies and thus have different strengths and limitations that need to be addressed. Studies I and II used embedded mixed methods designs in which the primary questions (offender strategies in Study I and experiences and psychological health of the child in

Study II) called for qualitative approaches, and the secondary questions (relationships and patterns) aimed to provide information about co-varying factors through quantitative approaches (Plano Clark et al., 2013). A mixed methods approach draws on the potential strengths of both qualitative and quantitative methods, and allows researchers to explore diverse perspectives and examine phenomena from different viewpoints (Shorten & Smith, 2017), thus providing more knowledge and insights about the research topic than either approach alone (Landrum & Garza, 2015). Given the infancy of the research field, we used a descriptive and exploratory approach.

Studies I and II are based on court cases of real-life crimes involving actual children and should thus exhibit high external validity. By analyzing court documents, we were able to access sensitive data without causing any distress or intrusion into the lives of the victimized children. The court documents contain detailed descriptive information about the sexual abuse that would be both methodologically and ethically difficult to obtain using other methods. In addition, the court documents provided insights into how the judiciary evaluates cases of TA-CSA and which aspects were considered important for the judicial decisions. On the other hand, the court documents varied extensively regarding level of detail, and our analyses were limited by the information available in the documents. Court documents are written by judges after the court hearing and include the reasons for the ruling together with the relevant information that formed the basis of the judicial decision (Swedish Code of Judicial Procedure, chapter 30, § 5). Court hearings can last for several days, and the documents only contain the most relevant parts. Some factors (e.g., exact descriptions of the sexual acts) are always presented, whereas other factors (e.g., the interaction between the child and the offender) are described in some but not all cases. As a consequence, some data may be biased. To exemplify, the fact that an offender was described as pressuring the child does not mean that the offender did not also engage in sweet talk. Some information is more likely to be deemed important for the judicial decision and thus be included in the documents (pressure can result in the crime being deemed as aggravated). As a result, information included in the documents provided a lot of insight, although one needs to be careful about drawing conclusions based on missing information. In sum, the choice of using court document data prevents us from drawing conclusions about the prevalence of some of the variables investigated.

The nature of the data (being summaries of the child's testimonies, or secondary sources such as witnesses describing the psychological health of the child) means that the data was shallow (Braun & Clarke, 2013). This limited our ability to conduct in-depth interpretations, and instead motivated our analysis at a semantic level. Compensating for the shallowness of the data, the sample size was large measured by the standards of qualitative methods. The data set included *all* cases of exploitation of children for sexual posing

conducted online from Swedish district courts during a one-year period. While this constitutes a thorough data collection, only a small percentage of child sexual abuse cases are brought to the attention of the police (Alaggia et al., 2019), and even fewer reach the prosecution stage. It is possible that these cases differ from other cases of TA-CSA that go unreported. For instance, they may be of a more severe nature than unreported cases. Therefore, the results may not be generalizable to other groups of TA-CSA victims, but may only serve as examples of the characteristics and consequences of the cases that are prosecuted.

Study III is based on in-depth interviews with victims of TA-CSA to explore their subjective experiences and sense-making of their victimization (Braun & Clarke, 2013; Willig, 2013). In-depth interviews generally offer an atmosphere in which people are made to feel comfortable to establish a conversation and speak freely about the topic (Queirós, Faria, & Almeida, 2017). Due to the sensitivity of the research topic, there may be a concern that participants do not dare to share their stories (Dickson-Swift, James, Kippen, & Liamputtong, 2016) or answer in socially desirable ways (Bergen & Labonté, 2020). Therefore, a teller-focused interview method (Hydén, 2014) which aimed to reduce the power imbalance between the interviewer and the participant, and to provide a relationally safe space in which the participant felt safe to share his or her story, was chosen to minimize these risks. Due to recruitment issues, Study III only included seven participants. However, they were all part of very specific group (individuals with experiences of TA-CSA) recruited through purposeful criterion-based sampling (Braun & Clarke, 2013). In qualitative research it is often preferable to employ a theoretical sampling of a small number of people chosen for their special attributes (Yardley, 2000). The small sample size should not be a concern, as rich knowledge and small purposefully chosen samples have been argued to be unique strengths, not weaknesses, of qualitative research (Smith, 2018).

The difficulties with recruitment raise the question of potential bias in the sample. Do the individuals who took part in the study differ in any way from those who did not choose to participate? Victims who experienced a more negative impact of the abuse may have been more inclined to share their experiences by taking part in the study, compared to those who did not view the abuse as significant. On the other hand, it is also possible that individuals who were severely affected did not feel emotionally ready to share their story and thus did not choose to participate. All participants self-identified as victims of TA-CSA and represented a wide range of different abusive situations. Six out of seven participants described that they had been (and, to a large extent, still were) severely affected by the abuse. By contrast, one participant reported that it had not affected her too much.

All but one participant was recruited via information distributed by a Swedish female artist, author, and social media personality who frequently

discusses issues of sexual abuse. A decisive factor for participation may have been a belief that the subject was important to study, something that all participants expressed during the interviews. Recruiting participants to studies on sensitive topics loaded with taboo and social stigma can be challenging, and there may be concern that it will be upsetting or cause harm, or even that it is unethical (Becker-Blease & Freyd, 2006). On the contrary, it has been argued that asking about abuse is not only ethically defensible, but required, and sends the message that the abuse matters and is something that researchers want to hear about (Becker-Blease & Freyd, 2006). In addition, a web survey of 628 women showed that the vast majority expressed positive attitudes to being asked questions about violence and sexual abuse, with acceptance being equally high for those who had been and those who had not been exposed themselves. (Only 3% reported that they would react negatively to being asked such questions; Thoresen & Øverlien, 2009.) For Study III, data gathering methods other than in-person interviews may have resulted in a larger sample. On the other hand, the interviews had the benefit of providing rich, in-depth stories that would be difficult to obtain in a survey, and there was a value of being present in the room when participants shared stories that, in many cases, they had never talked about before. Due to the small sample, however, the results from the study may not apply to all victims of TA-CSA, only representing the lived experiences of this group of individuals (Braun & Clarke, 2013).

In general, the methodologies used in research on child sexual abuse cannot establish causality in the same way that experimental studies can, as this research is not performed in the closed system of laboratories where every variable is controlled for. In the field of offline child sexual abuse, retrospective findings have been confirmed and replicated in increasingly controlled prospective studies, but it is unlikely that this type of research will ever reach the benchmarks for high scientific standards (Noll, 2008). Nevertheless, the theoretical models used to outline sexual abuse and its consequences talk about causality, and it is a well-established view that the consequences reported in the research are caused by the abuse. The findings in this thesis follow the same patterns those shown regarding child sexual abuse in the offline context. We cannot know for certain, but based on the similarity with theory and the nature of the outcomes itself, the causality in the findings on TA-CSA are plausible.

Ethical considerations

Thorough ethical considerations were made in the planning of the studies, in accordance with both the Swedish Personal Data Act (SFS 1998:204) and the Swedish Ethical Review Act (SFS 2003:460). When

conducting research, the potential risks need to be carefully considered against the potential benefits. This is of particular importance when studying a sensitive issue, as some topics are more likely to cause distress than others (Corbin & Morse, 2003). In this section, I will therefore describe the measures and decisions undertaken to ensure that the studies were conducted in an ethical manner.

Studies I and II obtained ethical approval from the Central Ethical Review Board in Gothenburg, Sweden (Dnr: 634-17). As stated in the methodological considerations section above, analyzing secondary data was a non-intrusive way of obtaining detailed information without requiring any participation from the offenders or the victims and their families. In addition, court documents from Swedish courts are public records. Court cases about sexual abuse do not include any personal information about the complainant, and all information about the defendant was omitted during the coding process. Thus, no identifiable information about the victims or the offenders was collected or stored in the data set.

Study III obtained ethical approval from the Central Ethical Review Board in Linköping, Sweden (Dnr: 2018/488-32). However, the responsibility for protecting the rights of participants lies less with the ethics committee than with the researcher who meets the participants and conducts the interviews (Corbin & Morse, 2003). A major concern in qualitative interviewing is the power imbalance between the researcher and the participant (Elmir, Schmied, Jackson, & Wilkes, 2011). Therefore, Study III used the teller-focused interview method (Hydén, 2014), which aims to reduce the power imbalance by endorsing a dialectical way of thinking, in that the researcher and the participant are two partners with different tasks and responsibilities during the interview. The participants were thus informed that the aim of the interview was to let them tell their story. Before the interviews, the participants were informed that participation was voluntary, that they would remain anonymous, and that they had the right to withdraw their participation at any time. They were also informed about how the data would be stored and reported, and filled out a consent form. Research participants may feel more inclined to share their (sometimes previously untold) stories if they feel that they are in a safe place (Dickson-Swift et al., 2016). Accordingly, the interviews took place at the interviewees' choice of location, and participants were offered to choose the seating arrangement in the room (either opposite or diagonally next to me – to offer a more natural way of avoiding eye contact if needed). Similar to what other qualitative researchers have reported (Elmir et al., 2011), all participants wanted to continue with the interview despite the sometimes strong emotions it evoked, and all participants later expressed gratitude for having been given the opportunity to discuss their experiences, and appreciation that someone was doing research in this area. To protect their identities, all identifiable features (such as names and places) were removed during the transcription of

the interviews, and the participants' names have been changed to pseudonyms in the manuscript. The audio recordings are stored on encrypted hard drives in a locked cabinet.

In sum, researchers have a moral obligation to ensure that there is sound justification for conducting a study (Hewitt, 2007), which extends beyond telling a sad story (Thorne & Darbyshire, 2005). Due to the measures taken when both planning and conducting the three studies, my belief is that the benefits of the research studies outweighed the risks.

Suggestions for future research

Although the present studies have expanded our thus far limited knowledge of TA-CSA, several questions remain unanswered. First, the research has generally used small samples and been exclusively retrospective. Although children with experiences of online sexual abuse are a group that is difficult to recruit from both ethical and practical points of view, researchers should strive to recruit larger samples and ideally conduct prospective and longitudinal studies. While retrospective studies can provide correlational results, it would be of great value to investigate the causal relationship between different types of online child sexual abuse and subsequent psychological outcomes (Widom, Raphael, & DuMont, 2004). Furthermore, from a legal perspective, it seems important to determine whether TA-CSA can be equally severe as offline CSA. While current studies show that TA-CSA has the potential to lead to consequences of the same sort and severity as offline CSA, further studies should investigate this issue further, using more robust methodologies. Due to the novelty of the research field and the urgent need for knowledge, there is however also a need for more qualitative studies to verify the results of the studies in this thesis.

Second, Study I adds support to the initial findings showing that persuasion, pressure, and force are more common in online offenders' interactions with actual children than with decoys. Therefore, researchers should continue to strive to access data about naturally occurring interactions, preferably transcripts. This would be the natural next step to build on the extensive body of research on decoy data and disentangle how the results are applicable to conversations with actual children, and how they may differ.

Third, the majority of research focuses on female victims and the current understanding of male victims is therefore limited. In spite of male victims constituting a minority (Study II), it is of the utmost importance not to neglect this group in the research (Hill & Diaz, 2021). This is especially true in the light of the mixed results regarding whether online offenders' interactions with boys are less sexually explicit, aggressive, and coercive (Grosskopf, 2010), or not (Seymour-Smith & Kloess, 2021).

Fourth, professionals may underestimate the severity of TA-CSA (Hamilton-Giachritsis et al., 2020) and express a lack of knowledge and understanding about how best to work with children who have been sexually abused online (Bond & Dogaru, 2019). Hence, there is a pressing need for scientifically evaluated preventive efforts and treatment programs to ensure that professionals feel confident about carrying out their work, and that victimized children receive the right help. Due to the adult world's limited understanding of the digital reality of today's youth and the potential gap between adults' and young people's attitudes regarding online sexual activities, such programs should be developed in close collaboration with children and adolescents to ensure that a child perspective is included.

Implications for practice

Parents, school staff, and professionals working with children need to acknowledge the multifaceted aspects of young people's online sexual activities. What constitutes normal adolescent exploration in the digital age versus problematic and perhaps abusive experiences? The potential gap between young people's and adults' attitudes regarding online sexual activities compromises communication about these matters, and risks making young people reluctant to reach out for help (Wittes et al., 2016). Sexual victimization is largely hidden from the adult world (Gisela Priebe, 2008) and, like many of the cases in this thesis, online sexual abuse is often brought to the attention of the authorities through a police investigation rather than by the disclosure of a child (Katz, Piller, Glucklich, & Matty, 2018). Some adolescents refrain from disclosing negative online experiences because they do not consider the incident to be serious enough, they believe that negative online sexual encounters happen all the time (Priebe, Mitchell, & Finkelhor, 2013), or they believe they can handle the situation themselves (Janis Wolak, Finkelhor, Walsh, & Treitman, 2017). As evident from Study III, however, it may not have been initially evident to the child that they were being manipulated or exploited. A situation that appeared to be voluntary at the time may only be understood as abuse in retrospect. During the interviews, several participants expressed not being aware that they were being subjected to something criminal, because no one had ever educated them about online sexual abuse. There is evidence to suggest that many youths are aware of the risks of engaging in online sexual activities, but engage in it anyway (Gewirtz-Meydan, Walsh, Wolak, & Finkelhor, 2018). Therefore, education that focuses on the risk of negative consequences is ineffective. Instead, there is a need for educational efforts targeting youth to include differentiating between sexual exploration and sexual exploitation, differentiating between healthy, supportive interactions and negative ones (Katz et al., 2018), the importance

of consent, and how to engage in sexual activities safely (Razi et al., 2020) with individuals their own age. Education should also help young people to recognize their rights by informing them that it is illegal for adults to engage children in sexual activity, and stressing that it is always the adult's responsibility. In the studies in this thesis, some victims were abused as early as the age of seven. Consequently, it is vital that educational efforts also target young children.

Other reasons why young people refrain from disclosing experiences include being too scared, being too embarrassed, not believing it would be helpful, or fearing that they might get into trouble or lose their online privileges (Priebe et al., 2013; Wolak et al., 2017). Adults thus need to recognize that limiting young people's connection to their online worlds, for example by confiscating their smartphones, would be experienced as a punishment rather than an act of protection, as it would forbid the young person from interacting with their whole social world. Communicating that all contact with unknown people is risky, and that sharing photos or engaging in intimate activities online should be avoided, may make a young person who has done just that and ended up in an abusive situation reluctant to ask for help due to a fear of reprisals. It would also add to the shame and embarrassment of having ended up in the situation.

The complex nature of children's and adolescents' online sexual experiences, where some situations are part of natural sexual exploration and other situations constitute severe child sexual abuse, poses challenges for professionals working with children. Research has shown that TA-CSA is not well understood by many professionals (Hamilton-Giachritsis et al., 2021), and that they express a lack of knowledge and understanding about how best to work with children who have been sexually abused online (Bond & Dogaru, 2019). One key issue is that online abuse is generally seen as being of less concern and less likely to be acted upon, which may lead to a systemic failure to protect, leaving victims at risk (Hamilton-Giachritsis et al., 2021). In addition, some of the aspects that distinguish TA-CSA from offline CSA, such as the permanence of the images and the additional shame and blame due to the child being seen as more of a participant in the abuse, are not being sufficiently targeted in treatment. Regarding the images, professionals have reported a lack of understanding the potential effect of abusive online images (Martin, 2014), being inadequately prepared to respond to such crimes (Martin, 2016), and not knowing how to adapt interventions to cases of online abuse (Bond & Dogaru, 2019). Two-thirds of professionals working with victims where images had been uploaded online refrained from discussing the images in treatment, due to not knowing which questions to ask or feeling that there were other more important issues to discuss (Von Weiler et al., 2010). Despite this study being a few years old, this is alarming as the images appear to be a key component in the suffering caused by TA-CSA (Hamilton-Giachritsis et

al., 2020; Study III; Jonsson & Svedin, 2017). The anxiety caused by images may relate to an internalized fear of the future rather than of a past traumatic event (Martin, 2014), and this is important to target in treatment.

In order to equip professionals with the confidence and tools to respond properly, specialized evidence-based treatment programs developed specifically for TA-CSA victims are urgently needed. Until there are specially adapted programs, however, there is extensive experience and knowledge regarding offline CSA that professional can also use in their work with victims of TA-CSA, as many of the elements and processes surrounding the abuse appear to be similar. In addition, professionals must dare to address the concerns surrounding the images and support the child in working to accept the knowledge of their (potential) existence. Insecurity may arise from the feeling of not being technically savvy or not having embraced specific technologies (Slane et al., 2021). Specific technological knowledge is, however, not necessary; it is enough to acknowledge that technology is a central feature of young people's lives and thus part of the overall context that needs to be assessed.

When it comes to the feelings of shame and guilt which may be particularly prominent in online crimes, it is of great importance that the victimized child receives support without being admonished. Children often carefully consider whether or not to disclose abuse (e.g., Joleby et al., 2021), and the way an adult responds to a partial disclosure may be critical in terms of whether the child will disclose further details (Staller & Nelson-Gardell, 2005). Moreover, the responses of others affect the impact of the abuse (Whittle, Hamilton-Giachritsis, & Beech, 2013). Parental support is consistently associated with the positive adjustment of sexually abused children (Elliott & Carnes, 2001), and self-blame can be triggered by unsupportive approaches from school, peers, and family (Hamilton-Giachritsis et al., 2017). Building on this, parents, professionals, and other adults must understand the complex dynamics of TA-CSA and its potentially coercive and manipulative nature. By making children feel safe to reach out for help, even if the child has done something they regret (Save the Children, 2015), we have the opportunity to prevent further victimization and put an end to the potential spiral of violence. In addition, while adverse experiences during childhood are indeed a risk factor for later psychopathology, this does not mean that a young person who is abused is doomed to suffer poor health. Many children show great resilience (Toth & Cicchetti, 2013), and with the right support the chances of positive adaptive functioning increase.

An important issue highlighted in Study III is that the boundaries of when an experience is considered abuse can be blurred for the child (Whittle et al., 2013b). This can have implications for professionals meeting this victimized group. The specific circumstances of the abuse, as well as the potential individual vulnerability factors of the child, are important for

professionals to consider when deciding on a treatment plan. An abuse situation that, to an outsider, does not appear especially traumatizing might well have been very traumatizing to the child, and vice versa. Studies I and III showed that many of the children remained in contact with the offenders for an extensive period of time, and some described that certain aspects of the relationships were positive and of value to the child at the time. It is therefore important to bear in mind the sometimes complex, confusing, and contradictory experiences that some of the children may be striving to make sense of. As reported in Study III, for some participants it was not until they grew older and gained a greater sense of perspective, or when they were confronted with the fact that the offender had used lies and manipulation (e.g., when they were contacted by the police), that they recognized that they had been exploited. Importantly, even though a child might claim to have given consent and not to have experienced the sexual contact as something negative, it would still be viewed as abuse in a legal sense, as in most societies it is illegal for an adult to engage in sexual activities with an underage child. This illustrates the difficult situation this may create for the child, as they would be forced into a legal process (in most cases it was not the child who reported the abuse to the police) in which they are viewed as a victim, despite not (initially) perceiving themselves as such. Therapists and support workers 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.

Last but not least, there is a pressing need for more research on the topic of TA-CSA. Gaining access to potential participants is, however, extremely difficult, because many professionals act as gatekeepers to children and are reluctant to approach them with information about research studies on the topic (Hamilton-Giachritsis et al., 2017; Quayle, 2016). This proved to be the case when recruiting for Study III. While it is of course understandable that professionals do this with good intentions, it is vital to critically reflect on the tension between viewing children as subjects of protection versus competent social actors and rights-holders (Cuevas-Parra, 2020). To exemplify, Hamilton-Giachritsis and colleagues (2017) had difficulties recruiting adolescent participants for a study on TA-CSA through professionals, as the professionals were reluctant to discuss the project with young people. However, when they were allowed to inform adolescents directly about the study they received significant interest and involvement. As such, professionals working with young people can be of critical help when it comes to reaching out with information about research studies. When ethics and methodologies are well thought out, children's participation can provide

invaluable knowledge for the research, and can also be of benefit to the participant by allowing them to have their voice heard. For a summary of the implications for practitioners, see Table 4.

Table 4. The recommendations in this table reflect a synthesis of the implications presented in the above section, findings from research literature, the results of the studies in this thesis, and conclusions drawn from the immersion in the research field and networking with professionals from different fields.

SUMMARY OF IMPLICATIONS FOR PRACTICE	
Adults and professionals	<ul style="list-style-type: none"> Realize the sometimes complex, confusing, and contradictory experiences that TA-CSA may entail. Not all online sexual activities are problematic, but at the same time, young people may have difficulties recognizing when they are being exploited. Show that you care and are ready to listen. Do not condemn, do not forbid. Understand that sexual curiosity is a natural and healthy part of growing up.
Education	<ul style="list-style-type: none"> Focus on teaching youth to differentiate between healthy and unhealthy relationships and to recognize inappropriate sexual advances. Recognize that sexual curiosity is natural and a healthy part of development. Educate children and youth about their legal rights, both online and offline. Discuss strategies for responding to, and reporting, unwanted sexual advances. Introduce education about sexuality and bodily rights early on.
Therapy	<ul style="list-style-type: none"> Recognize that TA-CSA can be severe and lead to serious consequences. Many of the processes surrounding TA-CSA and offline CSA are the same, so trust your competencies when addressing victims of TA-CSA. Do not shy away from addressing the (potential) existence of abuse images. Help the child lift the burden of shame and guilt. Realize that the important thing is not to understand all the specific apps but to understand the digital environment we live in.
Law enforcement	<ul style="list-style-type: none"> Be aware that the child may not realize that they have been exploited and subjected to a crime. Understand that the child may experience it as you revealing their deepest secret. Recognize the potential anxiety and distress connected to the images, and be cautious about how you address their existence.

Conclusions

The results of this thesis add to the currently limited knowledge about TA-CSA. In sum, the results and discussions indicate that TA-CSA should not be viewed as essentially different from, or less severe than, offline abuse. The characteristics of the abuse vary widely and can be of an extremely severe nature, and the victimization can lead to serious consequences in both the short term and the long term. The reported consequences are similar to those shown in research on offline child sexual abuse, and most of the processes and mediating factors between victimization and its sequelae are the same. Consequently, there is nothing to suggest that the impact of sexual victimization is lessened only because it has been carried out via an online medium. On the contrary, some factors in TA-CSA complicate the impact of the abuse, such as the offender having easy access to the child around the clock, the fear and anxiety related to the documentation of the abuse, and increased feelings of shame and self-blame. Considering all this, it is important to view these online crimes as potentially traumatic experiences, and to provide victimized children with the support and legislative redress that they deserve.

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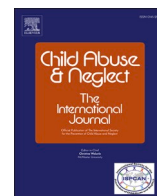
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APPENDIX

- I. Joleby, M., Lunde, C., Landström, S., & Jonsson, L. S. (2021). Offender strategies for engaging children in online sexual activity. *Child Abuse & Neglect*, 120, 105214.
- II. Joleby, M., Landström, S., Lunde, C., & Jonsson, L. S. (2021). Experiences and psychological health among children exposed to online child sexual abuse: A mixed methods study of court verdicts. *Psychology, Crime and Law*, 27 (2), 159-181.
- III. Joleby, M., Lunde, C., Landström, S., & Jonsson, L. S. (2020). “All of Me Is Completely Different”: Experiences and Consequences Among Victims of Technology-Assisted Child Sexual Abuse. *Frontiers in Psychology*, 11, 3432.



Offender strategies for engaging children in online sexual activity[☆]

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ABSTRACT

Background: Following technological developments, there has been increasing interest in online offenders' use of digital communication technology to sexually groom and abuse children. However, research has thus far primarily explored offenders' interactions with decoys instead of actual children, and initial evidence indicates that conversations with actual children may include more overt persuasion and extortion than conversations with decoys.

Objective: This study aims to describe online offenders' interactions with actual children when inciting them to engage in online sexual activity.

Participants and setting: Swedish court judgements including 50 offenders (aged 16–69, *median* = 28.9) and 122 child victims (aged 7–17, *median* = 13.0) were analyzed.

Methods: By using an explorative mixed-methods approach, we thematically analyzed what strategies the children were exposed to, and looked for patterns between the strategy used and the characteristics of the abuse, victim, or offender.

Results: We identified two types of strategies that the children were exposed to: pressure (threats, bribes, or nagging, *N* = 56), and sweet-talk (flattery, acting as a friend, or expressing love, *N* = 25). Overall, the offenders who used pressure were younger and targeted older children than the offenders who used sweet-talk.

Conclusions: This study expands the existing knowledge about the variety of manipulative strategies used by online offenders and adds support to the initial literature showing substantially more pressure and coercion in online offenders' interactions with actual children. The study also identifies some patterns between the strategy used and the age of the offender and victim that warrant further investigation in future studies.

1. Introduction

Since the beginning of this century, there has been increasing interest in online offenders' use of digital communication technology to sexually groom children. This body of research has demonstrated online offender's motives, strategies, and modes of manipulation

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Table 1

Overview of previous research studies investigating online offenders' communicative patterns. Summary focusing on aim, sample and key findings.

Study	Aim	Sample	Key findings ^a
Balfe et al., 2015	<i>Review:</i> Offenders' use of identity protection tactics and technologies.	Peer reviewed literature between 2000 and 2011 N = 40	A surprisingly large number of offenders do not use any technologies to disguise their identities.
Barber and Bettez, 2020	Identify behavioral patterns of adult solicitor behavior.	Chat logs (decoys – PJ) ^b N = 90	Identified five categories of behavior: control, grooming, predation, and offending. Minimal use of force.
Bergen et al., 2014	Explore prevalence of identity deception and secrecy and its relationship to outcome of sexual interactions online.	Questionnaire (adults self-reporting online sexual interactions with children/adolescents) N = 136 ^c	34% used identity deception. Deception increased likelihood of receiving a sexual picture, cybersex, or sexual contact offline.
Black et al., 2015	Consider similarities and differences in online grooming vs. offline grooming.	Chat logs (Decoys – PJ) N = 44	Some grooming strategies are the same, but order and timing of stages appear to be different.
Briggs et al., 2011	Explore and describe chat room sex offenders.	Chat logs + archival data from convicted offenders (90% decoys – police officers) N = 51	Identified two sub-groups: contact-driven and fantasy-driven.
Broome et al., 2018	<i>Systematic review:</i> Investigate whether there is an empirical basis for the distinction between contact-driven and fantasy-driven offenders.	Research literature (decoys in 16 studies) N = 22	The distinction between fantasy-driven and contact-driven is ambiguous. (Both engage in online behaviors that provide them with sexual gratification.)
Broome et al., 2020	Explore the psycholinguistic and deceptive properties of online grooming, from the perspective of front-line specialists.	Focus group interviews (prison staff + police officers) N = 7 + 7 Chat logs (decoys – PJ) N = 65	No deception needed. Offenders use language that denotes affiliation with a positive emotional tone. Communicative focus on developing interpersonal relationship.
Chiang & Grant, 2017	Identify common rhetorical moves in online grooming.	Chat logs (decoys – PJ) N = 7	Identified 14 rhetorical moves. Building rapport was the most frequent move, followed by maintaining/escalating sexual content.
Chiang & Grant, 2018	Explore rhetorical moves and numerous presented personas.	Chat logs (children) N = 20 (case study: one offender, 20 victims)	Identified 19 rhetorical moves, including overt persuasion and extortion. Offender adopted two personas: sexual pursuer/aggressor and friend/boyfriend.
De Santisteban et al., 2018	Explore the online grooming process and the perspective of the offenders.	In-depth interviews (convicted offenders of online grooming + sexual abuse offline) N = 12	Offenders study the child's environment and vulnerabilities and adapt strategy.
DeHart et al., 2017	Identify key elements and propose a typology of online solicitation offenders.	Chat logs, e-mail threads and social network posts (decoys – undercover officers) N = 200	Typology: cybersex-only offenders, schedulers, cybersex/schedulers, and buyers.
Egan et al., 2011	Explore language used by offenders.	Chat logs (decoys – PJ) N = 20	Eight recurrent themes: implicit/explicit content, online solicitation, fixated discourse, use of colloquialisms, conscience, acknowledgement of illegal/immoral behavior, minimizing risk of detection, and preparing to meet offline.
Gámez-Guadix, Almendros, et al., 2018	Test theoretical model of relationship between persuasion strategies and online grooming.	Questionnaire (adolescent victims of grooming) N = 196	Deception and bribery associated with sexual solicitation. Involvement associated with sexual interactions.
Gámez-Guadix, De Santisteban, et al., 2018	Develop a questionnaire to assess online sexual solicitation and interactions of minors.	Questionnaire (validation sample of adolescents) N = 2731	Developed ten-item questionnaire.
Greene-Colozzi et al., 2020	Retrospective exploration of internet behaviors, experience of online sexual solicitation or online grooming.	Survey (college students) N = 1133	25% conversed with adult strangers as minors. Of these, 8% recalled that the adult behaved aggressively, 17% acted moody, 17% manipulative, and 9% angry.
Gupta et al., 2012	Analyze chat conversations to understand and gain insight into online grooming practices.	Chat logs (decoys – PJ) N = 502	Relationship forming is the most dominant stage (40% of conversation), followed by sexual stage (24%).
Ioannou et al., 2018	Compare online and offline grooming characteristics.	Chat logs (decoys – PJ) N = 76 (Compared to court transcripts of 25 offline offenders)	Majority of characteristics consistent across online and offline grooming. Online grooming: more questions about virginity and victim's family, more compliments, and alluding to sex.
Kloess et al., 2014	<i>Nonsystematic review:</i> Overview of the current knowledge and understanding of sexual grooming and exploitation of children via the internet.	Research literature	Overall, the internet offers opportunities to meet various motivations, ranging from sexual exploration to problematic expression and grooming to facilitate engagement in deviant sexual activities. There is a lack of research investigating

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Table 1 (continued)

Study	Aim	Sample	Key findings ^a
Kloess et al., 2017	Examine modus operandi.	Chat logs (children) N = 29 (five offenders, 29 victims)	truly representative data in the form of transcripts of online interactions between an offender and an actual victim. Interactions were of a highly sexual nature. Offenders used a range of manipulative strategies (including direct, non-compromising, and pressuring strategies).
Kloess et al., 2019	Describe offense processes.	Chat logs (children) N = 29 (five offenders, 29 victims)	Different approach strategies: direct vs indirect. Three offenders did not use grooming.
Kopecký, 2017	Build a model of online extortion of children.	Questionnaire (children) N = 1374 victims of blackmailing ^d . Case analysis (reported to an online advisory center) N = 25	Very similar techniques used to blackmail: focus on gaining confidence, luring out intimate material, and subsequent blackmailing. Blackmailing typically accomplished by threats to tell parents or friends on social networks.
Lorenzo-Dus et al., 2016	Propose model for online grooming.	Chat logs (decoys – PJ) N = 24	Online grooming comprises three phases: access, approach, and entrapment. The entrapment phase entails a series of partly overlapping processes and strategies, the ultimate aim of which is to lure victims into different forms of sexual behavior.
Lorenzo-Dus & Izura, 2017	Examine offenders' use of compliments to build trust.	Chat logs (decoys – PJ) N = 68	Compliments about appearance (both sexual and non-sexual) and personality were the most common. Faster groomers – more comments about sexual appearance.
Malesky, 2007	Examine how online offenders select their victims.	Questionnaire (convicted offenders) N = 30	Three-fourths monitored chat room dialogue and almost one-half reviewed online profiles.
Marcum, 2007	Understand the nature of online solicitations of minors for sex.	Chat logs (decoys – PJ) N = 3	All offenders used manipulation to lure their victims, and were blunt about their sexual intentions.
O'Connell, 2003	Create a typology of online grooming practices.	Chat room dialogues (decoy – the researcher) 50 h in chat rooms	Friendship-forming stage, relationship-forming stage, risk assessment stage, exclusivity stage, and sexual stage. Some individuals used aggressive phrases.
Quayle et al., 2014	Generate an exploratory model of how offenders rapidly acquire skills to select and engage children.	Interviews (convicted offenders) N = 14	The internet was used to create a private space for sexual behavior, an aid for fantasy, and for some a precursor to offline abuse. The internet provided access to many young children.
Quayle & Newman, 2016	Explore offender and victim characteristics as well as how they interacted.	Case reports (reported to cybertip.ca) N = 264	Requests for sexual pictures dominated the reports. Threats were reported in almost one-fourth of the cases. Majority of offenders did not request an offline meeting.
Schneevogt et al., 2018	Investigate whether more coercive and forceful moves are absent in interactions with decoys.	Chat logs (decoys – PJ) N = 622	Overly persuasive language was rare (found ten examples) and no extortion occurred.
Seymour-Smith & Kloess, 2021	Explore how victims attempt to resist offenders' threats, and how offenders manage such resistance.	Chat logs (children) N = 5 (one offender, five male victims)	Making deals (centered on exchange of images/videos) was the key social action to entrap victims: constructing deals as 'equitable', breaches in the formulation of deals, maintaining control and escalation to threats, and a loss of bargaining power.
Shannon, 2008	Describe cases of internet-related sexual offenses.	Police data (in which offender and victim communicated online) N = 315	Relationship-building was only evident in a minimal way. Most common in online-only contact: sexual conversations, attempting or actually persuading victim to pose nude or seminude, offender exposing via webcam. 16% of online-only contact involved blackmail.
Tener et al., 2015	Present a typology of online offenders.	Interviews (law enforcement) N = 75	A typology defining four types of offenders was identified: the expert, the cynical, the affection-focused, and the sex-focused.
van Gijn-Grosvenor & Lamb, 2016	Investigate behavioral differences in online grooming of girls vs. boys.	Chat logs (decoys – PJ) N = 101	Grooming girls: more rapport, less sexually explicit, more indirect, and careful approach of sexual topics.
van Gijn-Grosvenor & Lamb, 2021	Categorize online offenders based on their behavioral grooming patterns.	Chat logs (decoys – PJ) N = 101	Cluster of offenders: intimacy-seeking groomers, dedicated, hyper-sexual groomers, social groomers, and opportunistic-asocial groomers.

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Table 1 (continued)

Study	Aim	Sample	Key findings ^a
Whittle et al., 2013	Non-systematic review: Online grooming.	Research literature	A variety of techniques to manipulate young people (e.g., flattery, bribes, and threats). Internet offenders, victims, and the dynamics between the two are often unique and varied.
Whittle et al., 2014	Investigate victims' perspectives of online grooming.	Interviews (adolescent victims of online grooming) N = 8	Grooming themes: manipulation, deception, regular/intense contact, secrecy, sexualization, kindness and flattery, erratic temperament and nastiness, and simultaneous grooming of those close to the victim.
Williams et al., 2013	Establish offender tactics used within the initial hour of grooming.	Chat logs (decoys – PJ) N = 8	Themes: rapport-building, sexual content, and assessment.
Winters et al., 2017	Provide information about offender characteristics, victim characteristics, and dynamics of the conversation.	Chat logs (decoys – PJ) N = 100	Sexual intentions clear early in the conversations (89% in first conversation, 98% within two days). Length of contact varied from one day to nearly a year.
Wolak et al., 2004	Describe characteristics of victimization.	Interviews (law enforcement) N = 129	No deceit and clear sexual intent in most cases. Half of the victims described being in love/having close relationship with the offender. Most met offline and had sex several times.
Wolak & Finkelhor, 2013	Compare crimes between online-initiated offenses and those who knew the victim offline.	Interviews (law enforcement) N = 143 + 139 (online initiated + knew victim offline)	When online sexual communication is involved, their crimes are highly similar to statutory rape by offenders whom victims know in-person. Deceit in a minority of cases.
Wolak et al., 2017	Investigate whether incidents occurring to minors (< 18) are more or less serious than those experienced by adults (18–25).	Questionnaire (victims of sextortion – the majority knew or had a relationship with the offender) N = 1385	Perpetrators against minors (vs. adults) were more likely to pressure victims into producing initial sexual images, demand additional images, threaten victims for >6 months, and urge victims to harm themselves.

^a Key results of relevance for this study.

^b PJ – Perverted Justice. Online database containing 622 freely accessible cases of offender-decoy interactions.

^c Data on sexual interactions with adults are excluded from this table.

^d Total sample N = 21,453 (i.e., n = 16,856 did not report any experience of blackmailing, n = 3223 missing data).

well (e.g., Beech et al., 2008; Black et al., 2015; Briggs et al., 2011; Ioannou et al., 2018; Malesky, 2007; Marcum, 2007; O'Connell, 2003; Williams et al., 2013). However, most studies have investigated interactions between offenders and decoys (i.e., adults posing as children). In recent years, there has been growing critique that interactions with decoys lack the dynamics that a child would provide in such conversations, and concern that data from decoys cannot thus be viewed as an imitation of what happens in naturally occurring interactions with actual children (Briggs et al., 2011; Chiang & Grant, 2018; Kloess et al., 2014; Kloess et al., 2019; Schneevogt, Chiang, and Grant, 2018; Seymour-Smith & Kloess, 2021). The most used source of offender interactions is the Perverted Justice (PJ) database (perverted-justice.com). PJ is a foundation that uses adult volunteers posing as children online with the goal of forwarding information to the police to enable an arrest. The PJ database includes 622 freely accessible cases of offender-decoy interactions, which have been used in at least 19 scientific studies (resulting in each interaction having been analyzed several times over). Since decoys aim to obtain as much incriminating information as possible, they respond openly to sexual solicitations (Briggs et al., 2011), appear compliant (Broome et al., 2018), and might be more likely to continue within an uncomfortable conversation (Williams et al., 2013) compared to a child. This could in turn affect the strategy used by the offender, as he or she would not encounter any resistance or rejection. In support of this argumentation, an analysis of all 622 PJ cases by Schneevogt et al. (2018) showed that overtly persuasive language was rare in the texts (occurring in less than 2% of the cases), and that no extortion occurred. By contrast, more coercive and forceful strategies have been identified in studies on interactions between offenders and actual children. In a case study by Chiang and Grant (2018), the interactions between one offender and 20 child victims were analyzed. They observed nineteen rhetorical moves employed by the offender. Most moves were similar to those found in decoy data, but two moves were previously unidentified: overt persuasion (pushing victims into some sort of compliance) and extortion (directly coercive moves, typically involving threats). Chiang and Grant (2018) argue that these moves occur (at least in part) as a result of victims displaying a degree of resistance to the offenders' sexual advances. Accordingly, Seymour-Smith and Kloess (2021) demonstrated in their analysis of chat logs between one offender and five child victims how the offender escalated his threats following victims' resistance to and non-compliance with requests. Quayle and Newman (2016) identified threats in 24% of the 166 cases of children receiving requests to send sexual images as reported to a public Canadian cyber tip site. Moreover, Kloess et al. (2019) analyzed transcripts from five offenders interacting with 29 child victims. The most commonly used strategies were indirect and included compliments, flattery, and affection, as well as persistence and manipulation. These strategies correspond well to the grooming practices demonstrated in research on decoys (e.g., Lorenzo-Dus & Izura, 2017; Whittle et al., 2013). Some offenders, however, displayed no features of grooming, instead using a direct approach including aggressive, persistent, non-compromising, and pressuring strategies in order to achieve compliance from the child (Kloess et al., 2019). Threats (Whittle et al., 2013) and coercion (O'Connell, 2003) have also been reported in decoy data, but only to a limited extent. Force

has been described as being used minimally (Barber & Bettez, 2020) and overtly persuasive language has been described as rare (Schneevogt et al., 2018). Initial research on interactions with actual children thus confirms many of the findings from interactions with decoys, but also highlights some important ways that interactions with actual children differ. To understand how a child can be incited to engage in sexual activities that they are too young to consent to, may only have a vague understanding of, or that may be against their will (Joleby et al., 2021), we must understand what strategies they are exposed to. At present, there is a scarcity of studies exploring real world, naturally occurring interactions between online offenders and children. In the present study, we aim to address this gap by examining a large sample of legal cases involving actual children.

1.1. What we know about online offenders' interactions with decoys and children

Before describing the current study in more detail, we will provide an overview of the current state of knowledge (see Table 1). While being conscious of the limitations of decoy data, we must also acknowledge its value seeing that it does investigate online offenders' genuine attempts to sexually abuse children. Comprehensive research on offenders' interactions with decoys has shown that online offenders, much like offline offenders, use grooming (Craven et al., 2006; O'Connell, 2003). Most characteristics of grooming are consistent across the online and offline milieu, as online offenders use rapport-building to form a relationship (Chiang & Grant, 2017; Gupta et al., 2012; Williams et al., 2013), use flattery and compliments (Lorenzo-Dus & Izura, 2017), and introduce sexual topics to the conversations (Chiang & Grant, 2017; Gupta et al., 2012). However, the order and timing of the different grooming stages appear to be different (Black et al., 2015). Online grooming is described as a non-linear process (Barber & Bettez, 2020; Gupta et al., 2012; O'Connell, 2003) in which several stages occur simultaneously, speeding up the process compared to offline grooming. O'Connell (2003), who was among the first to describe online grooming practices, described that the sexual stage was entered gently, after a sense of trust and 'love' had been created. By contrast, later research has shown that sexual intentions are often clear early in the conversation (Winters et al., 2017). Early initiation of sexual topics is also reported in interactions with actual children (Tener et al., 2015), and some interactions are described as lacking elements of grooming altogether (Kloess et al., 2019). When it comes to online contact, interactions with decoys have identified different offender motivations. Some aim to arrange an offline meeting to sexually abuse what they believe to be a child (Lorenzo-Dus et al., 2016; Winters et al., 2017), while others aim to use the online contact for cybersex and masturbation (DeHart et al., 2017). In a well-cited study by Briggs et al. (2011), these sub-groups were labelled contact-driven and fantasy-driven offenders. However, a systematic review failed to find an empirical basis for this division as the distinctions between the two sub-groups were ambiguous, given that both groups engage in online behavior that provides them with sexual gratification (Broome et al., 2018). Research on actual children has shown that online offenders can receive this sexual gratification by inciting or coercing children into taking part in sexualized conversations, sending pictures or videos, or engaging in mutual sexual activities via webcam (Chiang & Grant, 2018; Kopecký, 2017). These sexual activities can be of a severe nature, including the child penetrating himself or herself with fingers or objects, sometimes causing pain and bleeding, or forcing the child to perform sexual acts on siblings and pets (Joleby et al., 2021; Kloess et al., 2017). Law enforcement with experience of working with cases of online abuse has described the relationship between offender and victim as either reciprocal, in which the victim willingly cooperates with the offender, or unilateral, in which the victim is forced or manipulated (Tener et al., 2015). Emerging evidence also indicates that children who are incited to engage in online sexual activities with an adult risk similar psychological consequences to child victims of offline sexual abuse (Hamilton-Giachritsis et al., 2020; Joleby et al., 2021; Jonsson et al., 2019).

In sum, the severity of the sexual abuse that children can be subjected to online, together with the indications that decoy interactions lack the coercion and pressure that may be present in naturally occurring conversations, adds to the importance of investigating the dynamic of online offenders' interactions with actual children. In this study, we will use a mixed-methods approach to examine what strategies children are exposed to when online offenders try to engage them in online sexual activity (qualitative analysis) and will examine whether the strategy used is related to characteristics of the abuse, the offender, or the victim (explorative quantitative analysis). Due to the explorative and descriptive approach of this study, we do not have any hypotheses.

2. Method

2.1. Data collection

This study is based on 50 Swedish court judgements including 50 offenders who have incited (or tried to incite) 122 children to engage in online sexual activity. In these judgements, the court states its reasons for the ruling and includes relevant information that formed the basis for the judicial decision (Swedish Code of Judicial Procedure). Such information often includes 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 study includes all cases from all Swedish courts that met the following inclusion criteria: I) issued during 2017, II) including the charge 'exploitation of children for sexual posing' (including attempted and aggravated crimes, the Swedish Penal Code), III) including 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' that was used as an inclusion criterion is a non-contact offense in which the offender induces a child to 'pose sexually' (the Swedish Penal Code). In cases where a child shows himself or herself nude or semi-nude or engages in sexual activity and displays this in a photo, in a video, or via a webcam, this counts as sexual posing. Depending on the type of sexual activity that the child is incited to engage in, additional classifications (such as sexual abuse, sexual molestation, rape, etc.) can be used together with sexual posing. The data was collected via the Karnov legal database. The first

author and a research assistant (RA) searched the database applying criteria I and II. This procedure was carried out twice to ensure that no relevant cases were missed. This search resulted in 99 hits, with a first screening identifying that 66 of the court judgements met criteria I and II. The first author and the RA thoroughly read the selected 66 court judgements against criteria III and IV, and excluded thirteen judgements due to a lack of any online crime, and three judgements due to the children being unaware of the abuse (due to sleeping or young age). In addition, we searched for subsequent Court of Appeal or Supreme Court verdicts pertaining to the cases. Sixteen of the judgements were tried in a Court of Appeal (none in the Supreme Court), and these judgements were added to the material (judgements from the District Court and the Court of Appeal were combined, and instances were thereafter treated as one entity). In Sweden, appealed cases are generally based on the exact same material as in the district courts (the appellate court watches video recordings from the district court's trial, and it is rare that new information is presented). In sum, the search resulted in 50 court judgements matching all four criteria, and the data set represents all cases of exploitation of children for sexual posing conducted online in Sweden during a one-year period. The court judgements included 50 defendants targeting a total of 122 children, and we treated this as 122 cases, because the interaction between an offender and a child is often unique and varied (Whittle et al., 2013), and we were interested in learning what strategies each child was exposed to. The court judgements varied greatly in terms of length (from 6 to 250 pages, $M = 36$ pages) and level of detail.

To create a joint dataset of the 122 cases, we extracted all relevant data from each court judgement using a coding manual. The coding manual was based on a set of variables used by Ernberg et al. (2018), investigating court cases of CSA among preschoolers (e.g., abuse characteristics, defendant characteristics, legal outcome, etc.). The coding manual was expanded with variables specified for online child sexual abuse (e.g., online platform used, offline meeting) and for the specific purpose of this study (e.g. description of offender-victim interaction). Some variables were dichotomous (yes/no), some were categorical, and others were string (including long text extracts). To further develop the coding manual, 16 non-systematically selected court judgements from years prior to 2017 were coded by the first author and the RA. This process was solely a step in creating the coding manual, and the data was not included in the final dataset. By using this data-driven method, old variables were redefined, and new variables were added. After this process, the coding manual had reached saturation, and included variables that captured all relevant information in the court judgements. For transparency, a part of this dataset has been used in a previous study (Joleby et al., 2021) investigating the psychological consequences for the victims.

To ensure that all relevant information was extracted from the court judgements, we calculated the level of coder agreement in the final dataset by the first author and the RA separately coding 20% of the cases (selected using a random generator) and comparing the coding documents. The inter-rater reliability for the variables used in this study showed excellent agreement (Cohen's kappa $M = 0.948$, range = 0.769 to 1.0; Intra-class correlation coefficient 0.957, 95% CI = 0.903 to 0.981, $F(24,24) = 23.425$, $p < .001$). The final dataset was used in the analyses.

2.2. Design and analysis

We used an embedded mixed-methods design (Creswell & Clark, 2017), which is a type of design in which two types of data are collected on the same occasion, analyzed separately and answering different research questions. In this study, the themes identified in the qualitative analyses were used as independent variables in the quantitative analyses. Collecting both quantitative and qualitative data helped us gain a broader picture and understanding than would have been obtained by either type of data separately (Gorard, 2010).

2.2.1. Qualitative analysis

We analyzed the extracts using the qualitative approach of thematic analysis – a method for identifying, analyzing, and reporting patterns within data (Braun & Clarke, 2006). We employed an inductive (data-driven) approach, which generates themes that are strongly linked to the data, rather than overlaying a theoretical perspective. The themes were identified on a semantic level, focusing on the surface meaning of the data. The procedures undertaken to ensure a rigorous thematic analysis followed the recommendations of Braun and Clarke (2006). First, the first author (who was also one of two people who extracted the data set) thoroughly read the material several times to re-familiarize herself with the data, and then systematically coded the material with descriptive labels. Throughout the coding, additional labels were developed as new features were identified, while reappearing elements were assigned existing labels. After labelling all the data, the first author created a mind map in which the labels were organized in relation to each other. Some codes were merged together, and initial themes were generated. Second, the first author re-read the material and color-coded every piece of text that related to any of the initial themes, to ensure that no extract was overlooked in the first round. Third, the first and second authors discussed and re-organized the initial themes. Fourth, the first author re-read the extracts and recoded segments where necessary, compared the initial themes to the original extracts, and re-organized some of them. Finally, the initial themes were transformed into descriptive sub-themes and organized under one main theme each. After this revision, the first and second authors discussed the themes further, and agreed on a final draft. All four authors approved the final draft.

2.2.2. Quantitative analysis

Using the two main themes derived from the thematic analysis as independent variables, we used R (R Core Team, 2020) for explorative visual inspection and percentage counts to look for differences in the distributions between the two strategies. The variables used as dependent variables are *abuse place* (dichotomous: online only or online and offline), *sexual act online* (categorical: attempted abuse, posing, masturbation, penetration, including other person, or including animal), *duration of sexual abuse* (continuous: number of days between first and last occasion of sexual abuse), *age* (continuous: age at the time of the (first) abuse), and *gender*

(dichotomous: male or female).

2.3. Ethical considerations

The Regional Ethical Review Authority in Gothenburg, Sweden, has approved the project. Court judgements from Swedish courts are public records. Nevertheless, all personal information or other identifiable markers (such as name, address, or personal identification number) were omitted during the coding procedure. Consequently, no identifiable information can be found in the documents of this research project. All quotations were translated into English and have been slightly edited to facilitate reading, and to avoid possible identification of the children.

2.4. Initial place of contact

In 56 of the 122 cases (45.9%), the court judgement described where the first contact between the offender and the child took place (The conversation was occasionally moved elsewhere after initial contact, to enable unmonitored conversations and the possibility to

Table 2
Summary of offender, victim, and abuse characteristics.

		Mean	Median	SD
Offender characteristics (<i>N</i> = 50)				
Gender				
Male	100%			
Female	0%			
Age ^a	16–69	34.0	28.9	15.3
No. of online victims ^b	1–26	4.6	1	4.5
Conviction				
Acquitted ^c	8.0%			
Prison	36.0%			
Probation	26.0%			
Suspended sentence	14.0%			
Fine	8.0%			
Youth service	8.0%			
Criminal record ^d				
No	40.0%			
Yes, SO	20.0%			
Yes, NSO	6.0%			
Yes, SO & NSO	6.0%			
No info	28.0%			
Victim characteristics (<i>N</i> = 122)				
Gender				
Male	12.6%			
Female	87.4%			
Age ^a	7–17	12.35	13.0	1.93
Abuse characteristics ^e (<i>N</i> = 122)				
Type of online abuse				
Attempted ^f	19.7%			
Sexual posing ^g	45.9%			
Masturbation	9.0%			
Penetration ^h	21.3%			
Involving others ⁱ	4.1%			
Offline abuse ^j				
Yes	15.6%			
No	84.4%			

^a Age at the time of the (first) sexual abuse.

^b Fifteen offenders had additional offline complainants (offline sexual abuse) in the current court case that are not included in this study (due to no offense being committed online).

^c In the cases where the defendant was acquitted, there was technical evidence of the abuse (photos, videos, and/or chatlogs). The reasons for acquitting were due to the high evidentiary requirements (for instance not being able to prove beyond reasonable doubt that the defendant knew that the child was below the age of sexual consent, thus having criminal intent). Since the courts had technical evidence of the abuse and the contact, the cases were included in our study.

^d Previous criminal record. SO = sexual offense (e.g., rape, rape of a child, sexual molestation, possession of child pornography, or sexual coercion), NO = non-sexual offense (e.g., unlawful threat, unlawful coercion, or traffic offense), SO & NSO = both.

^e Shows the most severe type of online sexual activity that the child was incited to engage in.

^f Defendant asking for explicit pictures but the child refusing.

^g Nude or semi-nude, including the breasts, the genitals, or the buttocks via photo/video/live on webcam.

^h Oral, vaginal, or anal, with fingers or objects.

ⁱ Perform sexual acts (e.g., oral sex) on another person (e.g., a younger sibling) or an animal live in front of a webcam.

^j If in addition to the online abuse the offender also sexually abused the child offline (*n* = 14 penetrative abuse, *n* = 5 fondling).

share images or video chat). Thirty-eight children came into contact with their offender through a social media platform (e.g., Instagram, Facebook, or Kik, or sometimes platforms evidently directed at younger children, such as Momio), six through an online chat randomizing strangers to talk to each other (e.g., Omegle), five through a similar, but more sexually suggestive, online chat platform (e.g., getnaughty, hotornot, or sugardaters), four through an online game, and three via a text message to their cell phone. In addition, 20 of the children were acquainted or briefly acquainted with the offender before the time of the online abuse, hence the online contact was not the initial contact. In 36 (29.5%) of the cases, it was stated in the court judgement that the offender lied to the child about his identity, often claiming to be younger ($n = 25$), and sometimes claiming to be female ($n = 6$). In five cases, it was not specified what the lie entailed. In eight of the cases where the offender lied about being younger, the court document specified the number of years deducted from the real age ($m = 21.38$, $median = 13.50$, $SD = 16.94$, claiming to be between the ages of 12–18), but the remaining 17 cases provided no such information. For more characteristics of the cases, see Table 2.

3. Results

3.1. Qualitative analysis: Strategies for engaging children in online sexual activity

In 81 of the 122 cases (66.4%), the court judgement included some kind of description of the contact between the offender and the child. This information included the court's summaries of the contact, quotations from interviews and interrogations, or transcripts of chat logs. In some documents, the descriptions were quite extensive and thorough, providing a relatively clear picture of how the contact between the offender and child unfolded. In other documents, the descriptions were very brief (e.g., a single sentence like "The complainant threatened to upload pictures of her unless she had sex with him"), but still provided an indication of the interaction between the offender and the child. The descriptions were not limited to the initial contact between the child and the offender but could be derived from any time during their contact.

The thematic analysis identified two main themes of strategies used by the offenders, with three sub-themes each. The main themes are presented in order of quantity, as are the sub-themes within each main theme. For frequencies, see Table 3. Please note that there was an overlap in five of the cases (where the child was subjected to both strategies), and that the descriptions in five cases were uncategorized.

3.1.1. Pressure

This theme contains the offender strategies that include *pressure* to perform the desired online sexual activities, with three sub-themes: *using threats*, *using bribes*, and *repeatedly nagging*.

The first sub-theme is the most extensive one, and includes the different ways that offenders explicitly *used threats* to get the children to meet their demands. One common threat was to reveal compromising information about the child to other people unless he or she performed certain acts or sent certain pictures that the offender demanded. This could involve informing the child's parents about previous sexual contact they had, or threatening to disseminate degrading pictures or videos of the child:

He has ruthlessly exploited the complainant for several months and forced her into action by threatening that he would otherwise punish her by disseminating naked pictures of her. He regularly reminded her that he intended to publish photos of her on Instagram if she did not participate. He demanded more pictures of the complainant, and these eventually became increasingly explicit in nature. [...] He did send nude pictures of the complainant, who was twelve years old, to more than 20 other people, and started an Instagram account in the complainant's name and uploaded pictures of her. (Offender 35, male aged 16; child 70, girl aged 12.)

By using blackmail, the offender could coerce the child into engaging in progressively more severe acts than what they initially agreed on. Once the offender had gotten hold of any compromising information, the child was entangled in a situation that was difficult

Table 3

Themes and subthemes of the strategies offenders used when inciting children to engage in online sexual activity.

Themes	Subthemes	No. of children exposed to each theme ^b	No. of children exposed to each sub-theme ^c
Pressure	Using threats	56	38
	Using bribes		14
	Repeatedly nagging		9
Sweet-talk	Using flattery	25	14
	Acting as a friend		8
	Expressing love		6
Uncategorized ^a		5	

Note: The themes are based on the 81 cases (66.4% of all cases in the study) that included some kind of description of the contact between the offender and the child.

^a These descriptions included information about the contact between the offender and the child that did not fit into any of the themes (e.g., "Initiated a conversation. After a while into the conversation 'send pictures of your pussy'" or "not threat or coercion").

^b Five children were subjected to both pressure and sweet-talk.

^c A child could be subjected to more than one of the sub-themes.

to get out of. “The offender requested the complainant to send images of herself. She took three pictures posing in her underwear. /.../ The offender then demanded pictures that were more extreme, and threatened to otherwise upload the images he had already received.” (Offender 35, male aged 17; child 71, girl aged 13.) For these threats to be successful, the child had to have performed a compromising act to begin with. Other threats, however, did not require any previous acts by the child. These threats could instead be that the offender would start a rumor about the child or threaten the safety of the child or his or her close friends or relatives.

The threats have consisted of the defendant claiming that he would injure or kill the complainant or other people close to her, and/or that he would upload [non-sexual] pictures of her on ‘porn and rape sites’, including a text urging people to find the girl, rape her, and kill her family. (Offender 47, male aged 39; children 92–117, girls aged 11–15.) Some offenders amplified their threats by emphasizing the amount of information they had about the child: “He let the complainant know that he knew where she lived and who her friends were.” (Offender 39, male aged 23; child 82, girl aged 11.) One offender forced the victim to use violence against herself by using language signaling force and power: “The defendant forced the complainant to slap herself and insulted her by using derogatory slurs such as ‘whore’ and ‘slut’.” (Offender 27, male aged 27; Child 40, girl aged 13.)

The second sub-theme comprises cases in which the offender pressured the child by *using bribes* to incite the child to perform sexual activities. The bribe could consist of money, objects (e.g., a cellphone, cigarettes), or any other currency attractive to the child, as illustrated in these examples: “He would receive ‘skins (in-game purchases) and such stuff’ if he took off his clothes and masturbated on Skype.” (Offender 37, male aged 24; child 76, boy aged 12); “The defendant wanted to have sex with the complainant, and she went along with it because she wanted money and cigarettes, but also because it was a part of her self-harming behavior.” (Offender 14, male aged 28; child 17, girl aged 13). The offender could specify the payment for a specific act: “She has been incited, for an offer of SEK 200 [approximately USD 20], to take semi-nude/nude pictures of herself and send the pictures to the defendant.” (Offender 12, male aged 32; child 15, girl aged 17.) Alternatively, the bribe could work indirectly by building up to a feeling of indebtedness, as exemplified here: “He had received that knife (a weapon in an online game) and wanted to give something back when the defendant kept asking.” (Offender 37, male aged 23; child 74, boy aged 13.)

The third sub-theme refers to how some offenders *repeatedly nagged* the child to do certain things or send certain pictures. In some documents, the offender was described as having used frequent and repeated nagging. In the following example, the offender and the victim met in a Facebook group for people who were looking to meet new friends. However, the offender used this opportunity to find children to victimize: “They talked and got to know each other, and then requests were sent to see the complainant in underwear or swimwear, and there was a lot of systematic nagging.” (Offender 18, male aged 32; child 26, girl aged 13.) Even if the child managed to refuse to comply with the offender’s wishes at the beginning, the nagging could eventually push the child into engaging in the behavior that the offender wanted.

“He asked for pictures that were more undressed, and even nude. She does not know why she sent the pictures, but felt obliged to do so, even though she knew it was wrong. The defendant described which types of pictures he wanted her to send. If he was not satisfied with the pictures she sent, he instructed her how to retake them.” (Offender 25, male aged 51; child 37, girl aged 14.)

In addition, the digital communication enabled the offenders to have intense contact with the child, sometimes using several different accounts on multiple social media networks, or through text messages or phone calls after finding the child’s phone number online.

3.1.2. Sweet-talk

This theme contains offender strategies that used sweet-talk to manipulate children into engaging in online sexual activity and is divided into the following three sub-themes: *using flattery*, *acting as a friend*, and *expressing love*.

The first sub-theme describes how offenders *used flattery* to manipulate the child and to achieve increased sexualization within the relationship. There was not much variation within this theme, and it was often simply described in the court judgements how the offender showed appreciation toward the child or gave compliments. Many of the compliments targeted the child’s appearance and body but could also include elements of affection: “He wrote to her that she was good-looking, has a nice body and that he likes her.” (Offender 32, male aged 35; child 54, girl aged 13); “I want to be with you. [...] I would like to be together with you in secret, so that only you and I know. [...] You are so hot, what a nice picture of you.” (Offender 18, male aged 32; child 27, girl aged 12).

The second sub-theme refers to the way in which an offender manipulated the child by *acting as a friend*. The conversations were initially on a sociable level and the offender took on the role of someone the child could talk to and confide in. It could start as a normal friendship, and the contact between the offender and the child sometimes lasted for a long time (months and even years).

They met in an online community where you could meet people from different countries and you would be randomized to talk to others based on similar interests, etc. They started chatting. Both she and the defendant were into horses. Initially the defendant claimed to be 16 years old, but then he claimed something else. Eventually he started asking for nude pictures of her. (Offender 8, male aged 22; child 8, girl aged 13.)

By acting as a friend and claiming to have similar interests to the child, the offender could use conversations that were initially age appropriate and revolved around a friendship with the child. Once the friendship was established, the offender could gradually introduce sexual content into the conversations.

The conversation with the defendant was initially innocent. [...] They talked on the chat function every day and sent perhaps around two to three hundred messages to each other. They were usually of a sexual nature, but they also talked about everyday things. They also talked on the phone with each other. It was the defendant who wanted to talk on the phone. In the beginning, these conversations had innocent content but became increasingly sexual. (Offender 25, male aged 51; child 37, girl aged 14.)

The third sub-theme include strategies whereby the offender *expressed love* toward the child. Offenders sometimes used this as a straightforward tactic to get the child to perform the desired act, for instance: “What if I got to see your boobs without a bra teehee love you.” (Offender 18, male aged 32; child 26, girl aged 13.) At other times, the expressed love was part of a (perceived) romantic relationship that had developed between the offender and the child, as in this example of a 63-year-old offender who incited a 13-year-old girl to perform many sexual acts, some of which were described as ‘extreme’.

Their contact got more and more intense and eventually a love relationship arose. [...] When they fell in love it was as if they became addicted to each other. They could be in contact with each other for eight hours a day, four hours in the morning and four hours in the evening. He talked with her daily, listened to her and was interested in what she did and how she felt. He supported her and said that she was good at various things. [...] The way she feels for him, she has never felt before. It was a normal romantic relationship, except for the age difference. The defendant became her whole world, and she did not hang out with her peers during her leisure time. (Offender 4, male aged 63; child 4, girl aged 13.)

In a few cases, the court explicitly pointed out that the child had perceived the sexual contact as voluntary: “It is the district court’s view that both parties perceived it as being a love affair. There has been no element of coercion against the complainant.” (Offender 24, male aged 17; child 35, girl aged 13.) By enmeshing the child in a perceived love affair, the offender could induce the child to engage in sexual activity:

“They wrote to each other several times a day, about everything. He said that he loved her because he wanted to show that he supported her. [...] The method used by the defendant to persuade the complainant to pose has been persuasion. He has tied her to him and made her trust him in an elaborate way. He has then ruthlessly used this trust in him for his own pleasure.” (Offender 49, male aged 46; child 119, girl aged 13.)

Similarly, the love and affection expressed by the offender could be conditional and thereby put pressure on the child: “He tried to incite her to involve a dog in the sexual acts, and when the complainant did not want to perform the sexual acts with the dog the defendant has said that he loves her if she does it and called her darling.” (Offender 32, male aged 35; child 58, girl aged 12.) In this case, the offender and child were only in contact on this one occasion, but the offender still used language indicating a romantic involvement.

3.1.3. Overlap of the themes

From the documents, it was clear that five children were subjected to both strategies, which means that in these cases the offender alternately used pressure and sweet-talk on the same victim (this was done by four offenders).

“They were in contact online for about two years and the complainant felt that the defendant was also a friend, a person to talk to. [...] The defendant tried to get the complainant to do more things that he did not want to. Every time they had a fight, the defendant said that it was the complainant’s fault and threatened to tell other people what had happened on cam.” (Offender 37, male aged 23; child 74, boy aged 13.)

It should be noted that it is probable that more offenders than just these four used an overlap of strategies. It is likely that many of the offenders who used pressuring strategies also engaged in some of the sweet-talk strategies (for instance introduced pressure first after having established some type of relationship or dependency with the child), but that this was not mentioned in the documents.

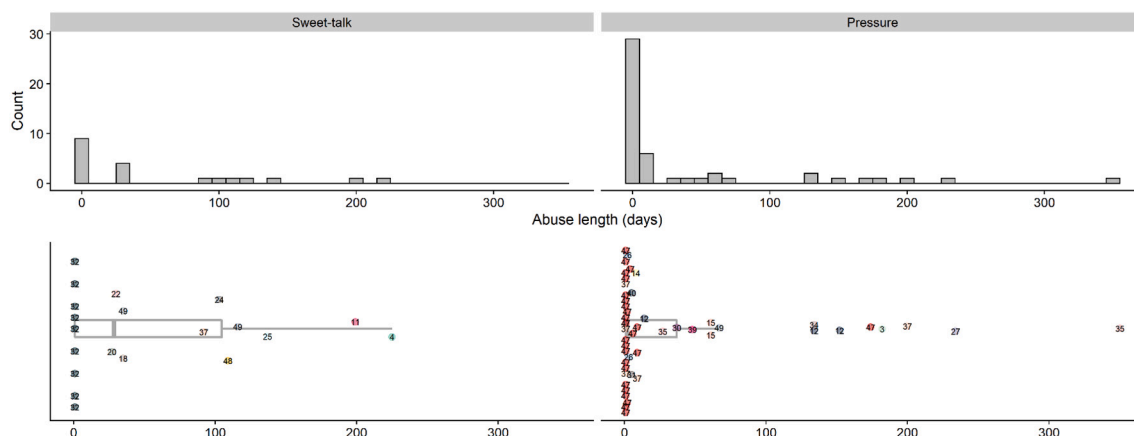


Fig. 1. Number of days between the first and the last occasion of sexual abuse, divided up by strategy. The color-coded numbers display the ID of the offender behind each child victim. Note: Two cases of pressure (679 days and 1461 days) have been removed to avoid excessive length of the x-axis.

The use of pressure is more likely to affect the legal decision and is therefore more likely to be reported. For a further discussion on this, see Limitations and future research.

3.2. Quantitative analysis: Patterns between the strategy and characteristics of the abuse, the victim, and the offender

The total sample include 50 offenders targeting 122 children, but many cases lack information about the strategy the offender used against the victim/s. The majority of all offenders ($n = 34$) had a single victim, but a few had many victims (2, 3, 4, 5, 7, 19 and 26 victims). Due to a lot of missing data regarding the used strategy, it is not possible to draw conclusions about whether or not offenders in general stick to one strategy or adapt the strategy to different victims. From our data it was however possible to discern that five offenders used different strategies on different victims. On the contrary, the offender with 26 victims exclusively used pressure. This indicate that some offenders seem to adapt their strategy following the responses of the child, whereas others (especially those targeting large groups of victims) may have developed a clear *modus operandi*.

3.2.1. Patterns between strategy and abuse characteristics

In these descriptive statistics, the five cases in which the child had been subjected to both categories were excluded. The duration of abuse varied significantly between cases: 40.2% of the children were abused on a single occasion, while others were in contact with the offender and were abused over the course of several years (see Fig. 1). It was roughly as common for offenders to use pressure to abuse a child on one occasion only (43.2%) as it was for offenders to use sweet-talk (45.0%). There was also a large overlap between the two strategies when it came to abusing the child for a longer period (pressure *range* = 1–1461 days, sweet-talk *range* = 1–225 days), but the three longest interactions included pressure. It was somewhat less common for children subjected to pressuring strategies to meet their offender offline (9.9%), compared to the children subjected to sweet-talk strategies (20.0%). The children ($n = 5$) who were incited to perform the most violating acts (performing a sexual act on another person or on an animal) were all subjected to pressuring strategies ($n = 4$ to threat, $n = 1$ to repeated nagging) – see Fig. 2.

3.2.2. Patterns between strategy and victim characteristics

In these descriptive statistics, the five cases in which the child had been subjected to both categories were excluded. The children subjected to pressuring strategies were generally older ($m = 13.2$, $SD = 1.4$, $range = 10\text{--}17$ years) than the children subjected to sweet-talk strategies ($m = 11.5$, $SD = 2.1$, $range = 8\text{--}14$ years) – see Fig. 3. Remarkably, a large proportion of the children were thirteen years old at the time of the first abuse (pressure 44.7%, sweet-talk 25.0%, full sample 36.4%). It was somewhat more common for boys to be subjected to pressure (80.0% of the boys in the sample where strategy was mentioned was subjected to pressure, compared to 70.5% of the girls). However, it should be noted that this statistic is based on a sample of only 10 boys (the sample of girls was 61).

3.2.3. Patterns between strategy and offender characteristics

In these descriptive statistics, the five offenders who used both strategies were excluded. Overall, the offenders who used pressure were younger ($m = 27.0$, $SD = 14.6$) than the offenders who used sweet-talk ($m = 48.3$, $SD = 16.2$) – see Fig. 4.

4. Discussion

This study confirms many of the findings from previous research investigating online offenders' communicative strategies, but also

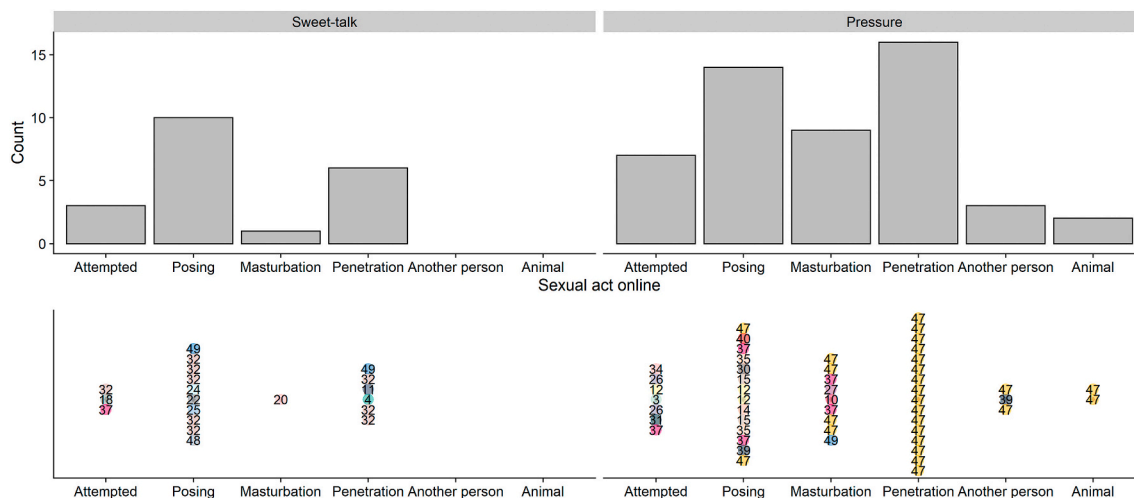
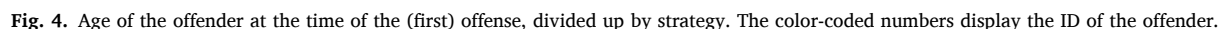
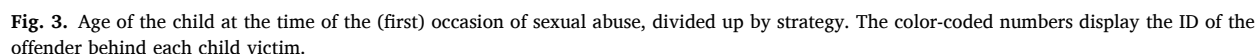


Fig. 2. The most serious kind of sexual act that the child was incited to perform online, divided up by strategy. The color-coded numbers display the ID of the offender behind each child victim.



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children. Possibly, the use of high initial threat can be explained as a sifting strategy to identify the most gullible victims and avoid wasting time on victims that are less likely to comply. By using a scattergun approach (Broome et al., 2018) and sending messages to hundreds of different children at the same time (FBI, 2015; Ulricehamn tidning, 2017), the offender can await the most gullible to take the bait. This strategy would build on the same argument as described by Herley (2012) regarding the way Nigerian scammers reduce the false positives (individuals that are attacked but yield nothing). Nigerian letters are an infamous phenomenon for most people, which means that it should be unwise for a scammer to say that they are from Nigeria. In opposite, scammers present themselves as Nigerian in the first contact in order to dissuade all but the likeliest prospects. In sum, using pressure could be either a response to being rejected or an initial solicitation strategy for some offenders. This finding highlights the great variety of strategies employed by online offenders and illustrates that the interaction between online offenders and their victims extends beyond grooming.

In this study, the pressuring strategy was the most common. However, it should be mentioned that there is a potential bias in the data (e.g., cases that are reported to the police may include more pressure than cases in general, and pressure is more likely to be mentioned in the documents), which prevents us from drawing any conclusions about the prevalence of pressure compared to sweet-talk. The study does however show that pressure is one of the strategies that online offenders use when inciting children to engage in online sexual activity, and that it seems to be more common than previously reported in the literature.

The sweet-talk strategy echoes many of the results from previous research on decoys, showing that online offenders can use compliments, flattery, love and affection, or general conversations when communicating with children (Kloess et al., 2017; Lorenzo-Dus & Izura, 2017; Whittle et al., 2013). Online offenders' interactions have typically been denoted as online grooming (Chiang & Grant, 2017; O'Connell, 2003; Whittle et al., 2013), and grooming itself is described as a slow process in which the offender gains the child's compliance and prepares the child for abuse (Craven et al., 2006). In line with previous research (Winters et al., 2017), some offenders in our study invested a lot of time and effort in building a relationship with the child. However, almost half of the offenders who engaged in sweet-talk were only in contact with the child on a single occasion. This demonstrates that some strategies that are generally part of grooming (flattery, expressing love, and acting as a friend) can be utilized even in short one-time contacts.

Kloess et al. (2019) investigated five offenders' interactions with 29 actual children and distinguished between direct and indirect approaches. Those who employed an indirect approach used compliments, flattery, and gentle pressure through disappointment and sadness, and prepared the child by grooming. Offenders who took a direct approach used more forceful strategies such as threats, blackmail, and insults, and did not prepare the child, instead using immediate initiation of sexual activity. While these findings have many similarities with the results of this study, we identified a large overlap between the strategies. Pressure could be employed either during the initial contact or after a relationship had been established. Likewise, sweet-talk could be part of building a relationship, or could be employed in one-time contacts. Similar to the overlap between fantasy-driven and contact-driven offenders, showing that both groups engage in online sexual gratification (Broome et al., 2018), all offenders in this study tried to engage in online sexual activity while only a few arranged an offline meeting with the child. This provides an insight into the varied nature of offender interactions and indicates that it is difficult to find clear-cut distinctions between the strategies they employ. This study also shows that the relationship between offender and victim can be described as either reciprocal or unilateral (Tener et al., 2015).

The explorative quantitative analyses identified some interesting patterns. The age differences between offenders and victims in interactions characterized by pressure were much smaller than the age differences between offenders and victims in interactions characterized by sweet-talk. One possible explanation is that offenders who used pressure were motivated to exert sexual power over their victims and chose teenagers as they are easier targets than peers, as opposed to having a sexual interest in children. By contrast, offenders who used sweet-talk as a way to build a romantic relationship with young children could be expressing a deviant sexual interest in children. This is only speculation, as further investigation using a study with a different methodology would be needed in order to shed light on the underlying explanations for this pattern.

In sum, the results add to the literature identifying a range of manipulative strategies used by online offenders. Increased awareness that online grooming is not the only threat is important in order to inform current approaches to policing and prevention. This is especially true in light of the relationship identified between the strategy used against the child and the type of sexual abuse that the child was exposed to (pressure was used in the most violating cases, and offline abuse was slightly more common following sweet-talk). The finding that a disproportionately large proportion of the children were thirteen years old indicates that this age group might be particularly vulnerable to online sexual abuse, possibly due to sexual development at this age. These insights are essential when it comes to detecting and criminalizing adults' sexual interactions with children online, as well as when developing preventive measures to teach children about online child sexual abuse.

4.1. Limitations and future research

The present study analyzed court judgements from cases in which offenders had incited children to engage in online sexual activity. While data on naturally occurring interactions with children is one of the strengths of this study, this data also entails some limitations that need to be addressed. First, court judgements only reflect what was brought up during the court hearing and subsequently deemed relevant enough to be included in the court judgement. Consequently, a lot of information about the case is not included, leading to a possible bias in the reported data. This bias is likely to be expressed as an underreporting of certain offender behaviors, and this is of relevance for the current study. It can be assumed that a judge is more likely to include an offender's use of pressure in the court judgement than an offender making small talk about everyday things with the child, because the first behavior (pressuring the child) is more likely to affect the legal decision than the latter (sweet-talk). What this means for our data is that there is a possible underreporting of sweet-talk strategies, whereas the volume of pressuring strategies reported is probably reasonably accurate.

Second, the study is based on the small percentage of cases of online child sexual abuse that are brought to the attention of the

authorities, and moreover result in a prosecution. It may be that cases including more forceful strategies are more likely to be reported to the police, resulting in a bias in the data. The findings from this study might thus not be generalizable to all interactions between offenders and children.

For ethical reasons, it is difficult to access data from online offenders' interactions with actual children, and there is currently a lack of studies analyzing such transcripts. In order to drive the research field forward, future studies should do their utmost to access such material, as it would provide invaluable information about the dynamics that children bring to the conversations.

4.2. Conclusions

Our study supports the claim that online offenders use more pressure, coercion, and persuasive language in their interactions with actual children than in their interactions with decoys (Chiang & Grant, 2018; Schneevogt et al., 2018; Seymour-Smith & Kloess, 2021). Consequently, this indicates that pressure may be more common than previously assumed, as the majority of the research within this field builds on decoy data. This study provided detailed descriptions of how offenders could use threats, bribes, and nagging in order to incite children to engage in online sexual activity, and that these strategies could be related in part to the sexual acts that the children performed. In addition, this study identified a sweet-talk strategy in which offenders use flattery, friendship, or love to manipulate children into participation, confirming many previous findings on online grooming, albeit not always characterized by long-term contact. Expanding knowledge about the variety of strategies offenders use and highlighting the importance of not taking too uniform a view of sexual abuse conducted online may have implications for how we can understand, detect, and prevent these crimes.

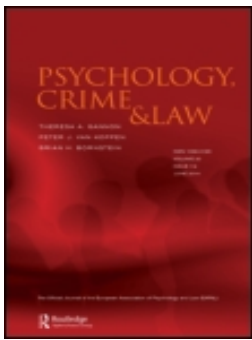
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Experiences and psychological health among children exposed to online child sexual abuse – a mixed methods study of court verdicts

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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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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*, *Feared 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)

Feared 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](https://osf.io/ma2eu/) 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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“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 ^a	Age at onset of abuse	Length of contact with offender/s	Age at interview	Number of online offenders	Online sexual abuse ^b	Experience of offline sexual abuse ^c	LYLES score nIPE/IPE/ACC ^d	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)

^aAll names are fictitious. ^bThe 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. ^cThe 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. ^dLYLES = 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
From thrilling to abusive	
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.
Negative effect on health and wellbeing	
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.
A new self after the abuse	
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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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2020.606218/full#supplementary-material>

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