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Technology-assisted child sexual abuse

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DEPARTMENT OF PSYCHOLOGY

UNIVERSITY OF GOTHENBURG

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 följden 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 symtom och potentiella konsekvenser som rapporteras i studierna ligger väl i linje med vad forskning på sexuella övergrepp mot barn utanför nätet visat, 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 webkamera 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 barnens 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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friends, thank you for sharing your lives with me outside this weird world called Academia. I love you all!

I would also like to express my gratitude to the Swedish Crime Victim Compensation and Support Authority for the financial support, and to the brave participants in Study III that made this project possible.

Malin Joleby
Gothenburg, October 2021

CONTENTS

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: Övergreppen [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 boarders 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 & Lougheed, 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 & Frisén, 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 (Ericson, 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 (Edgardh, 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 (Szoszkiewicz, 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 of' 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, Aghtaje, & 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 it if 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 LBGTQ 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.

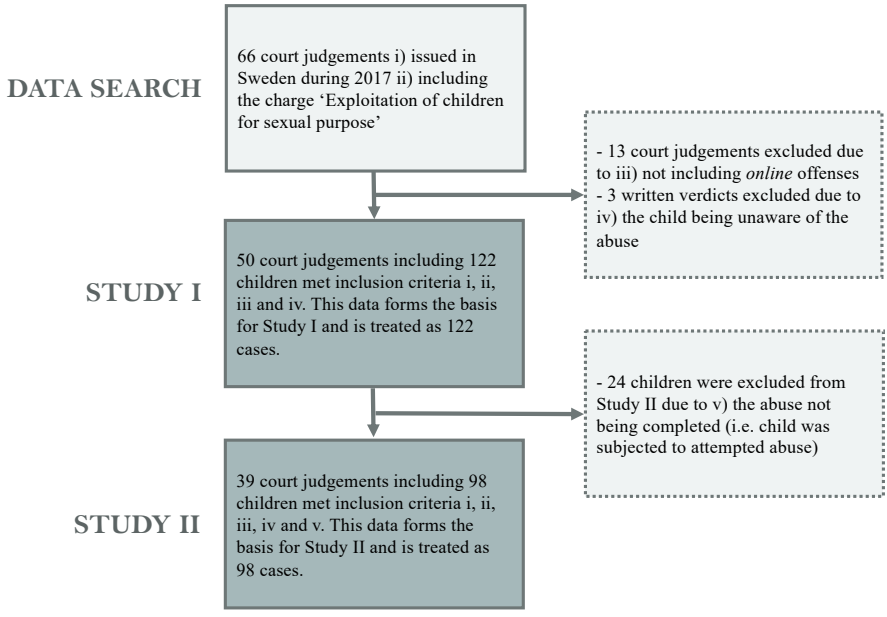


Figure 1. Flow chart showing data selection in relation to the inclusion criteria for Study I and Study II. The inclusion criteria were as follows: i) court case issued during 2017, ii) including the charge 'exploitation of children for sexual posing', iii) including at least one *online* offense, iv) 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.

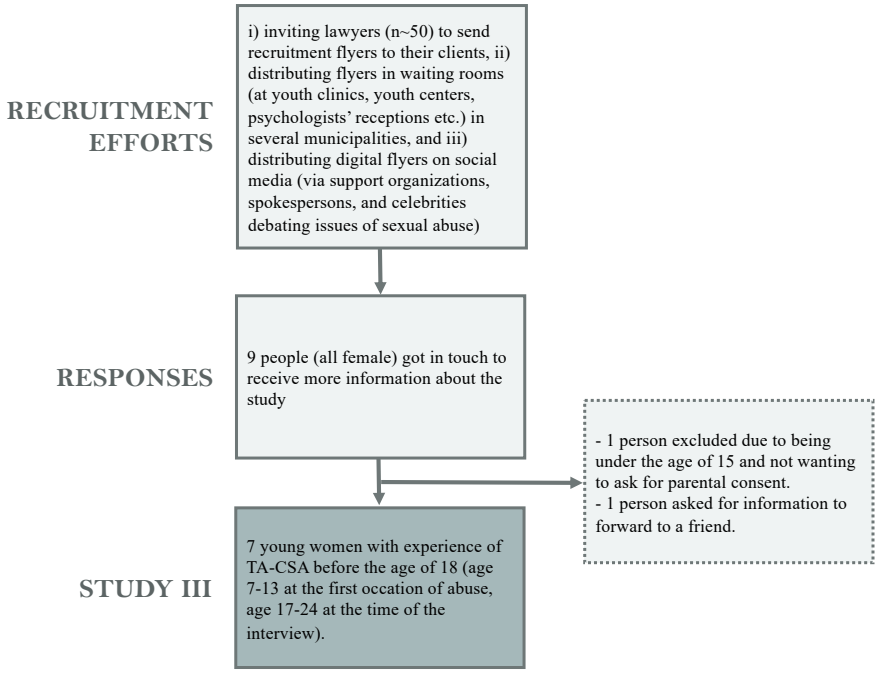


Figure 2. Flow chart showing recruitment of participants to Study III.

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).

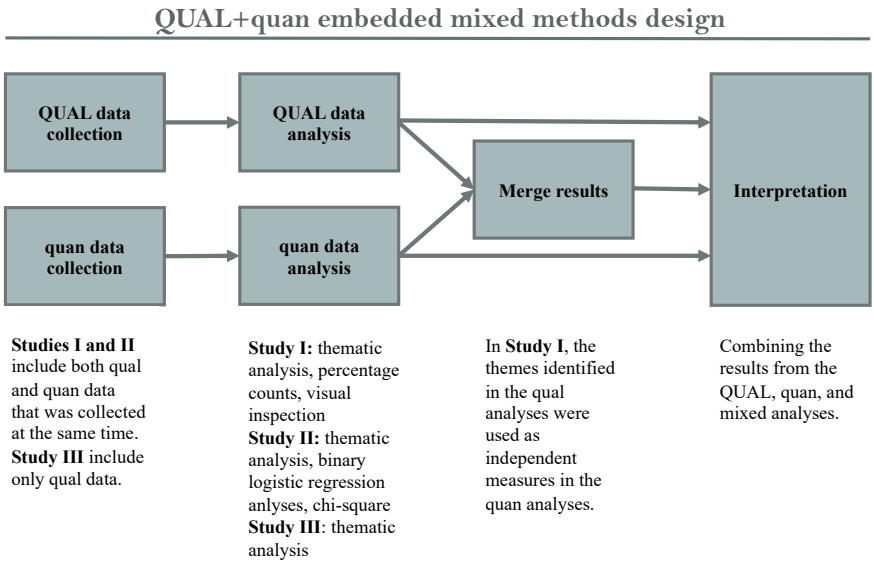


Figure 3. Overview of a QUAL+quan embedded mixed methods design and how it relates to this research project. Inspired by Creswell and Plano Clark (2017).

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	"He regularly reminded her that he intended to publish photos of her on Instagram if she did not participate."
	"The threats have consisted of the defendant claiming that he would injure or kill the complainant or other people close to her."
Using bribes	"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."
Repeatedly nagging	"… and then requests were sent to see the complainant in underwear or swimwear, and there was a lot of systematic nagging."
Sweet talk	
Using flattery	"He wrote to her that she was good-looking, has a nice body and that he likes her."
Acting as a friend	"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."
Expressing love	"What if I got to see your boobs without a bra teehee love you."
	"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."

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 disembody 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 (Joleby, 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.

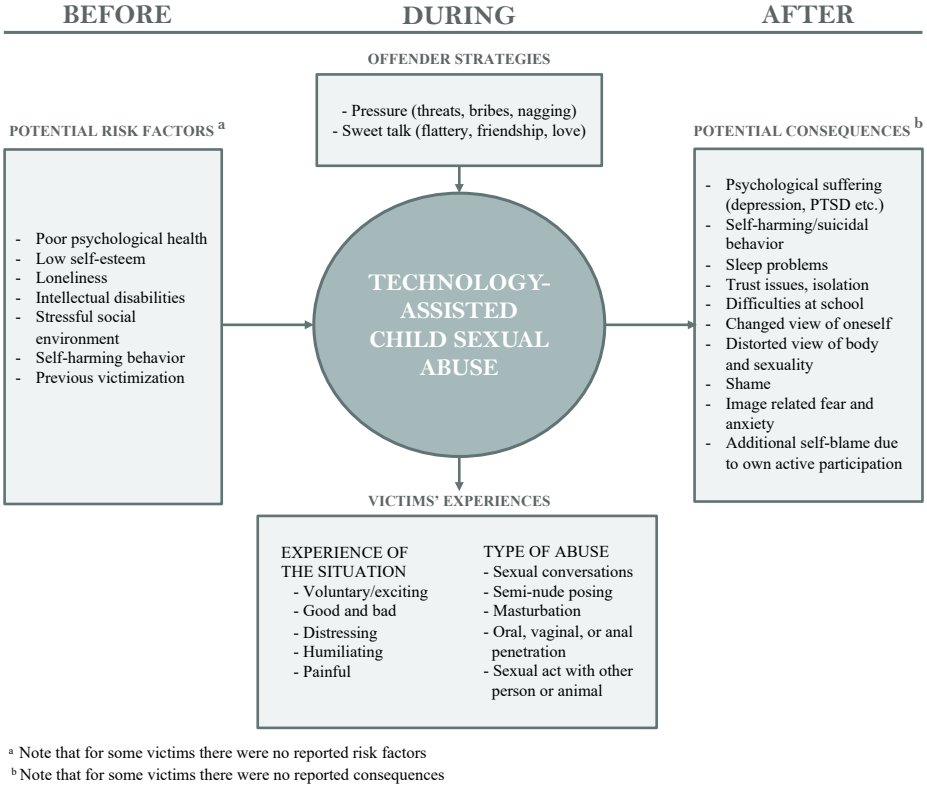
Online offenders' use of (sometimes immediate) pressure and threats indicates that the new digital landscape – with its access to a large number of potential victims – has created a new possibility structure. Offline offenders might need to be more deliberate in order not to scare off their potential 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 occurs 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-variating 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	• 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	• 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	• 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	• 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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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.