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Adolescents' Disclosure of Online Sexual Grooming Experiences: Facilitating Factors

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Online sexual grooming is a growing concern as children and adolescents increasingly interact on online platforms, often without parental supervision. This phenomenon involves soliciting children and adolescents for sexual purposes. Understanding the factors that impact the disclosure of online grooming experiences is crucial for creating effective prevention and intervention strategies against grooming and child sexual assault. Prior research on online grooming is limited, and based on our current knowledge, there is no empirical research on factors that impact disclosure.

This study investigates the factors influencing adolescents' disclosure of online grooming experiences. The subsample is drawn from prior research conducted by Save the Children Finland, where 1,762 Finnish adolescents completed a self-reported questionnaire about online grooming. The subsample of this study consists of 976 adolescents aged 11 to 17 who reported experiencing online grooming. Sixty-seven percent of the adolescents reported they had disclosed their experiences to someone, while thirty-three percent reported they had not disclosed their experiences to anyone. Most adolescents disclosed their experiences to peers rather than to adults.

The findings suggest that effective communication between adolescents and their parents is a significant factor in facilitating disclosures of online grooming experiences. Additionally, the perpetrator's grooming strategy of offering rewards for sexual acts was associated with an increased likelihood of disclosure; however, the model did not reach statistical significance, indicating the need for further research. A reported close romantic or friendly relationship with the perpetrator did not appear to impact disclosure in our subsample.

This study emphasizes the importance of effective parent-child communication in facilitating disclosures, which could potentially prevent further sexual abuse and provide support. Additionally, this research highlights the need for further investigation into the factors impacting the disclosure of online grooming experiences and the creation of reliable tools to assess these experiences effectively.

Key words: grooming, online sexual abuse, disclosure, non-disclosure, adolescents, sexual solicitation

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Netissä tapahtuva grooming on kasvava huolenaihe, sillä lapset ja nuoret viettävät yhä enemmän aikaa sosiaalisen median alustoilla ilman aikuisen valvontaa. Grooming tarkoittaa lasten tai nuorten houkuttelua seksuaalisiin tarkoituksiin. Grooming-kokemuksista kertomiseen vaikuttavia tekijöitä on tärkeä tutkia, jotta lapsiin kohdistuvaa seksuaalista väkivaltaa voitaisiin ennaltaehkäistä. Aikaisempi tutkimus groomingista on vähäistä, eikä nykyhetken tietojemme mukaan netissä tapahtuvan groomingista kertomiseen vaikuttavia tekijöitä ole aikaisemmin empiirisesti tutkittu.

Tämän tutkielman tarkoituksena on tutkia tekijöitä, jotka vaikuttavat netissä tapahtuvaan grooming-kokemuksista kertomiseen nuorilla. Tutkimusaineisto on saatu Pelastakaa Lapset Ry:n keräämästä aineistosta, jonka itsearviointikyselyyn groomingista vastasi 1762 nuorta. Tämän tutkielman osaineisto koostui 976 nuoresta, jotka raportoivat kokeneensa groomingia netissä. Vastajat olivat 11–17-vuotiaita. Yhteensä 67 % vastaajista raportoi kertoneensa kokemuksistaan jollekulle, kun taas 33 % raportoi, ettei ole kertonut kokemuksistaan kenellekään. Suurin osa nuorista raportoi kertoneensa kokemuksistaan vertaisilleen, kun taas aikuisille kertominen oli vähäisempää.

Tutkielman tulokset viittaavat siihen, että hyvä kommunikaatio vanhempien kanssa edesauttaa grooming-kokemuksista kertomista. Lisäksi tekijän tarjoamat palkkiot olivat yhteydessä kertomiseen, joskin tilastollinen malli ei ollut merkitsevä, minkä vuoksi tuloksia kannattaa tulkita varoen. Nuorten raportoima läheinen romanttinen- tai ystävyysuhde tekijän kanssa ei ollut yhteydessä kertomiseen tässä tutkielmassa.

Tämä tutkielma korostaa hyvän kommunikaation lapsen ja vanhemman välillä olevan tärkeä grooming-kokemuksista kertomista edesauttava tekijä. Tämä kommunikaatioyhteys voi mahdollisesti ennaltaehkäistä groomingin kehittymisen vakavammaksi seksuaaliseksi väkivallaksi ja auttaa tuen saamisessa. Lisäksi tämä tutkimus osoittaa tarpeen tutkia lisää tekijöitä, jotka vaikuttavat grooming-kokemuksista kertomiseen. Grooming-kokemuksia mittaavien mittareiden kehittäminen olisi tärkeää tutkimustulosten yhtenäistämiseksi sekä monimutkaisen grooming-ilmion tunnistamiseksi.

Avainsanat: grooming, seksuaalinen väkivalta, kertominen, nuoret, lapsen houkuttelu

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1 Introduction

Child sexual grooming is a deceptive process where an adult attempts to prepare a child for a sexual encounter with them (Craven et al., 2006; Winters et al., 2022). Grooming is commonly a precursor to child sexual abuse (CSA), as it facilitates the abuse. Perpetrators employ various grooming strategies to create an optimal environment for sexual abuse and to avoid detection (Winters et al., 2022). This often involves manipulating a child into cooperation and discouraging them not to disclose the encounter to anyone. Additionally, identifying child sexual grooming is challenging since the behaviour may resemble innocent and regular child-adult interaction before the sexual intentions appear (Craven et al., 2006; Winters & Jeglic, 2016). Defining grooming is complex, and the line between grooming and CSA is vague, as it is difficult to assess when the grooming progresses to sexual assault. It can be argued that grooming itself is a component of child sexual violence, and it has been criminalized as a sexual offence in many countries, such as the United Kingdom, Finland and Sweden.

There is a strong consensus that CSA has negative consequences on a child's well-being and development (Ensink et al., 2020; Fergusson et al., 2013). CSA increases the risk of various psychopathologies, such as PTSD and depression (Fergusson et al., 2013; Paolucci et al., 2001), and is linked to suicidal ideations and attempts (Fergusson et al., 2013; Zainudin & Ashari, 2018). Additionally, CSA is linked with several long-term physical health symptoms (Irish et al., 2009), future alcohol dependence, and diminished socioeconomic well-being in adulthood (Fergusson et al., 2013).

Nearly a quarter of girls have been victims of sexual violence over their lifetime (Qu et al., 2022). Among boys, the prevalence rate of CSA varies between 3% and 17% (Barth et al., 2012). Overall, the prevalence of CSA appears to be declining, as reporting rates have decreased from 28% during the period of 1981-2000 to 21% from 2001-2022 (Qu et al., 2022). However, with the advent of the internet, CSA has expanded to online platforms (Ali et al., 2021). One in nine adolescents has received sexual solicitation online (Madigan et al., 2018a). Additionally, 23% of college students reported engaging in intimate online conversations with an adult stranger when they were minors (Greene-Colozzi, 2020). Over half of them recalled receiving sexual solicitation from these adults. Online child sexual abuse is considered as severe to a child's psychological well-being as in-person CSA (Hamilton-Giachritsis et al., 2020).

Disclosing CSA is crucial for the child to receive help and to protect other children from sexual abuse. However, it is common for children to delay disclosure (London et al., 2008; McElvaney, 2013). Research on factors that impact CSA disclosure is limited, and even more so for online CSA (Katz et al., 2021). Based on our current knowledge, there are no prior empirical studies on the factors that influence the disclosure of online grooming experiences, as research on grooming is also limited. In a Spanish study, sixty-two percent of adolescents disclosed online grooming experiences to someone (Villacampa & Gómez, 2017). Sixty-seven percent of the adolescents who disclosed their experiences disclosed to peers, and only thirteen percent disclosed their experiences to guardians.

Overall, there is an increased need for empirical research on factors that impact the disclosure of grooming experiences. By understanding these factors, sexual education can be improved, potentially helping children recognize grooming and encouraging their disclosure. Prompt disclosure may protect children and adolescents from further abuse and harm and provide them with necessary support and resources.

This study aims to provide empirical knowledge of the factors that impact adolescents' disclosure of online grooming. This study aims to identify factors broadly, with a particular focus on the impact of various grooming strategies, as it has been suggested that the grooming process can decrease a child's willingness to disclose their experiences. This study will investigate disclosure experiences cross-sectionally.

1.1 Child Sexual Grooming

1.1.1 Definition of Grooming

Child sexual grooming is a deceptive process that facilitates child sexual abuse and enables perpetrators to avoid detection by manipulating children into cooperation (Winters et al., 2022). Child sexual grooming is closely related to CSA, and the definition of CSA has been criticized for excluding the grooming process (Craven et al., 2006). In a study by Winters and Jeglic (2022), 99% of CSA victims reported that their abuser employed at least one grooming strategy. However, it is essential to note that the phenomenon is complex, as not all CSA perpetrators use grooming strategies, and grooming does not always progress to CSA. Nevertheless, grooming itself is a criminal offence in many countries, even if it does not lead to CSA; for example, it has been criminalized under Finnish criminal law since 2023 (Criminal Code 39/1889).

The history of the term ‘grooming’ traces back to the late 1970s, when U.S. law enforcement investigators noticed that CSA offenders exhibited certain behaviours before the sexual assault took place (Burgess & Hartman, 2017). Additionally, there was a growing awareness of CSA and perpetrators seeking positions that gave them more access to children (Lanning, 2018). Public incidents in the 1980s, such as the McMartin School case, further brought the concept of grooming to public attention (Dietz, 2018).

The term ‘grooming’ first appeared in peer-reviewed publications in 1984 (Dietz, 2018). Before that, older academic publications used different terms to describe a similar concept, such as ‘seduction’ (Dietz, 2018). However, the term ‘seduction’ is now considered outdated for describing the grooming process, as it implies that a child could be willingly seduced. In recent years, research on grooming has become more established, though further studies are still needed (Craven et al., 2006). Research on grooming has increased over the past two decades, and the term ‘grooming’ has become more prevalent in peer-reviewed publications since 2008 (Dietz, 2018).

The lack of validated and standardized measures for assessing grooming challenges the research in this area. The definition of grooming varies across studies, complicating the comparability of results (Winters et al., 2022), and a generally accepted definition of grooming is needed (Bennett & O’Donohue, 2014). Moreover, validated and standardized measures are necessary to ensure greater consistency and reliability in future studies (Winters et al., 2022).

In recent years, efforts have been made to align the definition of grooming (Bennett & O’Donohue, 2014; Craven et al., 2006; Winters et al., 2022) and only recently has research begun to achieve consensus on the grooming process (Winters & Jeglic, 2022). A review by Winters and colleagues (2022) summarized the definition of grooming that has gained agreement across studies. Their review concluded that the grooming process involves various stages, is deceptive due to manipulation, and aims to create an environment conducive to sexual abuse, facilitate repeated abuse, and reduce the likelihood of disclosure.

1.1.2 Grooming Stages and Strategies

Literature suggests grooming has different stages to facilitate the abuse (Craven et al., 2006; Leclerc et al., 2009; Winters & Jeglic, 2016). Winters and colleagues (2020) aimed to identify these different stages of in-person grooming with the Sexual Grooming Model (SGM) they developed based on a literature review. The model has five different grooming stages: selecting

the victim; gaining access and isolating a child; developing trust; desensitization to sexual content; and maintenance following the abuse. The model still requires empirical validation and more knowledge of how these stages emerge (Winters et al., 2020).

Some studies have attempted to identify specific grooming strategies that typically appear in perpetrators' behaviour (Winters et al., 2020; Winters et al., 2022). Winters and colleagues (2020) gathered all the grooming behaviours (n = 77) they found in the literature and narrowed them into 42 relevant ones, with the help of 18 experts who assessed the relevance of every behaviour. These various strategies were classified into the five stages in the SGM. For example, in the stage of victim selection, experts had a consensus that perpetrators tend to select victims who have troubles in their family settings (e.g., not having a close relationship with parents) and have confidence issues. In the stage of trust development, common strategies include the perpetrator showing affection towards the child, spending a considerable amount of time with the child, creating a sense of specialness in the relationship by favouring the child, and providing rewards and privileges, such as gifts. In the stage of post-abuse maintenance, the perpetrator might tell the victim not to tell anyone, persuade the child that the incident was typical, give rewards or bribes, cause the victim to feel responsible, or threaten the victim. Refer to Winters and colleagues' (2020) paper for further details.

It is important to note that grooming strategies can vary among perpetrators (Winters et al., 2022), and various strategies may be employed based on context, victim and perpetrator (Craven et al., 2006; Winters et al., 2022). Despite the variation in conducted strategies, recognizing different grooming behaviours can significantly enhance the understanding of grooming and facilitate the identification of potentially risky situations for children (Winters et al., 2022).

As grooming strategies vary across different contexts, it has been suggested that grooming strategies are conducted differently online (Davidson & Gottschalk, 2011; Elliott, 2017). Research on online grooming strategies is commonly investigated through online conversations between perpetrators and adults posing as children (Joleby et al., 2021). These decoy studies indicate that rapport building is a frequently employed grooming strategy in chatroom conversations (Chiang & Grant, 2017; Williams et al., 2013). Perpetrators often use flattery (Chiang & Grant, 2017) and compliments (Ioannou et al., 2018; Lorenzo-Dus & Izura, 2017) during conversations. However, the generalizability of these decoy studies has been criticized, as the conversations may not simulate natural interactions between a child and an offender

(Briggs et al., 2011; Williams et al., 2013), and it has been suggested that perpetrators may be more persuasive and utilize force in online conversations with real children than with decoys (Joleby et al., 2021). In a study of 50 Swedish court cases, common online grooming strategies were pressuring the child with actions, such as threatening, bribing, or repeatedly nagging, and sweet-talking, such as flattering, acting as a friend, or expressing love (Joleby et al., 2021). Kloess and colleagues' (2019) study of real internet conversations between offenders and children revealed that offenders tend to employ either indirect or direct strategies. In the former, offenders spend more time building a relationship with the child, whereas in the latter, they employ more aggressive tactics, such as threats or insults (Kloess et al., 2019).

Further empirical studies on grooming strategies online are needed (Schmidt, 2023). Gámez-Guadix and colleagues (2021) developed a five-subscale instrument called the Multidimensional Online Grooming Questionnaire (MOGQ), which they validated with a sample of 1709 Catalanian adolescents. In their study, commonly reported strategies were sexualizing the conversation, displaying interest in the victim's environment, offering gifts, and employing deceit and aggression.

In summary, grooming strategies are context-dependent, where the victim, perpetrator and environment affect the dynamics (Whittle et al., 2013). Grooming strategies might not appear chronologically, as they can occur simultaneously (Winters et al., 2020), and there is a need for more empirical studies on strategies in natural settings. Overall, the grooming strategies are deceptive as their function is to manipulate the child into sexual interaction with the perpetrator. However, it is essential to keep in mind that there is no empirical evidence that perpetrators use these strategies consciously (Winters et al., 2022). Some offenders have been noted to either deny or justify their acts towards children (Craven et al., 2006). Offenders may have implicit theories, such as believing their actions are not harmful to children or beyond their control (Marziano et al., 2006).

1.1.3 Online Sexual Grooming

With the advent of the internet, child sexual grooming has found a new platform to entrap children (Whittle et al., 2013). The internet offers a place where adolescents can be approached easily. According to a Finnish study, 60% of adolescents reported intensively communicating with close friends online (Lyyra et al., 2022). In the same study, 22% engaged in frequent communication with friends they met online, while 13% reported maintaining intensive

communication with people they do not know. A retrospective study of college students revealed that a quarter of participants engaged in online conversations with an adult when they were minors (Greene-Colozzi, 2020).

As adolescents spend more time online, the prevalence of grooming and online sexual abuse has become a growing concern. A Swedish population study shows that 23.2% of Swedish adolescents reported encountering grooming online (Johnsson & Svedin, 2017). Additionally, 5.8% of the adolescents engaged in online sexual interactions with online contact, with one-tenth reporting feelings of pressure or coercion. A meta-analysis conducted by Madigan and colleagues (2018a) revealed that, on average, 11.5% of youth had received unwanted sexual solicitation online.

On the Internet, risk assessment might be easier for the perpetrator. Perpetrators can use technology to protect themselves from getting caught, such as using different IP addresses (Webster et al., 2012). Online grooming is also advantageous for deception, as it is easier to lie about one's age or characteristics online. In Wolak and colleagues' (2018) study, 58% of victims reported that the perpetrator gave false impressions about their age or intentions of their relationship. However, it has been noted that a common misconception is that most perpetrators lie about their age, and it has been suggested that there is no need for that kind of deception, given the high efficacy of the manipulation process (Whittle et al., 2013). In a representative sample conducted in the United States, 95% of the victims reported they were aware the offender was an adult and had sexual interests in them (Wolak et al., 2004). Other grooming strategies, such as building relationships, were considered more effective in the same study.

It has been observed that perpetrators may reveal their sexual interests to minors quickly in online conversations (Kloess et al., 2019; Winters et al., 2017). Winters and colleagues (2017) reported that 69% of the perpetrators disclosed their sexual intentions in the first 30 minutes of online conversations with decoys posing as children. Some argue that quick and direct sexual solicitation may not align with the concept of grooming, as observable grooming strategies have been absent in some cases (Kloess et al., 2019). However, there is a variation in the duration of online conversations (Webster et al., 2012; Winters et al., 2017). Some perpetrators invest more time to build a connection with the adolescent (Winters et al., 2017). Nonetheless, it has been observed that despite the revelation of sexual intentions, perpetrators might continue rapport-building to sustain contact with the youth (Kloess et al., 2019) and facilitate further sexual abuse.

In-person grooming can lead to violations of physical boundaries, while online grooming can expose minors to sexual conversations and media (Ringenberg et al., 2022). Furthermore, the perpetrator can persuade adolescents to send sexual pictures of themselves or to engage in sexual activity (Kloess et al., 2019). Klettke and colleagues (2014) found in their systematic review that an estimated 11.96% of adolescents have sent sexual photos to someone. The online environment also poses a risk for the creation of sexual deepfake materials of the victim. Sexual deepfakes are created through artificial intelligence, often utilizing the victim's photos. Ten percent of victims whom their offender had blackmailed reported the offender had generated fake sexual material of them (Wolak et al., 2018).

Sometimes online grooming can lead to meetings in real life. In Greene-Colozzi and colleagues' (2020) study, thirty-eight percent of participants (n = 100) who had long online conversations with an adult met the perpetrator in person. Of those meetings, sixty-eight percent led to physical sexual intercourse. However, studies of online offenders reveal that not all perpetrators seek to meet a child in real life (Webster et al., 2012). Briggs and colleagues (2011) categorized their sample of online offenders to either contact or fantasy-driven. Contact-driven offenders aimed to meet the victim in real life, while fantasy-driven offenders seemed to reach gratification if the assault took place in the online environment. The previous distinction has not received empirical support in later studies, where these two categories overlap among offenders (Broome et al., 2018). However, there is a consensus that online perpetrators may have different motivations for engaging in contact with minors (Websters et al., 2012; Whittle et al., 2013).

The psychological consequences of online abuse have been observed to be as severe as in-person abuse (Hamilton-Giachritsis et al., 2020). A quarter of adolescents reported high amounts of distress after receiving sexual solicitation (Mitchell et al., 2001). Sexual abuse with a digital component, such as sexual images of the victim or online sexual solicitations, is associated with an increased risk for psychopathologies, such as depression and PTSD (Say et al., 2015). Sometimes online grooming involves serious threatening and blackmailing that can cause significant distress to the victim (Webster et al., 2012). Almost half (44%) of adolescents who were digitally abused reported that the offender threatened to spread a sexual image of them (Say et al., 2015). In some cases, the perpetrator harasses the victims for a longer period. Among adolescents whose abuser threatened to spread a sexual photo of them, one in four reported that these threats persisted for more than six months (Wolak et al., 2018). The online

environment offers a unique platform for abusing minors, as it enables continuous access to victims at every hour (Whittle et al., 2013).

1.1.4 Risk factors

Girls appear to be at higher risk for receiving online sexual solicitations (Calvete et al., 2021; de Santisteban & Gámez-Guadix, 2018; Jonsson & Svedin, 2017; Mitchell et al., 2001). Additionally, sexual minorities may be at greater risk for online sexual abuse (Gámez-Guadix et al., 2015; Wolak et al., 2004). Some findings suggest that older adolescents are more likely to receive sexual solicitations (Calvete et al., 2021; de Santisteban & Gámez-Guadix, 2018; Mitchell et al., 2001). This may be due to older adolescents spending more time online, increasing the risk of dangers online (Davidson et al., 2009). According to the EU Kids Online report, teenagers report a significantly higher prevalence of having a social media profile compared to younger children (Livingstone et al., 2011). Based on a study conducted in the UK, thirty-five percent of adolescents have added a stranger as a friend on a social media platform (Davidson et al., 2009). Curiosity about sexual behaviour in adolescents may manifest as sexual behaviour online (Calvete et al., 2021), and it has been observed that increasing age is associated with sexting among adolescents (Madigan et al., 2018b). It is essential to recognize that the desire to expand social networks beyond the family and a curiosity about sexual behaviour are natural parts of adolescent development. However, this developmental stage may put them at higher risk of online sexual violence.

Adolescents from vulnerable families may be more at risk of receiving online sexual solicitations (Brå, 2007; Mitchell et al., 2001). Alienation from parents predicts forming a close online relationship with a stranger (Wolak et al., 2003). Gallagher (2007) analysed police interviews and files involving child victims of online sexual grooming. Their findings indicate that victim groups are overrepresented in single-parent families, reconstituted families, and economically disadvantaged families. Furthermore, functional family dynamics can protect children from online sexual encounters. Pasca and colleagues (2022) identified family support was a significant protective factor against online grooming. However, it is important to note that, despite the protective role of family, seventy-five percent of adolescents who experienced sexual solicitations did not belong to any recognized risk group (Mitchell et al., 2001).

It has been suggested that psychological symptoms may increase the risk of sexual solicitation in adolescents (Mitchell et al., 2001). Some studies have found a link between depressive

symptoms and online sexual solicitations (de Santisteban & Gámex-Guadix, 2018; Mitchell et al., 2001). In one study, adolescents who misused alcohol, were involved in thefts, violence, or truancy, and were victimized by bullying were more likely to receive online sexual solicitation (Brå, 2007). However, it is difficult to assess the causality between sexual solicitations and psychological symptoms, and as noted before, sexual solicitations can itself cause distress.

1.2 Disclosing the Child Sexual Abuse

It is widely acknowledged that the majority of CSA victims tend to postpone the disclosure until adulthood (London et al., 2008; Tener & Murphy, 2015). Retrospective studies indicate that 55%–69% of adults did not disclose their CSA experience during childhood (London et al., 2008). Research on the disclosure of online CSA is limited (Katz et al., 2021), with an even more significant lack of studies explicitly addressing online grooming. A quarter of adolescents in the United States told their parents about sexual solicitation they received online (Finkelhor et al., 2000). Findings from forensic interview surveys suggest that adolescents are more likely to disclose online sexual solicitation experiences to peers rather than parents (Gemara et al., 2023; Katz, 2013), which is in line with the previous studies of CSA (Manay & Collin-Vézina, 2021; Priebe & Svedin, 2008).

There are various reasons why children may refrain from disclosing sexual abuse experiences to others. Occasionally, adolescents may fear potential negative consequences following disclosure. Some adolescents report fearing punishment if their parents were to learn of online victimization (Mishna et al., 2009). Some adolescents fear the perpetrators' reaction and possible consequences, such as spreading sensitive pictures to others (Katz et al., 2021). Threats may impact a child's willingness to disclose CSA, though the empirical evidence on this is insufficient (London et al., 2008). Furthermore, some victims may experience feelings of self-blame or guilt after the incident (Katz, 2013), which can affect their willingness to disclose.

One reason why adolescents may not disclose their experiences is that they do not perceive the abuse as severe enough. Forty-four percent of adolescents who did not report online sexual grooming cited the reason was not considering the incident serious (Villacampa & Gómez, 2017). In Katz and colleagues' (2021) study, adolescents who were unwilling to cooperate with investigators reported they did not perceive the interaction with the perpetrator as abusive. Additionally, fifty-one percent of adolescents with experience of CSA did not identify those experiences as sexual abuse (Lahtinen et al., 2018). This absence of self-identification may stem

from a limited understanding of CSA, which has been identified as a barrier to disclosing these experiences (Manrai et al., 2021). Notably, understanding the severity of the abuse has been shown to facilitate disclosure (Brennan & McElvaney, 2020).

The grooming process itself aims to prevent children's disclosure (Craven et al., 2006; Winters et al., 2022). Katz (2013) conducted a study involving investigative interviews of twenty children suspected of having experienced online CSA. Their findings revealed that eight children resisted disclosing the abuse, even when strong evidence of the abuse existed. They suggested that this resistance might be due to the close connection these children had with the perpetrator. Furthermore, Webster and colleagues (2012) suggested that the victims' sense of being in a relationship with the perpetrator may increase loyalty to them, prolonging the sexual abuse and further preventing disclosure. These findings align with the idea that the perpetrators often establish a close relationship with their victims to ensure their cooperation and prevent them from disclosing the abuse. The establishment of close relationships appears to be a common strategy, as half of the online CSA victims have reported feeling a strong bond or being in love with the perpetrator (Wolak et al., 2004).

Some studies have found that girls are more likely to disclose the abuse compared to boys (Hébert et al., 2009; Okur et al., 2020; Priebe & Svedin, 2008). Findings in a systematic review by Manay and Collin-Vézina (2021) concluded that girls tend to disclose CSA to peers, whereas boys appear not to disclose their experiences to anyone. The evidence on victims' age impacting CSA disclosure is mixed. Some studies suggest that older age facilitates CSA disclosure (Lippert et al., 2009; Velloza et al., 2022), while others have not found an association between age and disclosure (Priebe & Svedin, 2008). Kogan (2004) found that younger adolescents were more likely to disclose online CSA immediately compared to older adolescents. Some findings suggest that age impacts disclosures to peers, as older adolescents tend to share experiences among themselves primarily and not with adults (Manay & Collin-Vézina, 2021).

A caring and not overprotective parent-child relationship may facilitate adolescents' CSA disclosures (Priebe & Svedin, 2008). This facilitating association between the parent-child relationship and disclosure was observed even though most adolescents disclosed CSA to peers rather than to parents. Priebe and Svedin (2008) proposed that this may be due to the supportive family environment which encourage adolescents to communicate about CSA experiences with others. Furthermore, a supportive social environment has been identified as facilitating the disclosure of online CSA (Manrai et al., 2021). In Brennan and McElvaney's (2020) review,

the most prominent theme identified as a facilitator of disclosure was the presence of someone the child can trust.

1.3 Research Questions and Hypotheses

This study aims to investigate the factors that impact adolescents' disclosure of online grooming experiences and to contribute empirical knowledge to this area of research. The grooming process is considered to affect a child's willingness to disclose such incidents to others (Craven et al., 2006; Winters et al., 2022), and especially the perpetrator forming a close relationship with the child has been suggested to impact CSA disclosure (Katz, 2013; Wolak et al., 2004). This study considers this perspective by examining the impact of various grooming strategies on disclosure. Other potential factors are also investigated since empirical knowledge of the factors impacting the disclosure is limited. We were especially interested in how communication between adolescents and parents impacts disclosure since prior findings indicate that a caring parent-child relationship facilitates CSA disclosures to others (Priebe & Svedin, 2008).

This study did not exclude adolescents based on whom they disclosed grooming to. This decision was due to the majority of participants disclosing experiences to peers instead of adults, which aligns with the prior studies (Gemara et al., 2023; Villacampa & Gómez, 2017). Sharing experiences with peers is considered important, given that peers can help realize the relationship with the perpetrator is abusive (Brennan & McElvaney, 2020). Understanding the factors that facilitate the disclosure, regardless of whom adolescents have disclosed to, is essential for the victim to receive support.

The research questions are the following:

1. How are adolescents' background factors (age, gender, family structure) and their communication with parents associated with the likelihood of disclosing online grooming?
2. Are the perpetrator's strategies—such as offering rewards for sexual acts, prohibiting disclosure, and asking consent for sexual acts—associated with adolescents' likelihood of disclosing online grooming?
3. Does the perceived relationship with the perpetrator impact the likelihood of disclosing online grooming?

Based on current knowledge, there is no prior research on factors that impact disclosing grooming experiences. We assume the factors impacting CSA disclosures may impact disclosing grooming somehow similarly as the phenomena are closely related. However, it is possible the factors impact differently when it comes to disclosing grooming. We hypothesise that higher levels of communication between adolescents and parents increase the likelihood of disclosure.

Our second hypothesis is that adolescents who perceive the relationship with the perpetrator as close are less likely to disclose their grooming experiences to others. Prior studies suggest that a close relationship with the perpetrator prevents disclosure (Katz, 2013; Wolak et al., 2004). No other hypotheses are proposed due to the limited research and findings.

2 Methods

2.1 Participants

The sample for the present study is drawn from a research survey conducted by Save the Children Finland (Juusola et al., 2021). Adolescents aged 11–17 were recruited for the study via schools and social media. A total of 499 Finnish schools were invited to take part in the study. Fifteen of those schools were Swedish-speaking. Schools were selected evenly from all over Finland, including the ten largest schools from each region. Furthermore, schools from smaller municipalities were selected to obtain a representative sample.

Due to COVID-19, the survey was also distributed online, as some schools were conducting distance learning. The survey was advertised through Finnish child protection organizations, hotline stakeholders, and social media. A social media influencer promoted the survey on her channel. A total of 1,762 adolescents participated in the survey (Juusola et al., 2021). Twenty-seven percent of participants responded to the survey at school ($n = 479$), while 73% responded through social media ($n = 1283$).

Seventy-one percent of adolescents self-identified as female ($n = 1231$), 18% of the adolescents self-identified as male ($n = 317$), 3% identified as other ($n = 52$), 5% did not want to define their gender ($n = 80$), and 3% did not want to disclose their gender ($n = 60$). Age ranged from 11 to 17 years, with 92% of the respondents being over 13 years old ($n = 1591$). Ninety-seven percent of adolescents reported their mother tongue as Finnish ($n = 1514$). Others reported their mother tongue as English (3%, $n = 46$), Swedish (2%, $n = 39$), and Russian (1%, $n = 16$).

The present study was interested in factors that impact disclosing online grooming experiences. A total of 61% ($n = 1070$) of adolescents reported that an adult or someone at least five years older had contacted them online, while 38% ($n = 666$) reported not being contacted online. This study focuses on a subsample of participants who had reported online grooming experiences, answered the survey questions about disclosure, and provided research consent ($n = 976$).

2.2 Procedure

The survey was conducted online via Webropol. The survey was open from February 15, 2021, to March 2, 2021. Instructions for the survey procedure were sent to school principals via email. At the beginning of the survey, respondents were informed that participation was voluntary and

anonymous, and they could stop the questionnaire at any point. At the end of the questionnaire, respondents received information on various support services to contact if the survey caused any psychological distress. Participants were also advised where to contact if they wanted to report grooming or sexual violence. Teachers received guidelines on grooming with children at schools and a list of support providers in Finland.

The study was conducted by the guidelines of the Finnish National Board on Research Integrity (TENK, 2019). Parents of children participating in schools were informed about the study and had the option to decline their children's participation. Parents of children participating online could not be informed about the study. However, the participant's consent was considered sufficient for participation due to the sensitive nature of the study. Additionally, no personal data were collected. The Finnish National Board on Research Integrity (TENK) approved the study, agreeing that it adhered to ethical principles.

2.3 The Questionnaire

The questionnaire was developed by the research group of Save the Children Finland report (Juusola et al., 2021). It was created in line with previous studies designed for children, such as the School Health Promotion study (THL, 2019) and prior reports by Save the Children Finland (2018). Additionally, Swedish surveys on grooming and sexual violence were used as a guide (Joleby et al., 2020; Jonsson & Svedin, 2017). The survey was available in Finnish, Swedish, and English. The questionnaire contained 69 questions and included items on participants' background information, their understanding of grooming, their experiences of grooming, and their disclosure experiences. The survey was piloted with ten adolescents and was edited based on their feedback.

At the beginning of the survey, the respondents were provided with a definition of grooming. *Grooming* was defined as the solicitation of a child or adolescent for sexual purposes, which often occurs online or social media platforms. Participants were informed that grooming is a process where an adult attempts to create a close relationship to facilitate sexual acts. Respondents were informed that the adult may insinuate sexual messages in conversations or ask for sexual favours, such as sexual images. They were also informed that the progression of contact can be slow, or it may rapidly escalate to sexual content. The survey specified that a 'perpetrator' refers to a person who has contacted the respondent online and is either an adult or at least five years older than them.

2.4 Variables

The variables were created after data collection based on a preliminary review of the dataset. All variable combinations were conducted before the statistical analyses.

2.4.1 Disclosing Grooming Experiences

Disclosing grooming experiences was asked with the following question: ‘Have you told anyone about your experiences?’. The response options were ‘Yes’ and ‘No’. Before the question appeared, the respondents were informed: ‘Next, we would like to ask you who you would tell about your grooming experiences’, so that the respondents would answer about their experiences of disclosing grooming. The variable ‘Disclosing Grooming’ was dichotomous, reflecting whether an adolescent has disclosed grooming experience to someone or not.

2.4.2 Background Information

Background information was collected through the following questions: ‘How old are you?’, ‘Gender?’, ‘Where do you currently live?’. Age was a continuous variable, with response options ranging from 11 to 17. For gender, we combined the answer options ‘I do not want to define my gender’ and ‘I do not want to tell’ into one group ‘Other’. Respondents who did not want to disclose their gender were excluded from the analysis due to the small sample size. Gender was a categorical variable with three categories.

Family structure had nine response options: ‘With both parents; I live alternating weeks with my parents; I live only with one of my parents; I live with my grandparents or other relatives; I live in foster care; I live in a children's home, youth facility, or residential school; I live in a family home; I'm placed in an institution; none of the above, if so, what?’. Responses on family structure were categorized into three groups: ‘Both parents’; which combined living with both parents or alternating between parents; ‘Single parent’; and ‘Other’ which combined living with relatives or outside of family. Open-ended responses were excluded from the analysis. Family structure was a categorical variable.

2.4.3 Communication with Parents

A new continuous variable was created to assess the communication connection between adolescents and their parents. This new variable is referred to as ‘Communication with Parents’. The following questions were included into the variable: ‘Is it common for you to talk with

your guardian about what you do online or on social media?'; 'Do you feel comfortable talking with your guardian about what you do online or on social media?'; 'Does your guardian know what you do online or on social media?'; 'Is your guardian interested in what you do online or on social media?'; 'Does your guardian know who you spend time with?'. The answer options for each question were 'Yes' or 'No'. Every 'Yes' response was summed for each participant. The scale ranges from 0 to 5, and a higher value indicates a stronger communication connection with parents.

2.4.4 Consent for Sexual Acts, Offering Rewards, and Prohibiting Disclosure

For the variable of consent for sexual acts, the following questions were considered: 'Did the perpetrator (groomer) ask for your consent or permission?'; 'To send nude or intimate photos to you?'; 'To take nude or intimate photos of you?'. Both questions had 'Yes' or 'No' response options. Responses were categorized into two groups: whether the perpetrator had asked consent for at least one of the claims or not. The variable 'Consent for Sexual Acts' was dichotomous.

Offering rewards and prohibiting disclosure for sexual acts were both assessed with the following questions: 'Think about situations related to the previous question': 'Have you been offered compensation for the aforementioned acts or some of them?'; 'Have you been prohibited from speaking about the aforementioned events or contact?'. Response options for both questions were 'Yes' and 'No'. Situations related to the previous question included receiving sexually suggestive messages, being asked to show or send nude pictures, being asked to record oneself naked or in minimal clothing via webcam and receiving nude pictures. Both variables, 'Offering Rewards' and 'Prohibiting Disclosure' were dichotomous.

2.4.5 Perceived Relationship with Perpetrator

A new variable on how adolescents viewed their relationship with the perpetrator was developed from the question: 'How did you perceive the perpetrator (groomer)? You can choose multiple options.' The question had seven non-exclusive answer options: 'I experienced him/her as a friend; partner (boyfriend/girlfriend); a safe person; threatening; frightening; an exciting/interesting new acquaintance; or in some other way?'. The last answer option was not considered since it contained only open responses.

Participants were categorized into three different groups based on their selections from the question. The categories were ‘friend’, ‘partner’, and ‘non-close relationship’. The inclusion and exclusion criteria for categorizing are presented in Table 1. The variable is referred to as ‘Perceived Relationship’ in the present study, and it is a categorical variable with three distinct groups.

Table 1

Categories of the ‘Perceived Relationship’ variable.

Participant selected	Participant did not select	Categories
‘friend’	no exclusive options	Friend
‘partner (boyfriend/girlfriend)’	no exclusive options	Partner
no inclusive options	‘friend’ or ‘partner (boyfriend/girlfriend)’	Non-close relationship

2.5 Statistical Methods

Statistical analyses were conducted with IBM SPSS 29.0. We decided to conduct three separate models for each research question to avoid overfitting the model with too many independent variables. We were primarily interested in the factors that impact disclosure and wanted to reduce the risk of a complicated model and maintain the interpretability of the results. The dependent variable in all three models was disclosing grooming, which was categorical and dichotomous. Therefore, logistic regression analyses were conducted for all three models.

The first model’s independent variables were age, gender, family structure, and communication with parents. In the second model, the independent variables were offering rewards, prohibiting disclosure, and consent for sexual acts. In the third model, the independent variable was the perceived relationship. We decided not to include any background factors as covariates in the second and third models, as most respondents were girls and over 13 years old.

For the logistic regression analysis, the collinearity assumptions between the independent variables were investigated using VIF-values and Tolerance. VIF-value over 5 and Tolerance under 0.2 suggests multicollinearity in the data. The VIF-values were under 5 for all variables (gender = 1.03, family structure = 1.03, age = 1.02, communication with parents = 1.05, consent for sexual acts = 1.03, offering rewards = 1.14, prohibiting disclosure = 1.13, and perceived relationship = 1.04), and tolerance were over 0.2 (gender = 0.97, family structure = 0.97, age =

0.98, communication with parents = 0.95, consent for sexual acts = 0.97, offering rewards = 0.88, prohibiting disclosure = 0.88, and perceived relationship = 0.97), which suggests there is no multicollinearity between the independent variables.

For the logistic regression analysis, the linearity assumption for the continuous variables was investigated by testing the interaction between the independent variables and their natural logarithms. The interaction for both age ($p = .731$) and communication with parents ($p = .555$) were not significant. The results indicate that both continuous variables are linearly related to the dependent variable.

3 Results

3.1 Descriptive Statistics

The present study focused on adolescents' disclosures of grooming experiences. Participants who reported grooming experiences and answered the question about disclosure were included in the study ($n = 976$). In this subsample, 66.6% of participants ($n = 650$) disclosed their grooming experiences to someone, while 33.4% did not ($n = 326$). Specifically, 12.1% of participants ($n = 118$) disclosed their experiences to their mother, 5.6% ($n = 55$) to their father, 1.1% ($n = 11$) to another guardian, 9.5% ($n = 93$) to their sibling, 61.7% ($n = 602$) to their friend, 3.3% ($n = 32$) to either school psychologist, school counsellor or school nurse, 2.8% ($n = 27$) to the police, 2.2% ($n = 21$) to social worker, 0.6% ($n = 6$) to a doctor, 1.0% ($n = 10$) to a nurse and 5.6% ($n = 55$) to others. Table 2 presents disclosure rates by gender and age. The mean age was 15.18 years ($SD = 1.54$), ranging from 11 to 17 years. The mean score for the variable 'communicating with parents' was 2.74 ($SD = 1.49$). Descriptive statistics for the categorical variables are presented in Table 3.

Table 2

Disclosure rates of grooming experiences by gender and age.

	Disclosure % (n)	Non-disclosure % (n)
Gender		
Girls	67.2 (525)	32.8 (256)
Boys	56.8 (46)	43.2 (35)
Other	67.5 (54)	32.5 (26)
Age		
11	66.7 (10)	33.3 (5)
12	60.0 (24)	40.0 (16)
13	59.8 (58)	40.2 (39)
14	65.1 (95)	34.9 (51)
15	71.1 (133)	28.9 (54)
16	65.9 (153)	34.1 (79)
17	68.7 (169)	31.7 (77)

Table 3*Characteristics of the subsample.*

Variable	%	n
Age		
11	1.4	12
12	4.3	36
13	10.2	85
14	15.8	132
15	20.5	172
16	24.9	208
17	22.9	192
Gender		
Girls	82.6	691
Boys	8.6	72
Other	8.8	74
Family structure		
Both parents	76.1	637
Single parent	20.1	168
Other	3.8	32
Offering rewards		
yes	38.9	303
no	61.1	475
Prohibiting disclosure		
yes	37.1	289
no	62.9	489
Consent for sexual acts		
yes	31.7	247
no	68.3	531
Perceived relationship		
friend	15.9	118
partner	7.6	56
non-close relationship	76.5	566

3.2 Impact of Background Factors and Communication with Parents on Disclosing Grooming Experiences

A binary logistic regression analysis was conducted to examine the impact of background factors (age, gender, family structure) and communication with parents on the likelihood of disclosing grooming experiences. The dependent variable was disclosure of grooming, and the independent variables were age, gender, family structure, and communication with parents. The model was statistically significant, $\chi^2(6) = 49.18, p < 0.001$. The model correctly classified 68.6% of cases and explained 7.9% of the variance (Nagelkerke $R^2 = 0.079$). The results of the logistic regression analysis are presented in Table 4. Participants who reported communicating more with their parents were more likely to disclose their grooming experiences to someone, $OR = 1.42, 95\% CI = [1.28, 1.57]$.

Table 4

Results of binary logistic regression analysis on disclosing grooming experiences (n = 837).

	<i>B</i>	<i>SE</i>	<i>p</i>	<i>OR</i>	<i>95% CI</i>
Age	0.08	0.05	.099	1.09	[0.99, 1.20]
Gender*			.597		
Gender: boy	-0.22	0.26	.405	0.81	[0.48, 1.34]
Gender: other	0.14	0.27	.617	1.15	[0.67, 1.96]
Family structure *			.772		
Family structure: single parent	0.09	0.19	.656	1.09	[0.75, 1.59]
Family structure: other	-0.20	0.39	.611	0.82	[0.39, 1.75]
Communication with parents	0.35	0.05	< .001	1.42	[1.28, 1.57]
Constant	-1.45	0.79	.065	0.24	

*The baseline category for gender was 'girls,' and for family structure was 'both parents'

3.3 Impact of Perpetrator Strategies on Disclosing Grooming Experiences

A second logistic regression model was conducted to assess the impact of perpetrator strategies—such as asking for consent for sexual acts, prohibiting disclosure, and offering rewards for sexual acts—on disclosing grooming experiences. The dependent variable was disclosing grooming, and the independent variables were consent for sexual acts, offering rewards, and prohibiting disclosure. The model explained some variance in disclosing

grooming experiences, although it was not statistically significant, $\chi^2 (3) = 7.22, p = .065$. Additionally, the model did not fit the data since Hosmer-Lemeshow test was significant, $\chi^2 (6) = 28.49, p < .001$. The model correctly classified 67.6% of cases, though it explained only 1.3% of the variance (Nagelkerke $R^2 = 0.013$). The results of this model are presented in Table 5. Offering rewards for sexual acts increased the likelihood of disclosing grooming experiences, $OR = 1.43, 95\% CI [1.03, 1.99]$.

Table 5

Results of logistic regression analysis on disclosing grooming experiences (n = 778).

	<i>B</i>	<i>SE</i>	<i>p</i>	<i>OR</i>	<i>95% CI</i>
Consent for sexual acts*	0.24	0.17	.159	1.27	[0.91, 1.76]
Prohibiting disclosure*	-0.26	0.17	.124	0.77	[0.56, 1.07]
Offering rewards*	0.36	0.17	.033	1.43	[1.03, 1.99]
Constant	0.62	0.12	< .001	1.87	

*The categorical comparison for every independent variable was 'no'

3.4 Impact of Perceived Relationship with Perpetrator on Disclosing Grooming Experiences

The third logistic regression model assessed the impact of adolescents' perspectives on their relationship with the perpetrator on disclosing grooming experiences. The dependent variable was disclosing grooming, and the independent variable was the perceived relationship. The model did not explain the variance in disclosing grooming experiences, as the model was not significant, $\chi^2 (2) = 1.33, p = .515$. The model correctly classified 65% of cases. However, the model explained only 0.2% of the variance (Nagelkerke $R^2 = 0.002$). The results of the third model are presented in Table 6.

Table 6

Results of the third model of logistic regression analysis on disclosure of grooming experiences (n = 740).

	<i>B</i>	SE	<i>p</i>	<i>OR</i>	95% CI
Perceived relationship*			.525		
Perceived relationship: friend	-0.09	0.21	.660	0.91	[0.61, 1.38]
Perceived relationship: partner	0.30	0.31	.324	1.36	[0.74, 2.48]
Constant	0.61	0.09	< .001	1.84	

*The categorical comparison for perceived relationship was 'non-close relationship'

4 Discussion

The aim of this study was to investigate factors that impact adolescents' disclosure of online grooming experiences. The factors we investigated were adolescents' background factors; the level of communication between adolescents and their parents; the perpetrator's grooming strategies, such as asking for consent for sexual acts, prohibiting talking, and offering rewards; and adolescents' perception of the relationship with the perpetrator. This study was interested in disclosures overall, and all disclosures were included regardless of whom the adolescent disclosed to. The subsample for the current study was drawn from a previous survey by Save the Children Finland (Juusola et al., 2021). Participants who reported grooming experiences and answered the survey question about disclosure were included to this study ($n = 976$).

We found that stronger communication between adolescents and parents increased the likelihood of disclosing online grooming experiences. The more adolescents reported their parents were aware of and interested in their free time, the more likely they were to disclose grooming experiences to someone. Additionally, offering rewards was associated with an increased likelihood of disclosing grooming experiences; however, this should be interpreted cautiously since the model was insignificant.

4.1 Grooming Experiences and Disclosure Rates

Overall, 61% of adolescents who completed the survey reported they had experienced online grooming. The reported experiences of grooming were higher compared to previous studies, where the prevalence has ranged between 11.5% and 25% (e.g. Greene-Colozzi, 2020; Jonsson & Svedin, 2017; Madigan et al., 2018a). This may be due to the different methods used to assess grooming experiences. The current study assessed grooming by a single-item question, including whether an adult or someone five years older had contacted the adolescent online. Prior studies assessed grooming as receiving sexual solicitations from an adult online, which complicates the comparison. It is possible that not every contact by an adult leads to sexual solicitation or grooming, which may explain the higher reported grooming experiences in this study. However, at the beginning of the survey, adolescents were asked to report their experiences of online grooming, which may have reduced the risk of reporting contacts that were not grooming.

In our subsample, 66.6% of adolescents disclosed their online grooming experiences to someone, while 33.4% did not disclose their experiences to anyone. This was consistent with a

prior study on online grooming, where 62% of adolescents disclosed their experiences to someone (Villacampa & Gómez, 2017). The disclosure rate appeared to be higher compared to prior studies on disclosing child sexual abuse (CSA), where the disclosure rate in retrospective studies has been considerably lower, ranging from 31% to 45% (London et al., 2008). One possible reason for this may be that disclosing CSA can be considered more difficult for the victim, due to the sensitivity of the incidents.

In the subsample, 61.7% disclosed their experiences to a friend, while the reporting rate to an adult ranged from 0.6% to 12.1%. The disclosure rate to parents appeared to be slightly lower compared to a prior study, where a quarter of adolescents disclosed their experiences of online sexual solicitation to their parents (Finkelhorn et al., 2000). Additionally, the adolescents were more likely to disclose their experiences to peers compared to adults, which was in line with prior studies (Gemara et al., 2023; Katz, 2013; Lahtinen et al., 2018; Manay & Collin-Vézina, 2021; Priebe & Svedin, 2008). The research on online grooming experiences is limited, and more studies on prevalence are needed.

4.2 The Factors That Facilitate the Disclosure of Grooming Experiences

We found that higher levels of communication between adolescents and their parents significantly increased the likelihood of disclosing online grooming experiences. This finding aligns with our hypothesis and previous research, which demonstrates that a caring parent-child relationship facilitates the disclosure of CSA to peers and parents (Priebe & Svedin, 2008). Priebe and Svedin (2008) suggested that the parent-child relationship may facilitate CSA disclosures to peers because growing up in a caring family could facilitate adolescents to talk more openly in other relationships as well. Effective communication between parents and adolescents likely reflects a sense of safety and trust, both essential for forming other close and safe relationships and further facilitating disclosures. A trusting relationship can empower victims to come forward without fear of being doubted or dismissed (Brennan & McElvaney, 2020). The importance of a secure relationship is further highlighted by studies showing that the expectation of a negative parental reaction reduces the likelihood of CSA disclosure (Hershkowitz et al., 2007). These findings emphasize that open, trusting relationships with parents are crucial for adolescents to disclose harmful experiences to others. Effective parent-child communication may therefore serve as a protective factor in preventing long-term harm caused by delayed or non-disclosure and may help prevent further forms of abuse.

The present study found no significant associations between adolescents' background factors and the disclosure of online grooming experiences. Factors such as gender, age, and family structure did not appear to impact disclosure in our subsample. Previous research suggests that girls tend to disclose CSA more frequently than boys (Hébert et al., 2009; Manay & Collin-Vénézina, 2021; Okur et al., 2020). However, in our data, there was no significant difference in disclosure between genders. This may be due to the overrepresentation of girls (82.6%) in our subsample, while the groups of boys (8.6%) and others (8.8%) were small. Prior research on the impact of victims' age on CSA disclosure has yielded mixed results. For example, Kogan (2004) found that adolescents aged 11-13 were more likely to disclose online CSA immediately, while those aged 14-17 were less likely to disclose. In our study, adolescents aged 11-12 were underrepresented (5.7%), with most participants falling between 13 and 17. This lack of age diversity may not have provided enough variability in age in our subsample. Finally, family structure did not significantly affect disclosure in the analysis. In our subsample, most participants lived with both parents or alternated between parents (76.1%), while those living with a single parent (20.1%) or outside of the family (3.8%) were fewer. Overall, previous studies on the impact of victims' background factors on disclosure are limited, and research on the disclosure of grooming experiences is lacking, highlighting the need for further research.

In our analysis, the perpetrator offering rewards for sexual acts was associated with an increased likelihood of disclosing grooming experiences. However, the model itself was not statistically significant and failed to explain the variance in disclosures, which is why the result should be interpreted with caution. Overall, it has been suggested that offering gifts is a perpetrator's strategy to form a relationship with the child (Winters & Jeglic, 2016), and there are no prior indications regarding whether that might impact disclosure. The association was unexpected, as it could be assumed that receiving gifts may increase the victim's sense of responsibility for the incident and heighten feelings of guilt, which could lead to a higher likelihood of non-disclosure. However, the current study focused solely on whether the perpetrator offered a reward; whether the adolescent accepted it was not controlled. It is possible that offering a reward may help adolescents recognize attempted grooming, which could facilitate disclosure. However, further empirical research is needed to explore this possibility.

Other grooming strategies did not significantly impact the disclosure of grooming experiences. The perpetrator's prohibition of discussing sexual solicitation did not significantly affect disclosure. Similarly, the perpetrator seeking consent for sexual acts had no significant impact on disclosure. We did not formulate a hypothesis regarding how these grooming strategies

affect disclosure since the empirical research on grooming strategies is limited. Generally, it has been suggested that the grooming process decreases a victim's willingness to disclose the incident to others (Craven et al., 2006; Winters et al., 2022). Overall, grooming is a complex process, and it remains unclear whether specific grooming strategies impact disclosure more than others.

Our second hypothesis assumed adolescents who perceive their relationship with the perpetrator as close are less likely to disclose their grooming experiences to others. However, this study found no significant impact of reported romantic or friendly relationships on disclosure. This finding contrasts with previous research, which indicates that a perceived romantic relationship with the perpetrator can be a barrier to the disclosure of CSA (Katz, 2013; Latiff et al., 2024). However, there is no prior research on whether a close relationship with the perpetrator impacts disclosing grooming experiences, and it is possible the disclosure mechanism for grooming differs from CSA in this case. Alternatively, the small number of participants reporting a close relationship with the perpetrator in our study may have contributed to the lack of significant association. Only 7.6% of adolescents viewed the perpetrator as their partner, and 15.9% considered the perpetrator as their friend. The reported close relationship was lower compared to previous studies; for example, in a large study conducted by Wolak and colleagues (2004), half of the adolescent victims of online sex crimes reported feelings of love or a close friendship with the perpetrator. It is possible that if the grooming leads to more severe abuse, the perpetrator has succeeded in manipulating the victim into trusting them and forming a closer relationship. The current study did not control if the grooming led to more severe sexual abuse, and we do not know how many contacts possibly led to such outcomes. This could have affected the reported close relationships and disclosures, highlighting the need for further research.

4.3 Limitations

One significant limitation of this study is that the sample may not fully represent the broader population. The survey was open online, and most participants responded to the survey via social media. This limits the generalizability of the findings since the sample was not randomized. There is a risk that the sample may overrepresent adolescents who use social media more frequently and are more open to sharing their experiences. Additionally, most respondents were girls, and the age distribution was skewed, demonstrating that most of the respondents were older adolescents.

In the logistic regression analysis, the explanatory power of each model remained remarkably low, suggesting that many factors influencing disclosure remain unidentified. Furthermore, two of the three models failed to explain the variation in the dependent variable statistically significantly, indicating that other factors may better explain the dependent variable. However, the data revealed imbalances in several categories within our categorical variables, particularly concerning gender and the perceived relationship with the perpetrator, which may have reduced the statistical power of the analyses.

The lack of a standardized measure for grooming experiences limits the generalizability of the findings. Despite the fact the survey was created with guidance from prior grooming and sexual violence studies, there are no widely accepted standardized measures for assessing online grooming experiences. Defining grooming is complex, and it challenged the current study as well. Recognizing grooming can be difficult for adolescents, as it might have affected their ability to identify their potential grooming experiences accurately. However, respondents were informed briefly about the definition of grooming at the beginning of the survey, which may have increased the adolescents' capability to identify their past experiences correctly.

The validity of two independent variables, perceived relationship and communication with parents, remains unknown since the variables were developed for this current study. The categories of perceived relationship -variable were created from the response options of one question from the survey, and it was assumed that if the respondent did not tick 'friend' or 'partner' they did not perceive the relationship as close. This may decrease the validity of the variable since respondents did not have an option to report the 'non-close relationship'. The communication with parents -variable was created from five different questions from the survey, which may improve the validity of the variable and reduce response biases. However, the variable was a single scale, and it might not fully capture all the dimensions of parent-child interactions.

The conclusions of this study's results should be interpreted with caution. The findings from the logistic regression analyses indicate a correlative relationship between the variables, where category inclusion is influenced by probabilities rather than direct causality. The underlying reasons for these correlations remain unclear, and the observed relationship may be due to other factors not included in the analysis. Therefore, drawing conclusions about a potential causal relationship between the variables must be approached with consideration.

Despite the limitations, this study contributed essential empirical knowledge about the factors impacting the disclosure of online grooming experiences. The strength of this study was a large subsample that produced important knowledge from the adolescents cross-sectionally. The topic of this study is socially significant since online sexual violence against children has become a growing concern, as children are in vulnerable positions there without parental supervision.

4.4 Conclusion and Implications

Based on our current knowledge, this study is one of the first empirical studies that investigated the factors impacting the disclosure of online grooming experiences among adolescents. The subsample was drawn from previous research by Save the Children Finland (Juusola et al., 2021). The findings suggest that effective communication between adolescents and their parents is one factor in facilitating disclosures of online grooming experiences. Additionally, the perpetrator's grooming strategy of offering rewards for sexual acts was associated with an increased likelihood of disclosure. However, the model was not statistically significant, so this finding should be viewed more as an indicator. Finally, a reported close romantic or friendly relationship with the perpetrator did not impact disclosure in this subsample.

This study aimed to provide empirical insights on how to encourage adolescents to disclose potential grooming experiences at earlier stages. Based on this and prior studies, adolescents tend to disclose their grooming experiences to peers rather than adults or professionals. Sexual education should include information on support providers and guidelines for adolescents who seek to support a friend. Additionally, sexual education that provides information about empirical evidence on the grooming process and manipulation strategies could be beneficial, as it has been suggested that adolescents do not have enough knowledge of grooming (Chiu & Quayle, 2022). Sexual education could facilitate children's recognition of potential experiences and encourage disclosures. Brief education about online grooming for adolescents has shown promising results in reducing the risk of intercourse in sexualized online interactions with adults (Calvete et al., 2022).

Additionally, guidance for parents to emphasize the importance of parent-child communication for disclosure could be beneficial. Open communication with adolescents about dangers in online platforms may show in advance that discussing these topics is allowed and encouraged.

Further exploration of factors that influence the disclosure of online grooming experiences should be studied. Moreover, developing validated measures for these experiences would be beneficial in capturing the complexities of grooming. The online context should be considered a part of the grooming process, as online solicitations and online grooming experiences appear to be common among adolescents. Nonetheless, it is important to reduce the risk of online grooming experiences and prevent their progression to more severe abuse.

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