

A Comprehensive Study of Understanding the Dynamics of Cyber Grooming through Behavioral Analysis

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Abstract—This study discusses online grooming, a process that enables child abuse and is a global threat to youth.

The study uses definitions, occurrences, and attributes of online grooming to dive deeply into how predators engage with young people on the internet.

The review connects theories of child sexual abuse and internet behaviors that are relevant in this context.

The article discusses the protests of youngsters on the internet (such as sending Snapchats to strangers and sharing personal information), along with the different manipulation techniques used by online groomers, including flattery, bribery, and threats.

Although the models and typologies can help professionals understand this crime, it is essential to acknowledge the unique and heterogeneous character of internet offenders, victims, and their relationships. Grasping the characteristics of online groomers is fundamental to devising interventions to reduce this predatory behavior.

Specifically, the review notes that there has been only limited research into online grooming of young people. It emphasizes the need for more research to build on existing work in this area.

Keywords— cyber grooming; child abuse; internet; sexual abuse; young people.

I. INTRODUCTION

The internet is used to communicate and interact with one another, and it has changed all of that. Although others point out that social media reflects how people behave in real life and shows the good and bad sides of humanity, research shows that people tend to act differently online versus offline.

This process is called 'disinhibition' and is especially pertinent when considering online grooming. Internet crimes committed against young people make regular headlines and instill fear among parents, law enforcement, educators, and child protection specialists.

Consequently, it is vital to better understand online grooming and some of the key aspects associated with this type of exploitation from the perspective of both perpetrators and victims. The paper provides a comprehensive charter of relevant literature on the online grooming of minors, identifying important themes and trends in the field.

II. ONLINE GROOMING

A. Definitions

Before the rise of the Internet age, the sexual exploitation of youth was considered a significant area of study (Mitchell et al., 2005). Grooming is now widely accepted as a method used by sex offenders to help them bring their fantasies to life, both offline and online. The legal specification of the act of 'grooming' was enshrined in UK legislation for the first time under Section 15 of the Sexual Offences Act (SOA) 2003, which came into force through England and Wales in May 2004 (McAlinden, 2006). Depictions of its inclusion were progressive in the sense that it provided avenues for the criminalization of preparatory acts in advance of the sexual exploitation of children. The SOA 2003, however, does not clearly define sexual grooming, nor does it provide coverage for cases in which one person grooms a child with the intention that another person perpetrates the abuse. Craven et al. (2006) conducted a review of the existing literature. They developed a broad definition of child sexual abuse: "A process whereby an individual prepares a child, significant adults, and the environment for the sexual abuse of the child. The main goals are child access, compliance, and secrecy to protect against revelation. This process consolidates the abusive behavior of the offender and may be used to explain away or deny the actions they engage in." It can happen in the real world and online applications, though in different methods (Craven et al., 2006).

B. Prevalence

Ospina et al. (2010) reported the findings of their systematic literature review on the online sexual exploitation of youth that, according to studies relying on samples from the general population, between 13% and 19%, respectively (Wolak et al., 2006 and Finkelhor, et al., 2000) of persons between the ages of 10 and 17 experienced online sexual solicitations. Not all those solicitations came from adults, so only a portion were defined as online grooming. Additionally, these statistics were based on studies performed in the United States with similar designs (Elliott et al., 2009).

Six in ten European parents indicated their principal concern about their children online was potential grooming (European Commission, 2008). Evidence is scarce in the UK regarding the extent of online grooming, with the majority of published research still focusing on offline abuse (National Society for the Prevention of Cruelty to Children [NSPCC], 2011). Another UK study, referenced in the Ospina et al. (2010) and Bebbington et al. (2011) review, found that around 2.1% of police cases in the UK every year were associated with online grooming. This figure might be underestimated because reporting rates of this type of crime are low (Gallagher et al., 2006).

Between April 1, 2009, and March 31, 2010, the Child Exploitation and Online Protection Centre [CEOP] received 1,536 reports in the UK of suspected online grooming. Such infamy underscores both the pervasiveness of the crime and the public fear of it. This has involved reviewing and evaluating existing research into online grooming and comparing how grooming may differ online and in the 'real' world. However, this issue has been under-researched (McAlinden, 2006), and much remains to be done to explore the extent of the crime and its nature and patterns of variation.

C. Characteristics of grooming

Not only is grooming a complex and layered phenomenon, but it is also challenging to identify and define, even by those experienced in prevention work (Gillespie, 2004). Child sex offenders are not a homogeneous group, as shown by many studies (Webb et al., 2007), a diversity that is also found among online groomers (Briggs et al., 2011; European Online Grooming Project, 2012). As a result, grooming can take many different forms in terms of style, length of time taken, and intensity, and tends to mirror the personality and behavior of the perpetrator (McCarthy, 2010).

Victims and offenders will engage in online communication for some time, and young people, in particular, often take some time to build up trust, which leads the offender to groom for extended periods (McAlinden, 2006; Beech et al., 2008). The time frame of contact varied widely from seconds to years (European Online Grooming Project, 2012) according to interviews with 33 online groomers, supported by other studies (Craven et al., 2007). Previous research conducted by Wolak et al. in 2004 on 129 sexual offenses committed against adolescents that began online demonstrated that 64% of offenders were involved in communication with their targets for more than a month. In contrast, according to Briggs et al. (2011), in a sample of 51 sex offenders, 70% communicated for less than a week, and 40% interacted for less than 24 hours before making arrangements to meet. It was found that contact-driven offenders were very keen for a meeting, confining grooming over shorter periods, while fantasy-driven offenders communicated online for an average of 32.9 days (Elliott & Beech, 2009).

The differentiation between contact-driven and fantasy-driven offenders highlights varying goals within online grooming, a concept increasingly recognized in research (European Online Grooming Project, 2012). Also, offline traditional grooming processes have been described with models like Finkelhor's Four-Preconditions Model of Sexual Abuse (1984), which has been the model of reference for future models of child sexual abuse and grooming processes online and offline. Finkelhor's (1984) model was recently expanded into Sullivan's Spiral of Sexual Abuse (2009), detailing the progression from motivation to actual abuse and informing each offender's cognitive distortions and abuse-supportive thinking. Sullivan's model has gained popularity for its visual representation and simplification of an offender's progression, making it valuable in policing communities and offender interventions (Gallagher et al., 2006).

TABLE I. COMPARISON OF MODELS OF GROOMING

	Finkelhor (1984) Preconditions	Sullivan (2009) Spiral of Abuse	Craven et al. (2006) Stages of Grooming
Internal	Motivation to sexually abuse	Motivation to sexually abuse	
	Overcoming internal inhibitors	Overcoming guilt/fear Fantasy and Masturbation	Self-grooming
External	Overcoming external inhibitors	Grooming the child and others/victim selection	Grooming the environment and significant others
		Creating opportunities with victim and others	
	Overcoming resistance of the child	Manipulating the perception of victim and others	Grooming of the child
		Preventing discovery and disclosure of victims and others	

While grooming is critical in models like Finkelhor's and Sullivan's, it is considered a component rather than the central focus. The significance of grooming in determining the occurrence of abuse has prompted further exploration in recent years, emphasizing its impact on abuse prevention and intervention efforts (O'Connell, 2003).

Manipulation

The manipulation, which involves corruption and intimidation used during the grooming process, encourages young people to act in a manner that opposes their true selves (Berson, 2003). Grooming is where manipulation can take many forms, including bribery, sexualized games, gifts, force, and threats (Ospina et al., 2010). According to Sullivan (2009), offenders use different styles of manipulation for grooming victims and those around victims, including suffering, integrity projection, liberal thinking, insidious controlling, intimidation, and overt manipulation (Sullivan & Quayle, 2012).

The choice of manipulation style by the offender depends on their personality, circumstances, and the victim involved. Offenders may exploit a young person's desire for affection and care by using flattery to make them feel special (Berliner & Conte, 1990). Conversely, an offender might employ intimidation, fear, and even blackmail to assert control during grooming. These operation techniques aim to enhance the offender's control and dominance, drawing the victim in and fostering dependency on the offender (Finkelhor, 1997; Ospina et al., 2010). Studies, such as those by Wolak et al. (2004), have shown that offenders engage with victims through various channels like telephone, email, and text messages, creating a sense of immersion in the victim's life. This technique of embedding themselves in the victim's daily routine enhances the victim's attachment and accessibility to the offender, further solidifying the offender's hold over them.

Accessibility

The accessibility of victims plays a crucial role in determining the likelihood of an offender engaging in grooming behaviors (Sullivan, 2009). The internet has significantly transformed the landscape by instigating individuals with a sexual interest in young people that was previously unavailable. Historically, offenders primarily targeted victims within their familial or social circles, including family members, coworkers, individuals in residential care, or acquaintances (Harkins & Dixon, 2010; Sullivan & Beech, 2002). However, with the growing popularity of the internet among young people, offenders now have increased access to potential victims beyond their immediate social circles.

The internet allows offenders to join with possible victims from the comfort of their homes while upholding anonymity within private virtual spaces (Berson, 2003; O'Connell, 2003). This online environment allows offenders to establish a sense of intimacy with victims without physical proximity, a concept referred to as "intimacy at arm's length" (Carr, 2004). Offenders who may feel marginalized or face challenges in the physical world often find acceptance and opportunities for interaction online, where traditional boundaries are more fluid (Quayle & Taylor, 2002; Dombrowski et al., 2004).

O'Connell (2003) has a typology of online grooming and highlights how technology has affected one of the key elements of victimology, namely accessibility, opportunity, and vulnerability. Based on observations in chatrooms, this typology describes the stages of grooming, which consist of the formation of friendship, progression of the relationship, assessment of risk, exclusivity, and the enactment of sexual and fantasy behavior. These attributes are found mainly within the grooming phase of the risk assessment stage that may extend grooming to others and/or the ecosystem (Craven et al., 2006). In the online realm, parental vigilance often lags behind concerns in the physical world, with parents being less involved in their children's online activities (Fleming et al., 2006). Limited parental regulation online, especially when internet access is mobile or in a child's bedroom, increases children's vulnerability to online offenders. Research indicates that many young social media users engage in conversations with individuals unrelated to their everyday lives, highlighting the potential risks of unsupervised online interactions (Livingstone et al., 2011).

Rapport Building

The process of online grooming poses challenges for young individuals in distinguishing sexual exploitation from legitimate online relationships, as the stages of grooming can mimic the formation of genuine connections (Bryce, 2010). Offenders must establish trust with the victim to build rapport and intimacy (McAlinden, 2006). Williams et al. (in press) recognized three themes with sub-themes in grooming techniques through a thematic analysis of chat room transcripts.

Often as rapport is built during initial interactions, offenders adapt their behaviour and linguistic style to mirror that of the young person, generating a commonality and sense of comfort (Olson et al., 2007). Mutuality is about offenders considering the interests and current situation of the young person and accepting these to develop a bond. According to European Online Grooming Project (2012) research, they examine their victims by finding individuals who share similar interests or experiences rather than researching them during or afterward. Some offenders may even try to mentor the victim, reinforcing cognitive distortions by seeing themselves as helpers. Offenders typically aim to portray themselves positively to the child, exhibiting traits like friendliness and trustworthiness (Ospina et al., 2010). Establishing an exclusive relationship with the young person makes them feel special. It creates distance from hypothetically defensive associations (McAlinden, 2006), aligning with the grooming of the environment phase (Rosen et al., 2008).

TABLE II. GROOMING THEMES AND SUBTHEMES IDENTIFIED BY WILLIAMS, ELLIOTT, AND BEECH

Themes	Sub-ordinate Themes
Rapport Building	Coordination
	Mutuality
	Positivity
Sexual Content	Introduction
	Maintenance / Escalation
Assessment	Of Child
	Of Environment

Unlike the linear grooming stages by O'Connell (2003), Williams et al. (in submission) state that offenders do not sequentially evolve over phases. The European Online Grooming Project (2012) underscores this idea, which describes grooming as a cyclical process whereby offenders come in and out of different phases (adoption, maintenance, relapse, and re-adoption) over time.

Sexual Context

Owing to the offender's characteristics, the degree to which sexualization of contact with a young person occurs can vary both in timing and manner and is a key step in the grooming process. The European Online Grooming Project (2012) found three types of online groomers: intimacy-seeking, adaptable, and hyper-sexualized. Such hyper-sexualized groomers are less likely to insert sexual content into conversations at first, or if they do, it will happen much sooner, even immediately.

The role of sexual content is a central aspect of Williams et al.'s (in submission) model, and its effect on communication usually amplifies over time. Sexualizing comes in many forms, from flirtation, and sexually explicit language, to sending sexual photographs or links to porn (O'Connell, 2003). This behavior becomes routine/normal and gives the perpetrator extra power over the young person disclosing information they wish to keep confidential (McAlinden, 2006). Then, the perpetrator can use this information as leverage to manipulate or blackmail the victim.

Sexual conversations repeated over time are key for an offender to reinforce the effectiveness of their grooming. Exposing minors to sexual content is just one of the two communication strategies that sexual predators rely on: communicative desensitization (reducing sensitivity to sexual material over time) and reframing (Craven et al., 2006). The first strategy involves verbal and physical desensitization of the young person, which leads to sexual interaction. Framing, conversely, changes how the child views sexuality and what is good for them engaging in sexual acts (Olson et al., 2007). These tactics are used to confuse the victim into abandoning their understanding of how sex works and to take advantage of the victim when they are most vulnerable for the benefit of the person who is offending.

Risk Assessment

The offenders' assessment of the risk associated with the grooming of a particular child is a key component of the grooming process, as Williams et al. (in press) described for assessing the child and the environment. Risk assessment is a continuous process rather than one that can be done one time. This ongoing evaluation not only helps them fly under the radar but allows them to measure the balance of trust and weakness in the child (O'Connell, 2003).

According to the European Online Grooming Project (2012), offenders control risk in three ways. They have risk management in place by using multiple devices, different IP addresses, and various storage label techniques, adding a variety of technologies, and changing the logistics involved with that technology. Also, perpetrators do not communicate with victims in public zones or open areas but switch to private channels such as mobile phones or email. The third risk management strategy concerns those offenders who meet victims in person, suggesting locations well removed from their homes.

The European Online Grooming Project (2012) noted in its findings that not all groomers engaged in risk management, particularly if their beliefs indicated that they were not committing a wrongful act and thus had no need to cover up their activities. The authors emphasized the importance of overcoming internal inhibitions, breaking down barriers (Sullivan, 2009), and engaging in self-grooming behaviors in the grooming process (Craven et al., 2006). These elements are essential in how offenders perceive risk and their plans to take advantage of it specifically to groom likely victims.

Deception

Grooming is a deceptive process where young individuals may struggle to find warning signs recognition (Berson, 2003). Identity online is not fixed but relatively fluid, allowing for continual changes and adjustments (Jewkes, 2010), which can lower a young person's suspicions and increase their likelihood of engaging with an offender. Deception in online interactions often involves offenders posing as young individuals (Palmer & Stacey, 2004), taking advantage of the malleable nature of online identities.

Deceiving young people online is a well-used tool in the arsenal of offenders (O'Connell, 2003), yet it is recognized that not every online groomer will misrepresent his age and intentions (Wolak, Finkelhor, Mitchell, & Ybarra, 2008). Only 5% of offenders impersonated young people when communicating with their potential victims (Wolak et al., 2004). Most of the offenders listened to this and openly stated they were adults looking for sex, and sex conversations are common in dot com chats. Many of the victims who come into contact with

offenders online and later meet them in person expect to have a sexual relationship, and some even fall in love with their offenders (Wolak et al., 2008).

Notably, many minors know that they are communicating with adults. Yet, they still take risks in their interactions with offenders, a testament to the severity of the grooming process and the vulnerability that causes them to seek out these encounters. Such grooming with great intensity and child vulnerability tends to result in high-risk online behaviors seen in adolescents.

C. Young People Online

Integrating technology into daily life has become pervasive, with an average individual spending nearly 30 hours per week online (National Audit Office, 2010). The use of technology continues to expand, with people utilizing various forms of communication and internet access in different settings. Young people are immersed in a technology-saturated world, engaging extensively with online social networking, gaming sites, and mobile technology.

Studies by Livingstone (2010) and others have shown that children across prosperous countries have widespread access to the Internet, both at home and in educational settings. In the UK, a significant percentage of children, including those as young as 5 years old, have internet access at home, with a growing number in their bedrooms. Social networking platforms like Twitter, Facebook, and MySpace have seen a surge in popularity, with a substantial proportion of children and teenagers having active profiles on these sites.

The cumulative influence of social networking among young people is also driven by the rise of internet-enabled mobile devices and gaming consoles, making online access more portable and convenient. As the affordability of such devices has improved, a growing reach of young individuals has the liberty to access the Internet anytime and anywhere. Parental reports across Europe indicate a high prevalence of mobile phone ownership among children aged 6 to 17, with a significant proportion having access to mobile phones and internet-enabled devices. Internet usage tends to increase with age, with older teenagers expected to access the internet from various sources like their home computer, school, or a friend's house. Younger children, including those under 7 years old, are also increasingly accessing the internet from their homes. The seamless integration of online activities into young people's daily routines blurs the distinction between the online and offline worlds, presenting opportunities and risks. Professionals in the field recognize the need to consider online interactions integral to young people's social experiences, given their status as "digital natives" immersed in a technology-rich environment.

While users may not always differentiate between offline and online events, research suggests that online environments can influence behavior in ways that may deviate from typical characteristics. This emphasizes the need for understanding and managing potential risks associated with online activities.

III. INTERNET BEHAVIOUR

A. The Online Disinhibition Effect

The "Online Disinhibition Effect," described by Suler (2004), illuminates the discrepancy in individuals' online communication and behavior compared to real-world behavior. Suler identified six key factors that interact to produce this effect:

- **Dissociative Anonymity:** This component is a concept that the online person is anonymous, often achieved through user names or nicknames. Being anonymous means never taking responsibility for their actions. Some of the online groomers interviewed as part of the European Online Grooming Project (2012) accepted that there was a thrill and confidence in dealing online as they could act anonymously and felt unrecognizable.
- **Invisibility:** Physical invisibility online can embolden individuals to act differently than offline, amplifying the disinhibition effect.
- **Asynchronicity:** The lack of real-time reactions online, where messages can be sent without immediate feedback, can contribute to disinhibition among users.
- **Solipsistic Introjections:** This involves merging one's mind with that of the person being communicated online, leading to a sense of feeling merged with the writer of the text and potentially disinhibiting them.
- **Dissociative Imagination:** Creating online characters in one's imagination can lead to a separation between offline reality and online fantasy.
- **Minimization of Authority:** Online interactions often start on equal footing, regardless of one's offline authority or power, contributing to the disinhibition effect.

The "Online Disinhibition effect" can occur in 2 opposite directions: (1) benign disinhibition, in which people share personal thoughts and kind acts, and (2) toxic disinhibition, which consists of anger, criticism, or threatening behavior. Such tendencies appear online in the behaviors of young people who divulge personal information, presume the best about their online acquaintances, and, on the opposite end of the spectrum, appear to engage in cyberbullying or at least contribute to the building of information they know is harmful. Now add that the perceived anonymity and invisibility we experience online usually leads us to feel disconnected from our offline sense of self, which can also lead to disinhibition.

Young people often portray different behaviors online and may feel disconnected from their online actions (Berson, 2000). Combining offline and online environments may lead to fewer discrepancies in young people's conscious actions, potentially impacting their online and offline behavior.

B. The Proteus Effect

Through studies investigating the idea of 'Online Disinhibition' (Suler, 2004), the instigators of changed behaviors when online have been identified. The reasons lie in our behavioral change in response to how our online self-representations (avatars) get modified, a phenomenon known as the 'Proteus Effect' (Yee & Bailenson, 2007). They examined the effects of physical attractiveness and height through avatar manipulation. For the study, they measured interpersonal distance and level of self-disclosure during the interactions. The findings revealed that people with more attractive embodiments were closer to the confederate, as measured by interpersonal distance and self-disclosure. In addition, taller avatars and height were linked to greater confidence in participants, similar to those findings that taller individuals are considered more competent offline as well.

This study highlights the impact of online representations on behavior, where the attractiveness and height of avatars influenced participants' interactions and confidence levels. Adolescents, in particular, are known to assume different identities online with fewer boundaries and less supervision (Berson, 2000), aligning with the Proteus Effect's premise that online identities can influence behavior.

Research by Wolak et al. (2002) found that many internet users reported finding close relationships online with individuals unknown to them offline. This suggests that young people communicate online with strangers, emphasizing the potential influence of online interactions on behavior. Noll et al. (2009) investigated how adolescents' choices of avatars correlated with their online risky behavior. The study indicated that young individuals who made provocative avatar choices were more likely to engage in online sexual communications. This vulnerability is not limited to avatars, as young girls' self-presentations online, such as photo collections or narrative descriptions, may also increase their susceptibility to online grooming.

These studies underscore the significance of online self-representations and interactions in shaping behaviors, particularly among adolescents who may adopt different personas online, making them susceptible to various risks and influences in the online environment.

C. Risk Taking

Suler (2004) referred to the phenomenon of the "Online Disinhibition Effect," which underlines the different behavioral styles of real life and online interaction; this consequently denotes that young individuals often engage in risk-taking behaviors online—a theme which the CEOP (2010) says is alarming. In a study that examined different types of risky internet behaviors among young people, Ybarra et al. found that the more significant number of the kinds of risky behaviors a young person engaged in, the greater the odds of online interpersonal victimization (2007). People who engaged in these four risky behaviors were reported to be 11 times more likely to suffer from online interpersonal victimization.

Although there is a recognition that some online behaviors may be risky, young people tend to continue with them nonetheless (Mishna et al., 2009). Peter, Valkenburg, and Schouten (2006) found that adolescents who spent more time exchanging communication online were also other to speak to unusual individuals for chat, and mentioned entertainment, social integration, retention of rivals, acquaintance and social compensation with new people all as rationales. The findings suggested that boredom, curiosity, and inhibition were prevalent reasons adolescents want to talk to strangers online.

Adolescent girls tend to be victimized by an offender, and a significant number engage in risky behaviors like webcam stripping or masturbating, sending nude photos, and sharing personal information online (Leander et al. (2008). The study highlighted a link between online victimization and behaviors like communicating with unknown individuals, sharing personal information, meeting online friends offline, and discussing sex online. Sex offenders have described specific factors that make a child a target, including mentioning sex online, the child appearing needy or submissive, and the child's screen name sounding young (e.g., Sarah2001 and Jenny13).

TABLE III. FOUR MAIN GROUPS OF YOUNG PEOPLE ONLINE (ATKINSON & NEWTON, 2010)

Use/Risk Matrix	Infrequent Use	Frequent Use
Low Risk Taking	Low-risk novices	All round experts
High-Risk Taking	Inexperienced risk takers	Skilled risk takers

Atkinson and Newton (2010) adapted a concept from Livingstone and Bober to further explore the potential influences on young people's online behaviors and vulnerabilities. These studies emphasize the importance of understanding and addressing the risky behaviors young people engage in online to mitigate the risks of online victimization and exploitation.

V. PREVENTION MEASURES

Wolak et al. (2006), the Internet has a dynamic nature. Consequently, it has a positive influence on the teaching of Internet safety as many high-risk behaviors of adolescents are not stable features of the Internet culture, especially those posited as harmful to the development of the young. To protect children and adolescents online, a wide array of preventive strategies have been established, including statutes against illegal Internet activity, privacy protection laws, school Acceptable Use Policies (AUP), family rules, parental supervision, filtering software for access to Web sites, and Internet safety education programs targeted at children and teens (Berson, 2003).

Davidson & Martellozzo (2008) stated that classroom awareness campaigns have proven to be a particular target for efforts to make children, teachers, and parents aware of the dangers posed by online grooming. Some agencies worldwide provide tools and strategies to teach young people about online dangers better (Ospina et al., 2010). For example, CEOP's 'Thinkuknow' education program in the UK addressing online grooming has delivered its message to more than 8 million children, with 70,000 professionals signed up to provide program elements (CEOP, 2011). Nevertheless, the impact of internet safety education on targeting the youths who are most likely to engage in risky online behaviors is uncertain (Wells & Mitchell, 2008).

Instead, Davidson et al. (2009) fade from memory, as Taddeo et al. (2009) found, demonstrating that we cannot just tell young people something once but that they require frequent and ongoing short educational dose reinforcement. Ybarra and Mitchell (2008) have suggested that youth pre-emptive education addresses psychosocial issues that are more effective than targeting specific online applications. They recommended that talking to young victims of online grooming might also provide useful insights that could help improve educational programs.

While much of the research on online grooming has centered on offenders' perspectives, informing many education campaigns, incorporating the experiences of young victims could offer a unique and invaluable perspective for developing more impactful and relevant educational programs to protect young individuals in online environments.

VI. CONCLUSION

Young people increasingly engage with technology, creating opportunities for offenders to exploit shared online environments to build strong relationships with them. While the key aspects of online grooming have been outlined, there remains a need to explore how these factors intersect with young people's behaviors online, particularly concerning accessibility and their propensity for risk-taking behaviors. Understanding how offenders target vulnerable young individuals online is crucial to effectively implementing interventions and protective measures.

One important question to address is whether the most vulnerable young people are the ones who respond to offenders' communications when offenders cast a wide net online. Identifying the factors that contribute to the vulnerability of these particular young individuals is essential in designing targeted interventions and prevention strategies. Professionals are increasingly endorsing prevention techniques to safeguard young people online, but more research is necessary to evaluate the effectiveness of these interventions.

The internet plays a central role in modern society, underscoring the importance of ongoing research in exploring online safety issues to provide young people with adequate protection in digital spaces. As Bryce (2010) noted, developing a deeper understanding of victim-offender interactions is crucial in shaping effective prevention

strategies and interventions. Incorporating the victim's perspective into future research can provide valued insights into the dynamics of online grooming, update professionals employed in the field, and enhance their ability to protect young individuals online. By incorporating the victim's viewpoint, researchers can better understand online grooming dynamics and contribute to more effective prevention and intervention measures.

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