Review

Online child sexual abuse: Prevalence and characteristics of the victims and offenders

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Abstract

Today, with the widespread use of the internet, online child sexual abuse, facilitated through the rise in malicious sites that offer perpetrators the opportunity to interact with children, has emerged. Online child sexual abuse involves the obtaining, displaying, collecting, and distributing of sexual content for the purpose of deriving sexual satisfaction from a child. Online child sexual abuse threatens community mental health in terms of the harm it can cause to the mental health of children and families. The relevant literature includes only a limited number of studies on online child sexual abuse, with most focusing on child pornography. In this review, a definition of online child sexual abuse and its characteristics, the prevalence of online sexual abuse, and the characteristics of online child sexual abuse victims and offenders are presented in the light of the current literature. In addition, the review also provides information on how pedophilic culture facilitates child sexual abuse and, on the strategies, criminals employ to avoid being caught. The increased amount of time spent online and the development of new strategies by criminals escalates the risk of children being exposed to sexual abuse online. Therefore, it is crucial that online child sexual abuse be detected and prevented to protect community mental health. This review aims to raise awareness in mental health professionals by presenting information on online child sexual abuse literature and to contribute valuable data to future studies on this subject.

Keywords: Child health; child psychiatry; internet; psychiatric nursing; sexual abuse of child.

What is known on this subject?
- With the widespread use of the internet, cases of child sexual abuse online have emerged, posing a threat to the mental health of children, families, and society.

What is the contribution of this paper?
- This study provides information on the stages of online child sexual abuse, its prevalence, and the characteristics of the victims and criminals.

What is its contribution to the practice?
- Raising awareness in children, families, communities, and mental health professionals about online child sexual abuse will help to prevent further victimization. The results from this study will contribute valuable data on the detection and prevention of online child sexual abuse, characteristics of victims and criminals, and online sexual crime processes.

The rapid development of communication technologies, along with the expansive use of the internet, have radically transformed virtually every area of human life, including work, health, education, communication, and entertainment, to such an extent that these technologies have grown to be a basic need.[1] With its relative low cost and ease of access, the internet is now a common feature of human life.[2] According to 2013 TÜİK (Turkish Statistical Institute) data, the mean age at which children between the ages of 6 and 15 in Turkey start to use the internet and cell phones is 9 and 10, respectively, and 45% of children use the internet almost every day.[3] Similarly, data from the EU Kids Online research project shows that 46% of children between the ages of 9 and 16 in Turkey start to use the internet between the ages of 7 and 10 and spend an average of 1–1.5 hours a day on the internet.[4] In England, 25% of children between the ages of 0 and 2 and 36% of children between the ages of 3 and 5 own their own tablet and spend an average of more than one hour per day on it.[5] Fur-

thermore, Turgut and Kurşun (2019)[6] reported in their study that 80% of children between the ages of 9 and 16 have access to mobile internet resources in their rooms, and that when using these resources, they spend most of their time on social media sites.

With the widespread use of the internet, commercial sites that include pornographic content, chat rooms, and uncontrolled communication networks have been developed, and these have served as platforms that bring children into contact with pedophiles, thereby threatening potential online sexual abuse.[7] With the increasing accessibility of the internet, child pornography, which falls within the scope of online child sexual abuse (OCSA), has not only increased but also new kinds of abuse, such as grooming and web cam sex tourism, have emerged.[2] OCSA is a relatively new phenomenon that poses dangers to the psychological well-being of children and families and as such must be evaluated as both a personal mental health problem and a public health problem.[8] While OCSA leads to feelings of shame, guilt, fear, and powerlessness in victims, it can cause feelings of angst, anger, shame, and dread in parents. Inappropriate reactions of parents and a non-supportive family environment can aggravate the negative effects that online abuse has on the victim.[9] The fact that children have begun to use the internet at younger ages and for longer periods of time increases their risk of encountering online threats, a potentially growing problem that endangers the mental health of society at large. It is important that psychiatric nurses, who play an important role in treating mental health issues and protecting the mental well-being of children, adults, families, and the community, are aware of OCSA and able to recognize it. This study aims to raise awareness about this issue in psychiatric nurses and to contribute information on this subject to the relevant literature by defining online child sexual abuse and its characteristics, the prevalence of online sexual abuse victims, and the characteristics of online child sexual abuse victims and offenders. In this study, the term child refers to all individuals who are under 18 years of age.

Online Child Sexual Abuse Process and Characteristics

Online child sexual abuse (OCSA) involves the display, collection, and/or distribution of child sexual abuse material for personal sexual gratification, financial gain, interaction with other pedophiles, participation in online live streams of child sexual abuse, and/or grooming to encourage children to engage in online and offline sexual acts.[10] Grooming refers to an interaction process whereby an adult uses the tools provided by information and communication technologies (ICT) to obtain sexual gratification from a child, to observe sexually-explicit acts involving a child, and to facilitate online and offline sexual abuse of a child.[11,12] In other words, grooming is a preparatory process whereby an adult seeks to gain a child's trust for the purpose of creating opportunities for sexual abuse.[13]

O'Connell developed a 5-stage model including friendship forming, relationship forming, risk assessment, exclusivity, and sexual stages to describe the online sexual abuse process:[14]

Friendship Forming: In this stage, the perpetrator contacts the victim and offers him/her to move from the general chat room, which is open to other people, to a private conversation area. The duration of the stage varies amongst perpetrators. The repetition of this stage depends on the level of contact the perpetrator can establish with the victim.

Relationship Forming Stage: This stage is an extension of the first stage and involves the perpetrator learning more about the life of the victim. This stage may not be executed by all perpetrators, but those who wish to maintain contact with the victim aim to create the illusion of being the victim's best friend.

Risk Assessment Stage: In this stage, the perpetrator asks questions about the victim's immediate environment (location of computer, number of people using the computer).

Exclusivity Stage: In this stage, the nature of the conversation changes. Here the victim is encouraged by the perpetrator to talk about their private problems. Communication between the victim and the perpetrator involves the mutual sharing of secrets.

Sexual Stage: This stage is entered once the perpetrator has created a deep sense of trust in the victim. Here significant changes occur in the content of the conversations, with perpetrators asking more explicit questions, such as "Have you ever kissed someone" or "Have you ever touched yourself". In order to maintain the relationship with the victim and to preserve the feelings of trust and love perceived by the victim, the perpetrator shows great caution in entering the sexual stage.[14]

The relational framework adapted by the perpetrator serves to manipulate the victim into perceiving the perpetrator as a potential lover and/or mentor. The online relationship defined in this model has the potential of leading to an offline meeting request. Not all perpetrator-victim interactions necessarily follow these stages of the virtual grooming process. The process can vary according to the perpetrator's motivation and aim. [14] Previous studies have shown that the grooming process can take place anywhere from 6 months to 4 years.[15–17] More recent studies have reported that perpetrators tend to make aggressive and fast sexualized demands by applying a small number of virtual grooming strategies, and that a long period of grooming is not required in perpetrator-victim communication.[10,18] The one common feature of the different approaches used by perpetrators is their sexualized nature.[18]

During the grooming process, perpetrators encourage child victims to participate in sexual activities or sexual intercourse. [10] To achieve this, perpetrators use different persuasive strategies, such as deception, bribery, involvement, and aggression. [16] The deception strategies employed by perpetrators include using false identities and lying when communicating with children.[15,16] In fact, in one study conducted on this subject, it was found that all the child victims thought they were communicating with someone younger.[15] The bribery strategies entail

enticing victims with various offerings, such as gifts, concert tickets, or money. The involvement strategies employed by perpetrators aim to create the perception that the parties are equal, or to desensitize and normalize the use of obscene visual materials to promote the sexual activity of the victim.[13,16] Perpetrators seek to isolate the victims physically (closing the door) or mentally (keeping the relationship a secret) in order to prepare them for online and/or offline sexual abuse.[15] The perpetrators may ask the child victims to take part in sexual conversations, take sexually-explicit photos, make sexual poses in front of the camera, get undressed, engage in sexual touching, masturbate, or carry out extreme sexual acts (use of objects, watching sexual intercourse, sexual intercourse with animals).[10,19] The obscene images obtained in the grooming process are recorded and stored permanently,[10] so they can be used as a strategy of aggression with the threat of sharing them with family, friends, or teachers or of uploading them to the internet. These threats ensure the silence of the victims or force them to comply in performing sexual acts.[10,16,20] Koçtürk and Yüksel (2018)[21] reported in their study that 71% of the children who met a stranger online were subjected to sexual abuse offline, 16% of these victims were recorded by the offender, 6% of these recorded images were shared online, 34% of the victims were threatened, and 24% were subjected to violence. These results confirm the predominant use of the mentioned strategies by perpetrators. When applying any of these strategies, the perpetrators take advantage of any problems the child may be experiencing, such as being absent from school, family conflicts, or other vulnerabilities.[16]

The literature has different classifications of grooming perpetrators. From the data collected as part of the EU Kids Online research project, OCSA offenders are divided into three groups according to their approaches. The first group of perpetrators targets highly vulnerable children who are in search of intimacy. The second group of perpetrators is prepared to engage in excessive sexual behavior and therefore target children who are not afraid to take risks. The third group of perpetrators determines intimacy or excessive sexual behavior according to the situation.[10] Perpetrators are also categorized according to their motivations, specifically whether they are fantasy- or contact-driven. The fantasy-driven group has the motivation to lead kids to virtual online sex, while the contact-driven group has the motivation to develop an offline, real-life sexual relationship.[13]

Online Child Sexual Abuse Prevalence

In the UK, there were a reported 100 thousand people involved with OCSA images in 2016. In Europe and the United States of America (USA), 5%–25% of children experience online bullying, see pornography, and engage in sexually explicit texting.[22] Approximately 4 thousand child victims and 2 thousand OCSA offenders were detected by Interpol between 2009–2013.[10] In the USA, 3 thousand people were arrested in one year with the charge of OCSA.[19] One study reported that

over a 10-week period, more than a thousand offenders made a money offer to a virtual Filipino child named Sweetie in exchange for sexual images online.[2] In the USA, it is reported that 13% of children between the ages of 10–17 who use the internet receive unwanted sexual offers online.[23]

As of July 2019, Interpol's International Child Sexual Exploitation Database has data on approximately 20 thousand victims and 9 thousand offenders.[24] It was determined that of the 1018 children who were evaluated within the scope of the EU Kids Online research project, 11% had seen sexually explicit photos on the internet and 12% had received sexually explicit messages. In one study it was reported that of the 16% of the children who had met someone new on the internet, 2% of them met them later face-to-face.[4] Kim-Kwong found that 35% of children were victims of internet harassment in their study involving the participation of 1588 children between the ages of 10–15 years.[25] Although the stipulated age for creating profiles on certain online social networking sites is thirteen, one-third of the children who reported having a profile on the examined sites were under the age of thirteen.[4] Furthermore, a study with 5715 children reported that 6% of children had engaged in online sexual behavior at least once over the course of the past year, and that 32% of these children experienced persuasion, pressure, or compulsion at least once.[26]

A review of the literature on the prevalence of OCSA showed that most of the studies focus on addressing the results of research conducted by official institutions, with the remaining largely directed at defining children's online activities and the risks they face. Recognition of the OCSA problem and its reflection on the data can be difficult when the children are not aware that they are communicating with adults or sexually motivated people. In addition, the data may not be accurate considering that in some cases the interaction between the child and the perpetrator may not progress to the extent of explicit sexual expression or the child may be subject to coercive and threatening behavior by the perpetrator to prevent disclosure.[13] The different definitions and legal regulations applied by countries and the anti-catch strategies of offenders further complicate determination of the real prevalence. Therefore, more research on the prevalence of OCSA needs to be conducted to fill the gap in information on this subject.

Characteristics of Online Child Sexual Abuse Victims

The facts that children are starting to use the internet at an early age, have their own phones and tablets, and spend more and more time on the internet expose them to greater risks online.[1,3–5] Among the children in Turkey with accounts on social networking sites, 46% have their profile set to "open to all" and 19% share their address information and 8% share their phone number information with strangers. Moreover, it was found that 68% of children do not know how to adjust privacy settings and block unwanted messages on social networking

sites.[4] Turgut and Kurşun (2019)[6] reported in their study that of the children on social media, 76% shared their surname, 71% shared photographs with their faces on them, and 6.5% accepted all incoming friend requests. One study found that 50% of the children in Europe shared their personal information with strangers and 40% encountered adult pornography, and all the children did not see it as a risk to interact with strangers.[23] Considering the results reported from these studies, children have a lack of information about the online environment, engage in risky online behavior, and are vulnerable to offenders. Studies show that perpetrators of OCSA act by accessing personal information shared on children's social network profiles.[27]

Previous studies on OCSA have determined that most of the child victims are female and that girls are more at risk of exposure.[16,18,27–31] Online sexual activities are often seen as being innocuous due to their anonymous nature and the fact that there is no real contact. At times, it can even be perceived as normal and an easy way to earn money for children and families with disadvantaged socioeconomic status.[12] A study carried out in Turkey determined that 97.8% of children who were physically abused after grooming had a low socioeconomic level.[21] Children of unemployed families and families with lower socioeconomic status or immigrant backgrounds have been shown to engage in more sexual behavior online.[26] Furthermore, it has been reported that children who are not socioeconomically disadvantaged but experienced early traumatic life events and feel excluded are more apt to engage in online sexual activity in return for financial gain; these children feel a sense of belonging in internet communities, and the online sexual behavior emerges as a modified form of self-harm.[29] The different results obtained from these studies can be attributed to the level of development in the countries where the studies were carried out and the differences in culture and social structures. Children with a history of neglect and abuse tend to be more exposed to online sexual content and desires and high-risk social network profiles.[30] It has been shown that certain factors, like the victims' low self-esteem, poor relationship with parents, higher frequency of substance use, psychological difficulties, the desire for sensation, and risky internet behavior are highly associated with exposure to online child sexual abuse.[26,32] Moreover, factors such as female gender, low socioeconomic status, traumatic life events, low self-esteem, and risky internet behavior constitute risky characteristics for children in terms of experiencing OCSA. It is therefore important to closely monitor children with these characteristics to include them in education programs against online risks, and to support them psychosocially in order to prevent their exposure to online sexual abuse.

Characteristics of Online Child Sexual Abuse Perpetrators

The global structure of the internet makes it difficult to audit and manage.[33] The internet is a tool that facilitates access for perpetrators and helps prepare the victim for sexual abuse.[10] Perpetrators use the internet to obtain sexually explicit images and to engage in sexual acts with children.[16,19,27] In addition, the internet gives perpetrators the opportunity to interact in many ways and to meet with more than one victim in different scenarios simultaneously.[27] The anonymity offered online is appealing for perpetrators. With the internet, individuals who had had child sexual abuse tendencies before but avoided acting on them now can commit these types of crimes under the cloak of perceived anonymity. This gained anonymity offers perpetrators the opportunity to communicate with many children with impunity.[10,16,27] Switching between social networking sites, using sites that do not require registration, operating on P2P networks that allow perpetrators to communicate with one another directly, and the use of encrypted communication networks on the dark web are all methods adopted by perpetrators to secure their anonymity.[27,33] The best-known dark network is the freely available Tor software.[33] In addition, offenders can easily access a variety of sexual content at affordable costs from their homes.[13] Internet bulletin boards and chat rooms are used to communicate with multiple victims,[19,20] and when children meet a stranger online, they are affected by the feeling of anonymity and therefore may show a tendency to act more freely than they otherwise would.[10]

A pedophilic culture, which refers to a culture that supports and encourages emotional and sexual contact with children, increases the ability of child sexual abuse perpetrators to hide and reinforces sexual attitudes about children that are perverted and can lead to the escalation of fantasies through normalization. Online pedophile groups avoid the terminology of exploitation and abuse on the internet and instead reinforce the cognitive distortions of perpetrators by defining sexual relations with children as a feeling of love.[10] These groups discuss ways to change child abuse legislation and public perception in virtual communities.[19] Quayle et al. (2014)[27] determined in their study with OCSA offenders that they have discordant beliefs and attitudes and cognitive distortions. Yet, the abusers try to normalize their crimes by claiming that they are misunderstood. Abusers use the term 'young friend' instead of victim and 'boy lover', 'girl lover', or 'child lover' instead of sex offender.[19]

The literature states that convicted offenders of grooming are mostly male and between the ages of 21 and 56 and that they largely contact girls who are between the ages of 11 and 15 years-old.[16,18,27,31] OCSA offenders, as opposed to offline child sexual abuse offenders, tend to be younger, unemployed, and more likely to be in a romantic relationship.[10] Other studies have stated that OCSA offenders have a higher education and socioeconomic level than those of offline criminals[34] and more sexual deviance and lower repression management traits than those of offline offenders.[10] Negative emotional states such as loneliness, depression, stress, difficulty in social and relational bonding, or avoidance are common in offenders. It has been further reported that these offenders use chat rooms as social and sexual outlets and the internet as a source for sexual satisfaction to cope with negative emotional situations and they see their behaviors as addictions.[10,31,35] Some offenders point to certain experiences to account for their OCSA, such as un-

healthy sexual development, family life difficulties experienced at young ages, negative school experiences, and frequent moves to different cities.[35] The limited number of studies examining female offenders report that these offenders are mostly involved as suppliers in the criminal processes, involved in the crime with a male partner or act as a facilitator to the crime thanks to their nurturing nature.[36,37] These studies have also determined that female offenders often have a history of trauma, suicide attempts, and substance abuse or previously received mental health care.[37] Examination of the literature on OCSA offenders showed that studies were carried out with small groups and that data were limited to police reports or statements of participants and did not include perpetrators who have not yet been identified. Therefore, the obtained results may not reflect all OCSA offenders. More studies are needed in order to better understand the cognitive and social processes that push offenders to commit crimes, to identify these people before the crime occurs, and to provide effective mental health treatments.

Conclusion

The growth of the internet into an indispensable tool, even for children, poses the risk of increasing the number of OCSA victims. Children and families are vulnerable to online risks. It has been reported that the professionals working with victims also feel anxiety and have a lack of knowledge about OCSA and experience difficulties in treatment.[38,39] It is important for psychiatric nurses to be on the alert regarding OCSA and to evaluate the victims' online behaviors as well as their mental health in the treatment to prevent recurring victimization. It is recommended that training programs be organized to raise awareness in children, families, society, and professionals about OCSA, and that public service ads be created. Furthermore, it is recommended that activities related to supporting the production of creative and educational content online for children be developed, that online safety and age-appropriate privacy settings be taught in schools, and that age limits and content classification be strictly applied. Mental health workers play an important role in detecting online child sexual abuse, preventing it, providing treatment for victims and families, and maintaining mental well-being. An examination of the literature showed that studies on OCSA mostly focus on child pornography and that the number of studies on grooming is limited. Therefore, there is a need for more studies on this subject to bring greater knowledge and awareness about it and to meet the information needs of mental health professionals through training and education.

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References

1. Çıkman B, Salman Ö, Çalışkan D. Adı: meraklı, soyadı: çocuk, durum: çevrimiçi, sonuç: grooming, internette çocuk istismarı. The Journal of Current Pediatrics 2017;15:87–97.

2. Açar KV. Organizational aspect of the global fight against online child sexual abuse. Glob Policy 2017;8:259–62.

3. Türkiye İstatistik Kurumu. Hanehalkı bilişim teknolojileri kullanım araştırması. Retrieved July 2, 2020, from http://www.tuik.gov.tr/PreHaberBultenleri.do?id=15866.

4. Kaşıkçı DN, Çağıltay K, Karakuş T, Kurşun E, Ogan C. Türkiye ve Avrupa'daki çocukların internet alışkanlıkları ve güvenli internet kullanımı. Eğitim ve Bilim 2014;39:230–43.

5. Livingstone S. Children's and young people's lives online. In: Brown J, editor. Online risk to children: Impact, protection and prevention. New York: John Wiley and Sons, Incorporated; 2017. p. 35–47.

6. Turgut YE, Kurşun E. Türkiye'deki çocukların erişim, kullanım ve etkinlikler bağlamında mobil internet deneyimleri. Eğitim Teknolojisi Kuram ve Uygulama 2019;9:349–71.

7. Keçe H. Çocuk destek merkezlerinde yaşayan cinsel istismar mağduru kız çocuklarının sosyal kaygı düzeyleri. [Yayımlanmış Yüksek Lisans Tezi] Ankara: Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü; 2018.

8. Urazel B, Fidan SF, Gündüz T, Şenlikli M. Çocuk ve ergen cinsel istismarlarının değerlendirilmesi. Osmangazi Tıp Dergisi 2017;39:18–25.

9. Hanson E. The impact of online sexual abuse on children and young people. In: Brown J, editor. Online risk to children: Impact, protection and prevention. New York: John Wiley and Sons, Incorporated; 2017. p. 104–29.

10. Whittle HC, Hamilton-Giachritsis C. Offender behavior. In: Brown J, editor. Online risk to children: Impact, protection and prevention. New York: John Wiley and Sons, Incorporated; 2017. p. 65–80.

11. McAlinden AM. 'Grooming' and the sexual abuse of children: Institutional, internet, and familial dimensions. 1st ed. Oxford: OUP Oxford; 2012. p. 92–119.

12. Ramiro LS, Martinez AB, Tan JRD, Mariano K, Miranda GMJ, Bautista G. Online child sexual exploitation and abuse: A community diagnosis using the social norms theory. Child Abuse Negl 2019;96:104080. [E-pub ahead of print]

13. Kloess JA, Beech AR, Harkins L. Online child sexual exploitation: prevalence, process, and offender characteristics. Trauma Violence Abuse 2014;15:126–39.

14. O'Connell RL. A typology of child cyberexploitation and online grooming practices. 2003. Retrieved June 30, 2020, from https://www.semanticscholar.org/paper/A-TYPOLOGY-OF-CHILD-CYBERSEXPLOITATION-AND-ONLINE-O%E2%80%99Connell/898c0e9791e5d227dd875129ca05cf7cae08d4c4.

15. Katz C. Internet-related child sexual abuse: What children tell us in their testimonies. Child Youth Serv Rev 2013;35:1536–42.

16. de Santisteban P, Del Hoyo J, Alcázar-Córcoles MÁ, Gámez-Guadix M. Progression, maintenance, and feedback of online child sexual grooming: A qualitative analysis of online predators. Child Abuse Negl 2018;80:203–15.

17. Whittle HC, Hamilton-Giachritsis CE, Beech AR. A comparison of victim and offender perspectives of grooming and sexual abuse. Deviant Behav 2015;36:539–64.

18. Kloess JA, Hamilton-Giachritsis CE, Beech AR. Offense Processes of Online Sexual Grooming and Abuse of Children Via Internet Communication Platforms. Sex Abuse 2019;31:73–96.

19. Gottschalk P. Characteristics of the internet and child abuse. In: Davidson J, Gottschalk P, editors. Internet child abuse: current research and policy. London: Taylor and Francis Group; 2010. p. 27–51.

20. Paranjothy S, Griffiths JD, Broughton HK, Gyte GM, Brown HC, Thomas J. Interventions at caesarean section for reducing the risk of aspiration pneumonitis. Int J Obstet Anesth 2011;20:142–8.

21. Koçtürk N, Yüksel F. A modern danger for adolescents: From online flirtation to sexual abuse. Dusunen Adam The Journal of Psychiatry and Neurological Sciences 2018;31:294–300.

22. Carr J. A brief history of child safety online: child abuse images on the internet. In: Brown J, editor. Online risk to children: Impact, protection and prevention. New York: John Wiley and Sons, Incorporated; 2017. p. 19–34.

23. Davidson J. Legislation and policy: protecting young people, sentencing and managing internet sex offenders. In: Davidson J, Gottschalk P, editors. Internet child abuse: current research and policy. London: Taylor and Francis Group; 2010. p. 8–26.

24. Açar KV. Framework for a single global repository of child abuse materials. Glob Policy 2020;11:178–90.

25. Choo K. Online child grooming: a literature review on the misuse of social networking sites for grooming children for sexual offences. Research and public policy series no 103. Canberra: Australian Institute of Criminology; Retrieved July 1, 2020, from https://www.aic.gov.au/publications/rpp/rpp103.

26. Jonsson LS, Fredlund C, Priebe G, Wadsby M, Svedin CG. Online sexual abuse of adolescents by a perpetrator met online: a cross-sectional study. Child Adolesc Psychiatry Ment Health 2019;13:32. doi: 10.1186/s13034-019-0292-1. [E-pub ahead of print]

27. Quayle E, Allegro S, Hutton L, Sheath M, et al. Rapid skill acquisition and online sexual grooming of children. Comput Human Behav 2014;39:368–75.

28. Machimbarrena JM, Calvete E, Fernández-González L, Álvarez-Bardón A, Álvarez-Fernández L, González-Cabrera J. Internet Risks: An Overview of Victimization in Cyberbullying, Cyber Dating Abuse, Sexting, Online Grooming and Problematic Internet Use. Int J Environ Res Public Health 2018;15:2471.

29. Jonsson LS, Svedin CG, Hydén M. Young women selling sex online - narratives on regulating feelings. Adolesc Health Med Ther 2015;6:17–27.

30. Noll JG, Shenk CE, Barnes JE, Haralson KJ. Association of maltreatment with high-risk internet behaviors and offline encounters. Pediatrics 2013;131:e510–7.

31. Briggs P, Simon WT, Simonsen S. An exploratory study of Internet-initiated sexual offenses and the chat room sex offender: has the Internet enabled a new typology of sex offender? Sex Abuse 2011;23:72–91.

32. Livingstone S, Smith PK. Annual research review: Harms experienced by child users of online and mobile technologies: the nature, prevalence and management of sexual and aggressive risks in the digital age. J Child Psychol Psychiatry 2014;55:635–54.

33. Smallbone S, Wortley R. Preventing child sexual abuse online. In: Brown J, editor. Online risk to children: Impact, protection and prevention. New York: John Wiley & Sons, Incorporated; 2017. p. 151–69.

34. Hirschtritt ME, Tucker D, Binder RL. Risk assessment of online child sexual exploitation offenders. J Am Acad Psychiatry Law 2019;47:155–64.

35. Morgan S, Lambie I. Understanding men who access sexualised images of children: exploratory interviews with offenders. J Sex Aggress 2019;25:60–73.

36. Martellozzo E, Nehring D, Taylor H. Online child sexual abuse by female offenders: An exploratory study. International Journal Of Cyber Criminology 2010;4:592–609.

37. Bickart W, McLearen AM, Grady MD, Stoler K. A Descriptive Study of Psychosocial Characteristics and Offense Patterns in Females with Online Child Pornography Offenses. Psychiatr Psychol Law 2019;26:295–311.

38. Martin J. Child sexual abuse images online: implications for social work training and practice. Br J Soc Work 2016;46:372–88.

39. Bond E, Dogaru C. An evaluation of an inter-disciplinary training programme for professionals to support children and their families who have been sexually abused online. Br J Soc Work 2019;49:577–94.