Technology and sexual abuse - The role of technology in facilitating child and adolescent sexual abuse: A systematic review

Tecnologías y abuso sexual - El papel de La tecnología en facilitar el abuso sexual de niños y adolescentes: Revisión sistemática

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Abstract: Child and adolescent sexual abuse is a reality that affects countless children and adolescents, harming and violating the physical, emotional and psychological integrity of the victims. There are numerous factors that cause vulnerability in this public, one of them being the technological means, due to the influences that the media causes, the exposure of children and adolescents and the facilitation of communication between aggressors and victims. To analyze the relationship between the use of technologies and child and adolescent sexual abuse, exploring how these technological tools have been used to facilitate the sexual abuse of children and adolescents. This is a systematic review of the literature. The search for articles was carried out from the Virtual Health Library (VHL); Lilacs; Scientific Electronic Library Online (SciELO); National Library of Medicine (PubMed). The descriptors used to search for the articles were: Child and adolescent sexual abuse, technologies and pedophilia. The Boolean operator AND was used to cross-reference the terms. Regarding the inclusion criteria used: complete articles, available and indexed in the aforementioned databases, free of charge, in the Portuguese language, published in the last five years between 2019 and 2023 related to the theme. Monographs, book chapters, paid articles, duplicate studies, in another language, and published before 2019 were excluded as exclusion criteria. Modern technologies, such as the internet and social networks, are means that facilitate the increase in cases of child and adolescent sexual abuse.

Keywords: Child and adolescent sexual abuse; Technologies; Pedophilia.

Resumen: El abuso sexual infantil y adolescente es una realidad que afecta a innumerables niños y adolescentes, dañando y vulnerando la integridad física, emocional y psicológica de las víctimas. Existen numerosos factores que causan vulnerabilidad en este público, siendo uno de ellos los medios tecnológicos, debido a las influencias que provocan los medios de comunicación, la exposición de niños y adolescentes y la facilitación de la comunicación entre agresores y víctimas. Analizar la relación entre el uso de las tecnologías y el abuso sexual de niños y adolescentes, explorando cómo estas herramientas tecnológicas han sido utilizadas para facilitar el abuso sexual de niños y adolescentes. Se trata de una revisión sistemática de la literatura. La búsqueda de artículos fue realizada en la Biblioteca Virtual en Salud (BVS); Lilacs; Scientific Electronic Library Online (SciELO); National Library of Medicine (PubMed). Los descriptores utilizados para la búsqueda de los artículos fueron: Abuso sexual de niños y adolescentes, tecnologías y pedofilia. Se utilizó el operador booleano AND para cruzar los términos. En cuanto a los criterios de inclusión utilizados: artículos completos, disponibles e indexados en las bases de datos mencionadas, gratuitos, en lengua portuguesa, publicados en los últimos cinco años entre 2019 y 2023 relacionados con el tema. Como criterios de exclusión se excluyeron monografías, capítulos de libros, artículos pagados, estudios duplicados, en otro idioma y publicados antes de 2019. Las tecnologías

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Received for publication on 2024/04/04; approved on 2023/10/25.
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modernas, como internet y las redes sociales, son medios que facilitan el aumento de casos de abuso sexual a niños y adolescentes.

**Palabras clave:** Abuso sexual a niños y adolescentes; Tecnologías; Pedofilia.

**INTRODUCTION**

Child and adolescent sexual abuse is a concern that transcends borders and presents itself as a challenge to be faced by society, given the marks it causes on victims and the social fabric in which it permeates. This type of abuse can affect anyone and affect their physical, emotional and mental integrity, causing sequelae that can last a lifetime (Cruz et al, 2021).

However, the scale of child sexual abuse is not restricted to individual impacts. These acts have the power to damage the foundations of society, eroding the social bonds that sustain it. In addition to the burden that victims carry, they often remain silent about what happened, which highlights the urgency of raising awareness, preventing these cases and offering support (Miranda et al, 2020).

Bearing in mind that the number of cases of child and adolescent sexual abuse is high, it is necessary to look beyond the common causes of occurrence, even though some studies emphasize that child and adolescent sexual abuse occurs mainly within the family, with the aggressor being a family member or someone close to the family, unknown aggressors are still present (Souza et al, 2022).

The aim of this article is to question whether technological media may be facilitating child and adolescent sexual abuse, given that a significant number of children and adolescents use these media indiscriminately and without supervision (Schwartz; Pacheco, 2021).

This study is a systematic review of the literature, with the aim of emphasizing the importance of developing awareness, prevention and coping strategies in order to reduce the number of cases of this serious problem.

**THEORETICAL BACKGROUND**

Sexual abuse of children and adolescents is considered a public health problem, since it is a violation of rights and affects all social classes, regardless of gender, race or ethnicity. This type of violence is characterized by sexual stimulation by an aggressor whose age or psychosexual development is superior to that of the victim. This form of abuse can occur in homosexual or heterosexual relationships and encompasses a range of situations, such as rape, harassment, pornography, pedophilia, manipulation of the genitals, sexual intercourse with penetration, non-consensual erotic practices, among others. These practices are highly damaging and violate the physical, emotional and mental integrity of the victims. In addition, they cause profound damage to the social fabric in which they are inserted (Miranda et al, 2020).
Its prevalence is striking, and it is more common than you might think. Brazil ranks 5th on the list of nations where the most sexual violations of children and adolescents occur. In 2021, the "Dique 100" (Dique Human Rights) reporting channel registered more than 6,000 reports of sexual violence against children and adolescents. These figures refer only to the period from January 1 to May 12. Of the 35,000 reports of violence against children and adolescents, 17.5% are related to sexual violence. This data serves as a warning to highlight the vulnerability of this public and their exposure to factors of violence (Brasil, 2021).

Technological means are increasingly present in the lives of the majority of the population, including children and adolescents. The Consulta Brasil survey, which assesses the use of information and communication technologies (ICTs) in 2020, found that, in Brazil, around 81% of the Brazilian population aged ten and over have access to the internet and social networks, even changing their age to have a profile. Of this percentage, only half reported having adult supervision, such as parents or guardians, during use (Júnior; Wahba, 2022).

The internet is a tool that can be used positively, but it also offers a wide variety of information that is not considered appropriate for certain groups. Currently, adultized and eroticized representations of children and adolescents have been offered, through advertisements that portray children simulating adult behaviour and even through advertisements that promote plastic dolls with sensual characteristics, with rounded breasts and provocative poses. These types of ads establish a connection between innocence and seduction, which can result in a distortion of the body image of children and adolescents, so they can also serve as material for pedophiles, encouraging child sexual abuse (Mion; Hennigen, 2018). Estimates suggest that there are approximately 750,000 online sex offenders in the world looking for images of sexual exploitation of children and adolescents (Brazil, 2020).

In addition to this, information and communication technologies have also played a significant role in facilitating child and adolescent sexual abuse, since they provide opportunities for many aggressors to connect with children or adolescents on online platforms, as well as platforms whose specific purpose is sexual and/or erotic. One example is the sexting platform, which is a means of digital communication in which adolescents and young people share and receive nude or sexual content, as well as sharing nude videos or images with third parties without the author's consent. This act corresponds to a practice of violence currently referred to in Brazil as digital abuse in relationships (Júnior; Wahba, 2022).

Comprehensive protection for children and young people is a right guaranteed by law. The Statute of the Child and Adolescent (ECA) recognizes the vulnerability that permeates children and adolescents and assigns responsibilities for ensuring fundamental rights and protection to all members of society, including the family, school, state and community in general, given that the legislation determines that
any act, whether by action or omission, that neglects, violates, discriminates against, exploits, causes cruelty or oppression is punishable according to the law (Brazil, 1990).

As a result, it is understood that child and adolescent sexual abuse is a reality, which emphasizes the importance and relevance of addressing this issue, questioning the facilitation that technological means make possible in worsening cases and what strategies can be used to prevent and cope with this demand.

METHODOLOGY

To support the study, a systematic review was carried out, which is a research in which evidence is identified, evaluated and synthesized, with the aim of answering a specific question through the analysis of relevant and reliable studies, thus providing an impartial and comprehensive synthesis on a given topic (Donato; Donato, 2019). The systematic review was based on nine stages:

<table>
<thead>
<tr>
<th>TABLE 01: Stages of the systematic review.</th>
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<tbody>
<tr>
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</table>

SOURCE: Donato and Donato (2019).

The research question of this study was: how can technological means facilitate child and adolescent sexual abuse and what strategies can be used to prevent and deal with this? With this in mind, searches were carried out in the Virtual Health Library (VHL); Lilacs; Scientific Electronic Library Online (SciELO); National Library of Medicine (PubMed) databases. The descriptors used to search for
articles were: child and adolescent sexual abuse, technologies and pedophilia. The Boolean operator AND was used to cross-reference the terms. The articles found were analyzed in the different databases and selected by means of the titles; those related to the topic were selected to read the abstract and, when they were identified as relevant to the subject, they were selected and separated into folders for full reading. The inclusion criteria were: complete articles, available and indexed in the aforementioned databases, free of charge, in the Portuguese language, published in the last five years, between 2019 and 2023, related to the topic. The exclusion criteria were monographs, book chapters, paid-for articles, duplicate studies, studies in another language and studies published before 2019.

**TABLE 02: Sorting process.**

<table>
<thead>
<tr>
<th>Identification</th>
<th>Results by Database</th>
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<tr>
<td></td>
<td><em>Lilacs</em> (nº: 765)</td>
</tr>
<tr>
<td></td>
<td><em>Scielo</em> (nº: 288)</td>
</tr>
<tr>
<td></td>
<td>Excluded after initial screening (no.: 1,016)</td>
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<tr>
<td></td>
<td>Excluded for being duplicates (no. 2)</td>
</tr>
<tr>
<td></td>
<td>Studies selected for reading in full (nº: 35)</td>
</tr>
<tr>
<td></td>
<td>Studies excluded after full reading (nº: 22)</td>
</tr>
<tr>
<td></td>
<td>Final sample of studies (nº: 13)</td>
</tr>
</tbody>
</table>

**SOURCE:** database search results (2023).

Table 02 shows a summary of the searches carried out and the number of articles found in each database consulted. In total, using the descriptors, 1,053 articles were identified in the two databases, as detailed below: LILACS: 765 articles and SciELO: 288 articles. After applying the first filter, in which inclusion and exclusion criteria were considered, highlighting the relevance of the topic, period of research, eliminating studies that were more than 5 years old, paid for, in another language, monographs...
and book chapters, a total of 35 articles were found. Once the 35 articles had been selected, a critical reading of the titles, abstracts and objectives was carried out and 22 articles were excluded as they did not have similar objectives. This resulted in a total of 13 articles, 11 from SciELO and 2 from LILACS.

RESULTS AND DISCUSSION

The findings of this study confirm that child and adolescent sexual abuse is a public health problem and a reality that affects countless children and adolescents on a daily basis, so that the most vulnerable age group is between 6 and 14 years old, with a higher prevalence of cases among females. Regarding the profile of the aggressor, in both sexes of victims, the aggressor is male. They are most often known to their families, mainly the stepfather and the father, followed by unknown aggressors with no family ties.

**TABLE 03:** General characterization of the articles selected according to authorship, year, language and database.

<table>
<thead>
<tr>
<th>Authors (year)</th>
<th>Titles</th>
<th>Language</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Souza et al. (2022)</td>
<td>Construction and validation of an educational video to prevent sexual violence among adolescents</td>
<td>Portuguese, English and Spanish</td>
<td>SciELO</td>
</tr>
<tr>
<td>Junior and Wahba¹ (2022)</td>
<td>Ingress of affection: undue exposure and ghosting in young social network users</td>
<td>Portuguese, English and Spanish</td>
<td>SciELO</td>
</tr>
<tr>
<td>Nobre et al. (2021)</td>
<td>Determining factors in children's screen time in early childhood</td>
<td>Portuguese and English</td>
<td>SciELO</td>
</tr>
<tr>
<td>Patrocinio and Bevilacqua (2023)</td>
<td>What do nudes and unauthorized disclosure of intimate images have to do with the school?</td>
<td>Portuguese and English</td>
<td>SciELO</td>
</tr>
<tr>
<td>Tomaz (2023)</td>
<td>From YouTube to the news: vulnerability and agency in the representations of child content producers</td>
<td>Portuguese and English</td>
<td>SciELO</td>
</tr>
<tr>
<td>Miranda et al.</td>
<td>Sexual violence against children</td>
<td>Portuguese and English</td>
<td>SciELO</td>
</tr>
</tbody>
</table>
### TABLE 04: Main results of the studies selected in the survey.

<table>
<thead>
<tr>
<th>Authors (year)</th>
<th>Main results</th>
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<tbody>
<tr>
<td>Souza et al. (2022)</td>
<td>The aim was to develop an educational video on preventing sexual violence aimed at teenagers. The presentation of this topic in a clear and contextualized way proved comprehensible to adolescents. The video looked at sexual violence from two perspectives: with and without physical contact and where the sexual abuser can be a family member, friend or stranger. It also presented the risk factors related to adolescents' exposure to sexual violence, highlighting the use of alcohol and other drugs and relationships in virtual environments, since this makes adolescents...</td>
</tr>
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</table>
The aim was to assess the incentives and functionality that young users of social networks have in *sexting*, which is the behavior of sending, receiving or sharing nudes, whether authorized or not. In relation to the phenomena of digital abuse, there is undue exposure, which corresponds to the act of sharing nudes without the author's consent. This involvement corresponds to an increase in the risk of cyber-violence and pressure to send more nudes.

The aim was to investigate the development of children aged between 24 and 42 months who had access to screens. 63.3% of the children had screen time of more than 2 hours a day, which is above the recommended time for their age.

The aim was to identify the impact on the school environment of the authorized and unauthorized exposure of intimate photos of women. Violent practices are differentiated based on how these media are produced, acquired and disseminated. The research identified a significant number of girls and women who had their intimate photos published. We therefore sought to identify how these photos were produced and disseminated and how they affected their lives.

The aim was to shed light on the visibility that children are having in an *online* environment such as *YouTube*, which promotes channels in which the protagonists are children, and thus investigate how this medium can cause vulnerability for this audience, in addition to the vulnerability that also permeates the children who are users of this environment.

The aim was to analyze cases of children and adolescents who have been victims of sexual violence. The data obtained showed that the female sex is more vulnerable than the male sex. In girls, the age of puberty intensifies this vulnerability, while in boys, the greatest
vulnerability occurs at a younger age than in girls. As for the aggressor, the highest frequency corresponds to adult men, for both sexes. With regard to girls, the stepfather is the most frequent perpetrator of abuse within the family, followed by strangers and boyfriends. In the case of boys, family members without a parental link are more present.

**Miranda et al. (2020)**

The aim was to identify the highest prevalence of cases of sexual violence in relation to the sex of the victim, their age group, risk factors, places of greatest occurrence and the profile of the aggressor. With regard to the most common victims, it corresponds to a younger age, in which children end up being more vulnerable, and in females, whether children or adolescents. It identified the home as the main setting, and the father as the most likely perpetrator.

**Cruz et al. (2021)**

The aim was to identify the psychological, physical, sexual and social impacts that sexual abuse during childhood and adolescence can have on its victims. When the information was collected, the following realities became apparent: low self-esteem, depressive disorder, post-traumatic stress disorder, sleep disorders, borderline disorder, self-injury, suicidal behavior, psychotic disorder, auditory hallucinations, pregnancy resulting from rape and substance abuse.

**Silva, Pereira and Andrade (2023)**

The aim was to conduct an online survey, using the Facebook platform, on the subject of the "fight against child sexual abuse". It was carried out mainly through an online group, in search of interactions with victims of this violence, with the aim of emphasizing the breaking of silence, elaboration of the trauma experienced and the support they can receive and offer to people who have been through the same situation. As technologies are increasingly present in people's lives, they are being used in a positive way.

**Arantes**

The aim was to highlight the role of psychology in defending the
human rights of children and adolescents, since theoretical clippings show how these groups used to be treated and how some realities have still not completely changed.

Martins and Santos (2022) The aim was to gain greater access to the subject of sexual abuse, in order to make it clearer or easier to suspect. Interviews were held with three psychology professionals who had already had experience in caring for children and adolescents who had been victims of sexual violence.

Schwartz and Pacheco (2021) The aim was to discuss the use of social networks and the internet during childhood and adolescence and how this may be impacting on their lives and the parenting process. The article discusses the benefits and risks that the internet and its means of communication provide to individuals, taking into account that some do not use it under adult supervision. As possible negative aspects, vulnerability is highlighted, so that the individual is exposed to cyberbullying and sexual issues, such as harassment and the request or receipt of intimate photos, since it is common for them to use social networks anonymously, through fake profiles, which makes the victims more vulnerable. As an intervention against this demand, it is suggested that parents be psychoeducated and given guidance on the risks and benefits of using technology, so that they can participate and promote healthy use for their children.

Cruz et al. (2020) The aim was to see how the body image and sexuality of boys and girls between the ages of 6 and 11 is being exposed through the media and social media, in view of the impact they have on shaping opinions and stereotypes related to the body, influencing their acceptance and inclusion. Interviews were carried out in groups to identify their opinions and realities regarding physical image. The results identified a difference between the girls' and boys' responses in relation to body eroticization: the boys showed more intense sexual manifestations. They all spoke naturally about body parts,
such as buttocks, breasts and genitals, but it was observed that they were accompanied by an intensified sexual tone, related to early sexualization. Among the categories that influence these realities, such as family, friends and the media, the media stood out as the main contributor to children's early sexualization.

**SOURCE:** Survey results (2023).

Martins and Santos (2022) argue that there is a tendency to reduce the explanation of the phenomenon of sexual violence to the family, emphasizing that this makes it impossible to observe cultural and socioeconomic aspects. Miranda et al (2020) state that it is necessary to emphasize that this violence is a complex, multi-causal, multifactorial and multidimensional phenomenon that can affect any individual, regardless of their gender, social class, age group and whether they are inside or outside their family context. In view of this, it is necessary to go beyond what is often shown and investigate other means that may facilitate this reality that threatens the physical, psychological and social integrity of so many victims.

According to Schwartz and Pacheco (2021), studies on the use of technology by children and adolescents need to be boosted, since our society is based on technological means and, therefore, subjects are already present in this reality from an early age. The research carried out by Nobre et al (2023) found that the 24 to 42 month-old age group already used screens beyond what is recommended and, as a result, sought to identify the benefits and harms it brings to users, one of the risk factors being exposure to inappropriate content.

There are many risks associated with internet use. Tomaz (2023) problematized the use of children's images on YouTube channels and how this visibility affects them and their internet users. Despite offering children new forms of language and a space of social relevance, which in the long term can be positive for them, this does not exempt them from exposure to various risks, such as access to pornography, sexual harassment and contact with strangers.

The media have an impact on the behaviors that children emit. The media to which they have access and the advertising they consume contribute to a direct transition from childhood to adulthood. The way in which female and male images are displayed is loaded with made-up eroticism, through poses and the exposure of bodies, replacing innocence with a seductive and sexualized image. Children, then, are considered to be sponges for these media, and what they have access to has an effect on their personal and external relationships, their view of the world and their introduction to early sexuality, according to Cruz et al (2020).
With regard to adolescents, the issues already mentioned are also present, as are their risk factors. However, other phenomena such as sexting, cyber-violence and undue exposure should be specifically highlighted.

Sexting is the practice of sending, receiving and sharing sexually-charged conversations, audios, images and videos with third parties (not always with their consent). This practice increases the risk of cyber-violence, which corresponds to intentional and repetitive violent behavior, one of the peculiarities of which is that it takes place anonymously, through fake accounts, and is less predictable, making it more difficult to deal with. Undue exposure is considered a consequence of these two phenomena, as it involves sharing nudes with third parties without the author's consent, generating threats to share more nudes as the main risk factor, placing the subject in a situation of digital abuse (Júnior; Wahba, 2022; Schwartz; Pacheco, 2021).

In view of the above, it is necessary to point out that the internet should not be considered a villain. The problem is related to its indiscriminate use, without supervision and guidance. Schwartz and Pacheco (2021) emphasize that the restrictive mediation of the use of technologies statistically shows a significant decrease in risky sexual behavior online, promoting a reduction in access and, consequently, a reduction in contact with inappropriate and sexual content.

Bearing in mind that technological means are increasingly present in everyone's life, and that it will not always be possible to prevent children and adolescents from accessing them in an inappropriate way, it should be taken into consideration to use them to provide ways of raising awareness and seeking to reduce child and adolescent sexual abuse, promoting educational videos, online awareness groups or support for victims (Silvia; Pereira; Andrade, 2022; Sousa et al, 2022).

CONCLUSIONS

Child and adolescent sexual abuse is a reality that affects countless victims on a daily basis and is often veiled. This makes it necessary to look at the risk factors beyond what is most often exposed. In light of this, the need to monitor how children and adolescents are using technological media, what they are exposed to and how they are exposing themselves is highlighted, since risk factors have been identified in relation to their indiscriminate and unsupervised use.

Technological means do not need to be abolished from the lives of children and adolescents, as they have benefits for society and their users, but it is necessary to look beyond the benefits and pay attention to their harms, emphasizing that technologies are not villains, but rather the way in which they are being used.
It is therefore necessary to emphasize that a multidisciplinary approach and the commitment of parents, educators, health professionals and society in general are essential. Raising awareness of the dangers and promoting guidelines for the responsible use of technology are essential strategies for ensuring the safety and well-being of the younger generation in an increasingly digital world.

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