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Magina, AR; Barros, MLN.

Corresponding author:

ANA MAGINA

anarobertamagina@gmail.com

Author Affiliation:Physical Therapy Program, School
of Health and Life Sciences,
Catholic University of Pernambuco,
Recife, Pernambuco, Brazil.**ADMINISTRATIVE INFORMATION****Support** - At the protocol stage, Ana was an Institutional Scientific
Initiation Scholarship Program (PIBIC) scholarship holder.**Review Stage at time of this submission** - Data extraction.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202550044**Amendments** - This protocol was registered with the International
Platform of Registered Systematic Review and Meta-Analysis Protocols
(INPLASY) on 15 May 2025 and was last updated on 15 May 2025.**INTRODUCTION**

Review question / Objective The PICO acronym method was used and adapted to formulate the research question and select the descriptors used to search for scientific publications.

P (Problem) Identify the factors influencing the prevalence of child sexual abuse and exploitation in the virtual environment.

E (Exposure) Identify articles on factors contributing to the occurrence of abuse and sexual exploitation cases in the virtual environment.

C (Control) Analyse the literature on cases of abuse and sexual exploitation in electronic media.

O (Outcome): Determine the factors and generate solutions to minimise the risks of exploitation today.

Based on the adapted application of the PICO strategy, the systematic review aims to answer the following research question: "What are the factors

influencing the prevalence of child sexual abuse and exploitation in the virtual environment?"

Rationale Sexual abuse is understood as situations in which a child or adolescent's sexuality is invaded by another person, constituting a form of violence that can occur both in domestic environments and outside them. In this context, the child is used for the perpetrator's sexual gratification, with their will being overridden. This includes caresses, touching intimate areas, or any act with a sexual connotation, with or without penetration. According to the epidemiological bulletin provided by the Ministry of Health, containing data on sexual violence against children and adolescents, between 2015 and 2021, 202,948 cases of abuse against children and adolescents were recorded in the Notifiable Diseases Information System (Sinan).

On the other hand, sexual exploitation is mediated by profit, whether monetary or not. In other words, a child or adolescent is used for sexual purposes with lucrative objectives. This exploitation can take

four distinct forms: child prostitution, sex trafficking, pornography involving children and adolescents, and sex tourism. In Brazil, from 2015 to 2022, 8,780 cases of sexual exploitation were reported, of which 4,655 involved children and adolescents aged 10 to 19 years, according to Sinan data. Considering that not all cases are reported to the competent authorities, the actual number is likely higher.

In this scenario, there is an aggravating factor that persists in contemporary society: the advancement of technology and social networks. Access to the internet is increasingly facilitated for people from different social backgrounds. Children and adolescents are introduced to the virtual environment at a very young age, which requires essential attention from guardians to protect them from imminent dangers in this environment.

However, there is a noticeable negligence in this supervision, making children vulnerable online and exposing them to sexual abuse and exploitation.

This digital neglect directly contributes to the number of sexual crimes against children and adolescents. The virtual environment facilitates contact between pedophiles and their victims, and without proper supervision by guardians, children can be easily manipulated psychologically, exposed to sexual content, and induced to explore their sexuality. A survey conducted by TIC Kids Online Brasil shows that 92% of the population aged 9 to 17 uses the internet in the country, which corresponds to approximately 25 million young people in 2022. This reinforces the importance of parental supervision to prevent possible sexual abuse of children and adolescents.

In this context, the research aims to review the literature on the factors influencing the prevalence of child sexual abuse and exploitation in the virtual environment. Since this is a current and recurring issue in Brazilian and global society, and with the advancement of new technologies, it is of utmost importance to have specific measures to protect children and adolescents who are vulnerable in this digital era. Understanding the risks and how they influence a young person's susceptibility to sexual abuse and exploitation is relevant for preventing such cases in contemporary society.

Condition being studied Not applicable.

METHODS

Search strategy With the research question established, a literature search strategy will be adopted. Data collection will occur from August 2024 to March 2025.

Scientific articles will be retrieved from the following journal portals: PUBMED, SCIELO, SCIENCE DIRECT, and LILACS.

The search terms will be structured according to the PICO acronym. The advanced search platforms will use descriptors in Portuguese, English, and Spanish, limiting studies to the period from 2020 to 2025. Boolean operators "AND" and "OR" will be used to combine search terms.

- Abuso sexual na infância AND/OR Trabalho sexual AND/OR Acesso à Internet
- Sexual child abuse AND/OR Prostitution AND/OR Internet access
- Abuso sexual infantil AND/OR Trabajo sexual AND/OR Acceso a Internet.

Participant or population Not applicable.

Intervention Not applicable.

Comparator Not applicable.

Study designs to be included Epidemiological and ecological studies; Case study; Clinical study; Comparative study; Equivalence trial; Evaluative study; Government publication; Historical article; Observational study; Personal narrative.

Eligibility criteria Selected articles will be screened based on inclusion and exclusion criteria:

* Inclusion Criteria:

- Published in the last 5 years (2020-2025);
- Description of the research methodology;
- Presence of at least one selected descriptor in the title and/or abstract;
- Complete and original scientific articles;
- Studies applying methodologies to analyze influencing factors of child sexual abuse and exploitation in the virtual environment.

* Exclusion Criteria:

- Bibliographic reviews, reviews, letters, and editorials;
- Incomplete articles;
- Studies not available online in PUBMED, SCIELO, SCIENCE DIRECT, and LILACS;
- Duplicate studies.

Information sources In conducting this research, I utilised multiple reputable scientific databases to ensure a comprehensive and diverse literature review. The primary sources of information included PubMed, SciELO (Scientific Electronic Library Online), ScienceDirect, and LILACS (Latin American and Caribbean Health Sciences Literature).

Main outcome(s) This systematic literature review aims to examine the influencing factors behind

child and adolescent sexual abuse and exploitation in digital environments. The study expects to show that the phenomenon is increasingly prevalent and shaped by psychosocial vulnerabilities, rising technological access, and gaps in legal and institutional responses. It intends to identify forms of abuse such as grooming, sexting, and non-consensual image sharing, while emphasising the need for preventive strategies involving education, parental supervision, digital literacy, and stronger legal protections. Additionally, the research aims to highlight the scarcity of empirical studies, particularly in Latin America, and the limited inclusion of victims' perspectives in the existing literature.

Additional outcome(s) In addition to the primary findings, this research aims to explore further outcomes that contribute to a more comprehensive understanding of the issue. These include the psychological and developmental impacts of online sexual abuse on children and adolescents, such as trauma, anxiety, and social withdrawal. It also seeks to identify patterns in the profiles of both victims and perpetrators, including behavioural characteristics and common tactics used in digital grooming. The role of digital platforms will be examined, particularly how social media and online gaming environments may facilitate abuse and the extent of cooperation from technology companies in addressing the issue. Moreover, the study intends to evaluate the effectiveness of current reporting mechanisms and institutional responses, assess the influence of cultural and regional factors, especially within the Latin American context, and analyse the adequacy of existing legal frameworks.

Data management Two digital tools were used during the research to reduce human error during the survey and to better organise the conduct of the research. The first of these is StArt (State of Art for Systematic Review), in which the imported articles are analysed and categorised in a methodical and organised way, following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. To import files from the databases into the StArt software, the Zotero citation manager was used, which supports compilation in RIS (Research Information Systems) format. This manager allows citation data to be seamlessly transferred and organised. It also played a key role in organising references, storing them in a digital library where they could be sorted, tagged, and easily retrieved if needed.

Quality assessment / Risk of bias analysis This research will use PRISMA (Preferred Reporting

Items for Systematic Reviews and Meta-Analyses) to conduct the research as a whole, respecting each phase of the preparation of a systematic literature review. The JBI (Joanna Briggs Institute) questionnaire, aimed at verifying the methodological and scientific quality of the articles extracted for analysis.

Strategy of data synthesis After the initial selection of articles, the next step involves a thorough review where the selected articles will be fully read. During this phase, their quality will be assessed using the JBI questionnaire, which evaluates the study's design, methodology, sample size, data collection methods, and potential risk of bias. In addition to this, a critical reading of each article will be performed to carefully examine its strengths and weaknesses. Each article will also be checked to ensure it meets the inclusion criteria, confirming its relevance to the research objectives and its suitability for the systematic review. This process ensures that only high-quality and pertinent studies contribute to the final analysis, thereby enhancing the validity and reliability of the research findings.

Subgroup analysis Not applicable.

Sensitivity analysis The JBI (Joanna Briggs Institute) tool will be used to assess the quality of the included studies, evaluating the methodological quality of each study, considering factors such as study design, sample size, data collection methods, and risk of bias. Excluding articles that do not provide adequate quality for this research.

Language restriction Studies in portuguese, english and spanish will be included.

Country(ies) involved Brazil.

Keywords Abuso sexual na infância; Sexual child abuse; Abuso sexual infantil; Trabalho sexual; Prostitution; Trabajo sexual; Acesso à Internet; Internet access.

Dissemination plans Presenting at congresses and events focused on the theme of child sexual abuse and exploitation, as well as presenting in the university environment, encouraging research and giving due attention to the electronic media used by children.

Contributions of each author

Author 1 - ANA MAGINA - Ana Magina conducted all phases of the systematic review under the PRISMA guidelines.

Email: anarobertamagina@gmail.com

Author 2 - Marina de Lima Neves Barros - Marina was the academic advisor throughout the development of the systematic review, providing continuous guidance, critical feedback, and methodological oversight. This included orienting Ana on the application of the PRISMA guidelines, assisting in the refinement of the research question and selection criteria, reviewing and correcting each stage.

Email: marinalnbarros@gmail.com