

Article

Pornography and Sexual Violence Among Minors: A Systematic Review

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ABSTRACT

The easy access to pornography, its consumption by the young population, the frequent violence toward women depicted in it, and its correlation with gender roles and stereotypes have led to the interest of the scientific community in analyzing its association with the perpetration of sexual violence. This systematic review aims to analyze the relationship between the consumption of pornography by minors and the commission of sexual violence. It also aims to examine the variables involved, gender differences, and differences between violent and non-violent content, as well as the implications for the prevention of sexual delinquency. Thus, following the PRISMA method, 17 studies published up to 2024 were reviewed. The findings indicate that an association exists, with some studies concluding that the consumption of pornography predicts the perpetration of sexual violence while others identify a correlation. Moreover, the relationship is stronger in men and in violent content. Research has also found different variables involved in this association. Consequently, there is a need to include this information in sexual delinquency prevention programs for young people, emphasizing the involvement of families and the demand for high-quality sexual and emotional education.

El Consumo de Pornografía en Menores y la Perpetración de Violencia Sexual: una Revisión Sistemática

RESUMEN

El fácil acceso a la pornografía, su consumo por la población joven, la frecuente violencia hacia la mujer presente en ella y su correlación con los roles y estereotipos de género ha supuesto el interés de la comunidad científica por analizar su asociación con la perpetración de violencia sexual. De esta forma, en esta revisión sistemática se pretende analizar la relación entre el consumo de pornografía en menores y la comisión de violencia sexual, además de examinar qué variables participan, las diferencias de género y entre el contenido violento y no violento, así como las implicaciones para la prevención de la delincuencia sexual. De esta manera, siguiendo el método PRISMA se han revisado 17 estudios publicados hasta 2024. Se ha observado que existe esta asociación: algunos estudios concluyen que la primera predice la segunda y otros que están correlacionadas. Además, la relación es más fuerte en hombres y en el contenido violento. Asimismo, las investigaciones han hallado diferentes variables que participan en dicha asociación. Como consecuencia, surge la necesidad de incluir esta información en los programas de prevención de la delincuencia sexual en la juventud, destacando la participación de las familias y la exigencia de una educación sexo-afectiva de calidad.

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Introduction

Currently, anyone, of any age, anywhere in the world, can consume pornography anonymously and free of charge. Pornography is understood as material containing "sexually explicit images or descriptions of sexual acts including genitalia" created to generate "sexual thoughts, feelings, or behaviors" (Kor et al., 2014, p. 862). Sexual violence includes sexual behaviors in the absence of the consent of at least one person, either with or without physical contact (O'Donohue & Schewe, 2019).

Studies on the relationship between pornography and sexual violence are divided into two blocks (Wright et al., 2016). On the one hand, there are researchers who affirm that pornographic content is a risk factor for sexual violence. On the other, there are those who maintain that it reduces this risk and that it only has an effect if it is of a violent nature, which is rare, and that prosocial influences avoid any relationship with sexual violence.

One of the most recognized theoretical models in this field is the Confluence Model, which integrates the available scientific evidence and establishes the risk factors for the commission of sexual aggression, i.e., hostile masculinity and impersonal sexuality (Malamuth et al., 2016). In this theory, pornography consumption is identified as a secondary risk factor that interacts with other individual risk factors increasing the probability of committing sexual aggression, reinforcing sexually aggressive attitudes, cognitions, and emotions already presented by the individual (Malamuth, 2018).

Another recognized theoretical model is the Acquisition, Activation, Application Model (3AM) that seeks to explain the socializing effect of pornography (Wright et al., 2015). This model states that through the consumption of sexually explicit material, sexual scripts—socially constructed scripts about the roles and behaviors to be followed in sexual relationships—are acquired, activated, and applied.

As shown in the latest report of the State Attorney General's Office (*Fiscalía General del Estado*, 2023), between 2021 and 2022, there was a 45.8% increase in Spain in sexual assaults committed by minors and a 116% increase since 2017. Sexual abuse on the other hand, only increased by 0.81% between 2021 and 2022, although since 2017 the increase has been 111%. It should be noted that for almost all of 2022 the differentiation between sexual assault and sexual abuse was still in force in Spanish legislation prior to *Organic Law 10/2022*, of September 6, on the comprehensive guarantee of sexual freedom (*Boletín Oficial del Estado*, *Official State Gazette*, 2022). This increase in sexual crimes committed by minors highlights the need to analyze why this is occurring and, therefore, what factors may be increasing the likelihood of these acts being committed.

It should also be noted that the mean age of onset of pornography consumption in Spain is 14.84, the youngest being 8 years, as found by Ballester and Orte (2019). In a study from the United States, the mean age of first exposure was 13.8 in men and 17.8 in women (Herbenick et al., 2020). It is necessary to take into account the early onset of this consumption, as it is in childhood when sexual identity is developed, which consolidates during adolescence (Ballester & Orte, 2019).

Numerous investigations have been developed over the years on the relationship between pornography consumption and the perpetration of sexual violence, but most have focused on general population (Wright et al., 2016, 2021a), only on adults (Brem et al., 2021; Carr & VanDeusen, 2004; De Heer et al., 2021; Kingston et al., 2008; Marshall et al., 2021; Tomaszewska & Krahé, 2018; Vega & Malamuth, 2007), or on young people including adults (Beyene et al., 2022; Bonino et al., 2006; Gallego & Fernández-González, 2019; Zgourides et al., 1997).

Furthermore, there have been systematic reviews that address other topics in addition to the relationship between pornography and sexual violence, but few articles have been analyzed: seven (McKibbin et al., 2024), five (Owens et al., 2012), four (Slavtcheva-Petkova et al., 2015), three (Pathmendra et al., 2023; Peter & Valkenburg, 2016; Raine et al., 2020)) and one (FS et al., 2021). In addition, systematic reviews have been conducted on this topic, but they have used studies in minors, adults, and the general population, but not exclusively in minors (Mestre-Bach et al., 2024; Wright et al., 2016). There have also been reviews such as that of Seto and Lalumière (2010), comparing adolescents who have committed sexual offenses with those who have not, to explain this type of criminal offense, although only eight studies were analyzed on pornography consumption. Mori et al. (2023) evaluates the relationship between pornography and sexually problematic behavior, which includes any inappropriate or potentially harmful behavior, but does not specify how this relationship relates to each type of behavior included in the category, such as, for example, violent behavior.

Consequently, we highlight the need to develop a systematic review on the relationship between pornography and sexual violence that only analyzes studies with a sample of minors in order to determine the characteristics of this relationship in this specific population.

The aim of this systematic review is to analyze and synthesize the existing scientific literature on the relationship between the consumption of pornography by minors and the perpetration of sexual violence. To this end, the following specific objectives are pursued: to identify and summarize the most relevant findings of empirical studies on the influence, in minors, of pornography consumption on the commission of sexual crimes; to examine which variables are involved in the relationship between pornography consumption and the perpetration of sexual violence; to observe whether there are gender differences and differences according to the violent nature of pornographic material; and to analyze what implications these results may have on the prevention of sexual delinquency.

Method

In order to carry out this systematic review, the guidelines of the PRISMA method (Page et al., 2021) were used. More specifically, an exhaustive search was carried out of the existing scientific studies on the subject of the present investigation. For this purpose, a search equation based on eligibility criteria was formulated in order to select the studies that meet the objectives of the present systematic review.

After the selection of the studies, their main characteristics are presented and the results described in a narrative synthesis.

Eligibility Criteria

The following selection criteria were used to select the articles included in this systematic review:

- Variables: articles dealing with the relationship between the consumption of pornography by minors and the commission of sexual violence were selected.
- Type of document: articles published in scientific journals were identified, discarding theses, reports, books, book chapters, etc.
- Study design and methodology: experimental, quasi-experimental, correlational, and observational empirical studies were accepted, as well as qualitative studies and case studies.
- Date of publication: articles published up to February 2024 were selected.
- Sample: we considered studies whose sample consisted of minors up to 18 years of age, including longitudinal studies where the age of majority is reached during the course of the research.
- Language: articles in Spanish and English were selected.

Search and Selection of Studies

In order to determine whether there have been previous systematic reviews on the topic of the present study, an initial search was carried out in the Web of Science (WOS), PsycInfo (EBSCO)

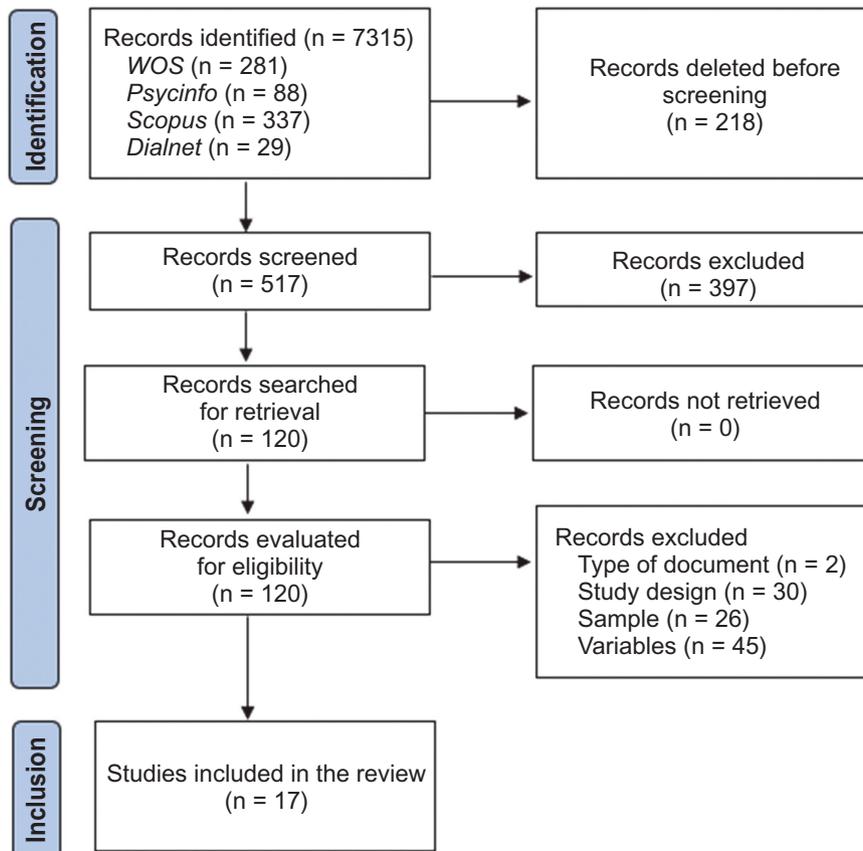
and Scopus databases. More specifically, the following search equation was used (*porn* OR “sexually explicit media” OR “sexually explicit content” OR “sexually explicit material”) AND (teen* OR minor* OR adolescent*) AND (“sexual assault” OR “sexual aggression” OR “sexual violence” OR rape OR abuse) AND (“systematic review”).

Additionally, this search was also performed in Dialnet in the following way: (porn*) AND (menor* OR adolescente*) AND (“agresión sexual” OR “abuso sexual”) AND (“revisión sistemática”). However, no results were obtained.

To identify the articles analyzed in this systematic review, the Web of Science (WOS), PsycInfo (EBSCO), and Scopus databases were consulted using the following search equation: (*porn* OR “sexually explicit media” OR “sexually explicit content” OR “sexually explicit material”) AND (teen* OR minor* OR adolescent*) AND (“sexual assault” OR “sexual aggression” OR “sexual violence” OR abuse OR rape). In addition, in Spanish, the Dialnet database was consulted with the search equation (porn*) AND (menor* OR adolescente*) AND (“agresión sexual” OR “abuso sexual”). The last search was performed on February 1, 2024.

The following flowchart, Figure 1, prepared according to the PRISMA method (Page et al., 2021), specifies the selection and screening of articles taking into account the eligibility criteria outlined above.

Figure 1
PRISMA Flow Chart



Methodological Quality of Included Studies

Following previous scientific literature on recommended scales for cross-sectional studies (Barker et al., 2023; Ma et al., 2020), use was made of the "JBI critical appraisal checklist" (Moola et al., 2020). This tool aims to assess the risk of bias in internal validity, statistical conclusion, scope of results, and external validity (Barker et al., 2023).

This scale is composed of 8 items: (1) Are the inclusion criteria for the sample clearly mentioned?; (2) Were the participants and the context of the study specified?; (3) Was the exposure group reliably and validly measured?; (4) Were objective and standardized criteria used to measure each condition?; (5) Were extraneous variables identified?; (6) Were there strategies to deal with the extraneous variables mentioned?; (7) Were the results reliably and validly measured?; and (8) Were appropriate statistical analyses used? Originally, each item had 4 response options: "Yes"; "No"; "Unclear"; "Not applicable". To make a decision on the quality of each study, it was decided that items marked "Yes" would score 1 point, while any other answer was scored 0 points (see Table 1).

We chose to consider only items 2, 7, and 8 of the scale, given that the remaining items refer to cohort studies and case studies. The evaluation of each article was carried out by two reviewers working independently to ensure inter-rater reliability. Discrepancies were resolved by consensus, and all articles in which consensus was not reached were eliminated.

Results

The present systematic review included 17 articles that met the eligibility criteria initially established, and their characteristics are shown in Table 2. The results are described below, divided according to the established objectives.

Influence of Pornography Consumption on the Commission of Sexual Crimes by Minors

Some of the studies that make up the present systematic review found that minors who consume pornography are more likely to perpetrate sexual violence (Stanley et al., 2018; Waterman et al., 2022; Ybarra et al., 2011). More specifically, Ybarra et al. (2011) establish that minors who consumed pornography were 6.5 times more likely to commit sexually violent behaviors over a 36-month period. Waterman et al. (2022) found that consumption of sexually explicit material predicted later sexual harassment and sexual assault. Adolescents who had consumed pornography in the previous 6 months were 2 to 3 times more likely to perpetrate sexual harassment and 4.2 to 14.4 times more likely to perpetrate sexual assault. Stanley et al. (2018) obtained that, for men, consuming pornography regularly was associated with an increased likelihood of engaging in sexually coercive behaviors. Pratt and Fernandes (2015) concluded in their case study that pornography influenced the sexual offenses committed by the two adolescents evaluated, mimicking sexual practices and providing distorted beliefs about women's unconditional predisposition to have sex and that they enjoy it regardless of whether they show resistance. Wright et al. (2021b) found that pornography consumption and sexual assault were correlated in both men and women. Similarly, Huntington et al. (2022) found that young men and women who had consumed violent pornography were more likely to have perpetrated a sexual assault in the past 6 months.

Other studies such as Mancini et al. (2014) found that, for each additional exposure to sexually explicit content, the frequency of committing sexual offenses increased by 9%. Similarly, Huntington et al. (2022) found that higher scores on violent pornography consumption were positively related to the frequency of committing sexual assaults among adolescents.

Table 1
Methodological Quality of Included Studies

Authors and year	Were the participants and the context of the study specified?	Were the results reliably and validly measured?	Were appropriate statistical analyses used?	Total (0 to 3)
Wieckowski et al. (1998)	1	1	0	2
Ybarra et al. (2011)	1	1	1	3
Mancini et al. (2014)	1	0	1	2
Pratt & Fernandes (2015)	1	1	0	2
Ybarra & Thompson (2018)	1	1	1	3
Stanley et al. (2018)	0	0	1	1
Dawson et al. (2019)	1	1	1	3
Rostad et al. (2019)	1	1	1	3
DeLago et al. (2020)	1	1	1	3
Boakye (2020)	1	1	1	3
Štulhofer (2021)	1	1	1	3
Kohut et al. (2021)	1	1	1	3
Wright et al. (2021b)	1	1	1	3
Bergenfeld et al. (2022)	1	1	1	3
Waterman et al. (2022)	1	1	1	3
Barter et al. (2022)	1	1	1	3
Huntington et al. (2022)	1	1	1	3

Table 2
Characteristics of the Included Studies

Authors and year	Country	Evaluation instruments	Main variables
Wieckowski et al. (1998)		Interviews using ad hoc questionnaires, PCL-R, and RAIP-ASO.	Characteristics of the sexual offense (differentiating between contact and non-contact and measuring pornography use), family dynamics, degree of psychopathy and criminality, and victimization and trauma.
Ybarra et al. (2011)	USA	Ad hoc questionnaire.	Perpetration of sexual assault (in person and online sexual harassment) and intentional exposure to pornography (violent and non-violent).
Mancini et al. (2014)	Canada	Computerized Questionnaire for Sexual Aggressors interview and documentation review.	Dependent: initiation and frequency of commission of sexual offenses (contact and non-contact). Independent: exposure to pornography (movies and magazines), strip club, erotic objects, prostitution, and total variables in adolescence and adulthood.
Pratt & Fernandes (2015)	Australia	Review of two cases from the Australian Childhood Foundation.	Abusive sexual behaviors and pornography consumption.
Ybarra & Thompson (2018)	USA	Ad hoc questionnaire.	Perpetration of sexual violence: sexual harassment, forced sex, attempted rape, and rape (in person or through technology).
Stanley et al. (2018)	Bulgaria, Italy, Norway, England, and Cyprus	Ad hoc questionnaire and interviews.	Sexual coercion and abuse (victimization and perpetration), sexting (victimization and perpetration), gender equality, pornography consumption, and intimate partner violence.
Dawson et al. (2019)	Croatia	Ad hoc questionnaire.	Self-reported sexual aggression and pornography use (frequency and age of onset).
Rostad et al. (2019)	USA	Questionnaires (CADRI, IRMAS, and ad hoc).	Intimate partner violence (threats, physical and sexual) (perpetration and victimization) and consumption of violent pornography.
DeLago et al. (2020)	USA	Medical records.	Sexual abuse with invasive and noninvasive behaviors, age, sex, age of victim, and relationship between the two.
Boakye (2020)	Ghana	Structured interviews using an ad hoc questionnaire.	Sexual violence.
Štulhofer (2021)	Croatia	Ad hoc questionnaire.	Sexual aggression, callousness, and pornography consumption.
Kohut et al. (2021)	Croatia	Ad hoc questionnaire.	Sexual aggression, hostile masculinity, pornography consumption (frequency), and impersonal sexuality (number of sexual partners, age of first sexual intercourse).
Wright et al. (2021b)	USA	Ad hoc questionnaire.	Consumption of pornography, motivation to learn through pornography, perceived realism in pornography, identification with actors and actresses, and perpetration of sexual aggression.
Bergenfeld et al. (2022)	Vietnam	Ad hoc questionnaire.	Frequency of perpetration of sexual violence with and without contact and frequency of pornography consumption with and without violence.
Waterman et al. (2022)	USA	Ad hoc questionnaire.	Consumption of pornography, perpetration of sexual aggression (harassment, coercion, physical force, intimate partner violence, and abuse of an incapacitated person, e.g. due to being under the influence of drugs).
Barter et al. (2022)	Bulgaria, Italy, Norway, England, and Cyprus.	Ad hoc questionnaire and interviews.	Victimization and perpetration of intimate partner violence (physical, emotional, and sexual).
Huntington et al. (2022)	USA	Ad hoc questionnaire.	Perpetration of sexual assault.

The research by Mancini et al. (2014) found that exposure to pornography was associated with earlier onset of sexual offending, and the greater the exposure, the earlier the onset. The study by DeLago et al. (2020) found that minors who had consumed pornography committed more invasive sexual abuse than those who had not consumed pornography.

In contrast to previous studies, Boakye (2020) concluded that there was no significant association between pornography consumption and sexual violence. In the research by Štulhofer (2021) and Kohut et al. (2021), the viewing of sexually explicit material did not predict the perpetration of sexual assault. Following on from previous studies, in the study by Dawson et al. (2019) no significant association was found between change in the consumption of sexually explicit material and the pattern of sexual aggression during the time period of the study.

Variables Involved in the Relationship Between Pornography Consumption and the Perpetration of Sexual Violence

Wieckowski et al. (1998) found that early exposure to sexually explicit material, together with the absence of appropriate bonding, increased the likelihood of committing sexual offenses. In Štulhofer's (2021) study, the relationship between pornography consumption and sexual aggression was found to vary with levels of callousness, which manifests as lack of remorse or objectification of the other person. In analyzing this moderating effect of callousness, it was found that the risk of sexual aggression among adolescents with high callousness was lower if they consumed sexually explicit material more frequently. Huntington et al. (2022) found that the interaction between hostile masculinity and consumption of pornographic material was associated with an

increased likelihood of committing sexual aggression. [Ybarra et al. \(2011\)](#) found that having been a victim of online sexual assault weakened the relationship between violent and nonviolent pornography consumption and the perpetration of sexually aggressive behavior. However, including aggression and psychosocial risk factors further attenuated the relationship between consumption of nonviolent sexually explicit material and perpetration of sexual assault, but not for violent pornography. [Stanley et al. \(2018\)](#) establish that in men there is a strong relationship between consumption of pornographic material, gender stereotypes, and abusive behavior.

Gender Differences and Differences Between Violent and Non-Violent Pornographic Material

Regarding gender differences, some studies found different results in men and women ([Barter et al., 2022](#); [Rostad et al., 2019](#); [Stanley et al., 2018](#); [Waterman et al., 2022](#); [Ybarra & Thompson, 2018](#)), while similar patterns were found regarding men and women in that of [Ybarra et al. \(2011\)](#). [Rostad et al. \(2019\)](#) found that men who consumed violent pornography were 3 times more likely to commit such acts. The reciprocal relationships found by [Waterman et al. \(2022\)](#) between viewing pornographic content and perpetration of sexual harassment were more frequent for men. Regarding the research of [Stanley et al. \(2018\)](#), a clear association between regular consumption of pornographic material and perpetration of sexual abuse and coercion was found in the male sample. [Barter et al. \(2022\)](#) found that the consumption of pornographic material in women was so low (5%), in contrast to men (45%), that it was presumed that no significant relationship with sexual violence would be found. However, for men, those who regularly consumed sexually explicit material were 2.46 times more likely to perpetrate intimate partner sexual violence than those who did not consume such material. Consistent with previous research, in the study of [Ybarra and Thompson \(2018\)](#), the likelihood of committing sexual violence increased significantly on the male side: people who consumed violent pornography were 6.58 times more likely to commit sexual assault, while in the specific case of men, they were 46.10 times more likely to perpetrate this type of sexual violence. With regard to sexual harassment, the overall sample was 4.62 times more likely to commit these acts (10.96 times more likely in men).

On the other hand, [Ybarra et al. \(2011\)](#) found that the relationship between the consumption of violent pornography and the perpetration of sexual violence was significant in both men and women. Specifically, they were 6 times more likely to commit sexual violence. However, no significant association was found for non-violent pornographic material. In addition, it should be noted that only 15% of women consumed such content, as opposed to 30% of men.

Regarding violence in pornography, some research found that violent pornography had a greater influence on commission of sexual crimes than nonviolent pornography ([Bergenfeld et al., 2022](#); [Ybarra et al., 2011](#); [Ybarra & Thompson, 2018](#)). [Ybarra et al. \(2011\)](#) found that, on the one hand, young people who had consumed nonviolent pornography in the previous year were 3.7 times more likely to engage in sexually aggressive behaviors than those who had not viewed such material. Those who had viewed violent pornographic content in the previous year were 24 times more likely

to perpetrate sexual violence. When comparing people who consumed violent and non-violent pornographic content, those who viewed violent material were 6 times more likely to perpetrate sexually aggressive behaviors over a 36-month period than those who did not consume this type of content. Consumption of non-violent pornographic material was not significantly associated with the perpetration of such sexually aggressive behaviors. Consistent with the previous research, in the work of [Ybarra and Thompson \(2018\)](#), where the sample lacked prior history of sexual violence, it was found that only the consumption of violent pornography significantly predicted the commission of sexual violence, specifically sexual assault, sexual harassment, coercive sex, and rape. [Bergenfeld et al. \(2022\)](#) found that only exposure to violent pornography was related to a consistent, albeit small, increase in the perpetration of behaviors of a sexually violent nature. Furthermore, the increase was even greater with more exposure to violent pornographic content.

Implications of the Results for sex Offender Prevention

As established by [Ybarra and Thompson \(2018\)](#), preventing violent behaviors in early adolescence can help reduce the likelihood of more serious forms of violence later on. Similarly, [Dawson et al. \(2019\)](#) and [Waterman et al. \(2022\)](#) also recommend starting to implement prevention programs from that stage. [Dawson et al. \(2019\)](#) justify this recommendation by stating that, in late adolescence, minors can compare real sexual relationships with those shown in sexually explicit material, whereas in early adolescence it may not be possible for them to make this comparison because they generally have fewer sexual experiences with other people.

Some authors point out the importance of family involvement in the prevention of sexual delinquency ([DeLago et al., 2020](#); [Pratt & Fernandes, 2015](#); [Rostad et al., 2019](#); [Wright et al., 2021b](#)). [Pratt and Fernandes \(2015\)](#) establish the need for families and caregivers to understand the impact of pornography on minors and, to do so, they will need the help of researchers to provide them with the necessary advice and strategies. In addition, [DeLago et al. \(2020\)](#), [Rostad et al. \(2019\)](#), and [Wright et al. \(2021b\)](#) recommend open communication between families and young people about healthy sexuality and relationships, sexual abuse, and pornography, highlighting concepts such as consent, boundaries, listening, and communication skills.

By the same token, [Pratt and Fernandes \(2015\)](#) highlight the ease with which young people access this type of material and its violent nature, which should be considered for the development of sexual violence prevention programs. Regarding the content of this material, [Wright et al. \(2021b\)](#) support the implementation of pornography literacy programs, where adolescents are taught to understand and analyze it critically. As a consequence, it is essential that minors receive quality sex education, where not only are sexual behavior and reproduction discussed, but also the focus is on respectful sexual intercourse and healthy and egalitarian relationships, i.e., consent and respectful communication ([Pratt & Fernandes, 2015](#); [Rostad et al., 2019](#); [Waterman et al., 2022](#)).

[Ybarra and Thompson's \(2018\)](#) research highlights the multifactorial etiology of sexual violence, demonstrating the need to take into account its risk factors in prevention programs. More

specifically, in relation to pornography, the authors point out that exposure in minors to intimate partner violence by caregivers predicts subsequent perpetration of sexual violence and these patterns are reinforced by the actors and actresses in the violent pornography they consume. In addition, Mancini et al. (2014) highlight the importance of taking into consideration the factors that predict the consumption of sexually explicit material throughout the life cycle.

Discussion

The findings from the 17 studies included in this systematic review have been analyzed to provide a synthesis of the scientific evidence regarding the influence of pornography consumption on minors in the perpetration of acts of sexual violence. Other objectives have also been pursued, such as determining which variables are involved in the relationship between the above, examining whether there are gender differences or differences due to the violent nature of sexually explicit material, and analyzing the implications of these results for the prevention of sexual delinquency.

Regarding the first objective, only some of the results show that minors who consume pornography are more likely to perpetrate acts of sexual violence (Huntington et al., 2022; Stanley et al., 2018; Waterman et al., 2022; Ybarra et al., 2011). These results are consistent with other studies that have analyzed these same variables, albeit with samples consisting of general population or adults (Beyene et al., 2022; Bonino et al., 2006; Carr & VanDeusen, 2004; De Heer et al., 2021; Kingston et al., 2008; Marshall et al., 2021; Tomaszewska & Krahé, 2018; Vega & Malamuth, 2007; Wright et al., 2016, 2021a). Moreover, the consumption of sexually explicit material is found to be correlated in both males and females with the commission of sexual assault (Wright et al., 2021b). This has also been found in other research developed in the general population or in adults (Bonino et al., 2006; Brem et al., 2021; Gallego & Fernández-González, 2019; Vega & Malamuth, 2007).

This correlation and prediction of sexual violence by the consumption of sexually explicit material can be explained by Bandura's (1987) social learning theory and conditioning processes. Repeated consumption of this content would shape individuals' fantasies, perceptions, and beliefs about sexual relationships, with behaviors being learned through observation (Kingston et al., 2008). Furthermore, given the high presence of violence against women in pornography (Fritz et al., 2020), as well as its correlation with the assumption of the dominant role of men over women and the objectification of women (Ballester & Orte, 2019; Brown & L'Engle, 2009; Cerbara et al., 2023; Mikorski & Szymanski, 2017), violence against women in sexual relationships would be accepted and normalized through the sexual scripts defined by the 3AM model (Wright et al., 2015). From the perspective of the Confluence Model, repeated exposure to pornography and, therefore, to male domination over women and violence against women present in this content reinforces the aggressive sexual scripts presented by an individual (Wright et al., 2021a). As a consequence of this repeated consumption, desire may be generated towards these violent practices characterized by male domination over women (Biota et al., 2022).

Concerning the second objective, the reviewed studies have found different variables involved in the relationship between

pornography and sexual violence: absence of adequate bonding (Wieckowski et al., 1998), hostile masculinity (Huntington et al., 2022), gender stereotypes (Stanley et al., 2018), online sexual aggression victimization (Ybarra et al., 2011), and callousness (Štulhofer, 2021). Regarding the latter, the risk of sexual aggression in adolescents with higher callousness was found to be lower if they consumed pornography more frequently. These apparently contradictory results are explained by the authors by establishing that pornography may act for these adolescents as a means of channeling their impersonal sexual fantasies. Furthermore, as self-reported sexual aggression is measured in this study, pornography may have altered their perception of sexual consent, making them less likely to be able to identify the violence they commit in sexual intercourse. This may be reflected in the violent content of pornography and women's positive or neutral responses as recipients of these behaviors (Fritz et al., 2020).

As regards the third objective, this consisted of observing whether there were gender differences in the relationship between pornography and sexual violence. Most of the studies reviewed whose sample consisted of women and men (and compared them with each other) concluded that men who consumed pornography were more likely than women to perpetrate sexual violence (Barter et al., 2022; Rostad et al., 2019; Stanley et al., 2018; Ybarra & Thompson, 2018). In Waterman et al. (2022), the relationship between consumption of pornographic material and the commission of sexual harassment was stronger for males. However, in the meta-analysis by Wright et al. (2016), it was concluded that consumption of sexually explicit material was related to increased likelihood of performing sexually aggressive behaviors in both males and females in the same way, although only 7 of the 22 studies they analyzed had females in their sample. The differences between men and women may be due to the fact that pornography reproduces a fictitious affective-sexual model based on misogyny and sexism (Biota et al., 2022).

Regarding differences due to the violent nature of the content, the studies reviewed found that the probability of perpetrating acts of sexual violence was higher when the pornographic content was violent, compared to non-violent (Bergenfeld et al., 2022; Ybarra et al., 2011; Ybarra & Thompson, 2018). This coincides with research in the general population where a greater association has also been found between violent pornography and sexual aggression than non-violent pornography (Gallego & Fernández-González, 2019). A possible explanation may point to the fact that men who are at higher risk of committing sexual aggression may be more attracted to and stimulated by violent pornographic content, as well as being more likely to be influenced by it (Malamuth et al., 2000). However, Wright et al. (2016) found no significant differences between violent and non-violent content in their meta-analysis. Similarly, the study by De Heer et al. (2021) found that pornography consumption predicted the perpetration of sexual violence, but this was not the case with extreme pornography, i.e., that which contained, among other aspects, violence or forced sexual intercourse.

Regarding the last objective, the reviewed studies affirm the need to prevent the perpetration of sexual violence from early adolescence (Dawson et al., 2019; Waterman et al., 2022; Ybarra & Thompson, 2018). Likewise, the cooperation of families is recommended, as well as open communication with young people

(DeLago et al., 2020; Pratt & Fernandes, 2015; Rostad et al., 2019; Wright et al., 2021b). It is also important to consider young people's perceptions of pornography and its effects on their expectations regarding sexual relationships (Pratt & Fernandes, 2015). In addition, risk factors for sexual violence (Ybarra & Thompson, 2018), predictors of pornography consumption (Mancini et al., 2014), and variables involved in the relationship between the two should be included in the programs. Among these, masculinity stands out, the inclusion of which other research recommends in prevention programs, as well as male involvement (De Heer et al., 2021). Finally, the requirement to provide quality sex education, prioritizing healthy and egalitarian relationships, as well as respectful sexual relationships, has been highlighted (Pratt & Fernandes, 2015; Rostad et al., 2019; Waterman et al., 2022). This coincides with the scientific literature, where it is suggested to provide young people with tools to develop healthy affective-sexual relationships (Biota et al., 2022; DeKeseredy & Corsianos, 2015). As Flood (2009) argues, protecting minors from sexual violence does not mean protecting them from sexuality, otherwise it would be encouraging the former and promoting poor emotional and sexual health. In the same way that this review encourages the application of pornography literacy programs (Wright et al., 2021b), so does previous research (Tomaszewska & Krahé, 2018), adding the critical evaluation of unrealistic beauty standards shown in pornography.

In order to interpret the results of this systematic review, it should be considered that it has certain limitations. The relationship between pornography consumption and sexual violence has been analyzed; however, this includes a broad spectrum of behaviors of varying severity and different characteristics, such as abuse, harassment, or rape. Therefore, it would have been interesting to analyze the association with each specific type of sexual crime and compare them with each other, in order to understand which one is most influenced by exposure to pornographic material. However, the small number of studies conducted on minors should be taken into account. By including only studies published in scientific journals, studies that have not been published because they have found negative or insignificant results may be excluded. This may bias the review by showing mostly studies with statistically significant results (publication bias). Likewise, by not evaluating the methodological quality of these investigations, the validity of the present systematic review—and therefore its results—may be compromised. The inclusion of only minors in this systematic review would impede the understanding of the impact of pornography on the perpetration of sexual violence in the long term. Thus, more longitudinal studies are needed to evaluate the consumption of pornography by minors and its consequences over the years with respect to the perpetration of sexual violence, so that it can be observed whether there are possible causal effects between the two variables.

The present systematic review highlights the need for further research on this topic in minors, given that only 17 studies have been found. In addition, it could be observed whether the effect of this material differs between minors with and without a history of sexual offenses. On the other hand, it would be worth analyzing what type of pornographic content minors consume, in what situations they do it, what digital platforms they use, why they started, how often they do it, their perceptions of this material and

sexuality, perceived realism, as well as the effects on self-esteem, interpersonal relationships, and the emotions. It would be necessary to use validated psychometric tests to determine the risk of perpetration of sexual violence, since many of the studies reviewed have used parts of questionnaires, thus compromising the validity and reliability of the results. Another relevant point would be to evaluate the effectiveness of existing sexual violence prevention programs, especially those that take pornography use into account.

Conflict of Interest

The authors declare that they have no conflict of interest.

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