

**INQUIRY INTO IMPACTS OF HARMFUL PORNOGRAPHY
ON MENTAL, EMOTIONAL, AND PHYSICAL HEALTH**

Name: Kay Patterson

Date Received: 28 May 2025

To whom it may concern,

I am writing with the hope that you will accept a late submission into the inquiry into the impacts of harmful pornography on mental, emotional, and physical health.

My name is Kay Patterson, and in 2024, I completed a Masters in Education, achieving a distinction (1st), largely due to the quality of my final submission. My final dissertation was on the impacts of sexually explicit online material on young people and their attitudes towards gender and relationships. I reviewed over 120

My paper (attached) is entitled: *How does the consumption of sexually explicit online material impact adolescents' sexual attitudes and behaviour, and their attitudes towards gender? What is the role of education in relation to this?*

As well as my academic-background, I am an ex-primary school teacher. I undertook various roles in my 20 years of working in education, from class teaching to Assistant headteacher, curriculum lead and designated safe-guarding lead, I have worked in schools in London, Tokyo, The Hague and in Melbourne and have a wealth of experience with young people and the subject of the inquiry.

I would be honoured to assist NSW Inquiry in any way I can. I'm English, but my husband is Australian and we have two boys, who also have Australian citizenship. I have permanent residency in Australia and lived in Mornington, Vic in 2018-2020 before leaving for The Hague. I now live in Tokyo. I would be enormously honoured to assist and contribute to the Inquiry. I consider myself an expert in this area, having spent over two years reading academic material as well as grey publications relating to this issue. I would be prepared to speak at hearings or meetings, offering my insights and sharing my research.

I am in the process of creating a protective education training and consultancy business, which would train educators and inform parents, caregivers and young people on the impacts of pornography and the overlapping issues related to it such as: sexploitation, misogynistic online gender-targeted extremism, coercive control amongst teenagers, AI generated exploitative and sexual images of children, image-based abuse, sexual violence, rape myths and rape culture in schools, consent, healthy relationships and peer-on-peer sexual abuse. All of these have direct links to online pornography.

I am also a Lifeline volunteer here in Japan, and have heard first hand, although anonymously, the experiences of young people who are either addicted to pornography, or those who have partners expecting them to be comfortable with being choked, spat on and harmed during routine sex or have experienced image-based abuse. This issue does not discriminate between countries or social standing, but I believe it can be tackled with education.

I have attached my paper and I hope you are able to accept this late submission. I applaud NSW for taking such a proactive and serious approach to this hugely critical topic.

With very best wishes,

Kay Patterson

How does the consumption of sexually explicit online material impact adolescents' sexual attitudes and behaviour, and their attitudes towards gender?

What is the role of education in relation to this?

Kay Patterson
2024

Submitted to University of Dundee in application for the Degree of MEd International Education.

Author's Statement:

This report is based on the results of investigations carried out by myself, is my own composition, and has not previously presented for a higher degree.

The research was carried out under the supervision of: Dr. Wendee White

Signed, Kay Patterson

21st October, 2024

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Abstract

Aims: This literature review explores the impacts of exposure and consumption of sexually explicit online material on young people and adolescents. As children are becoming exposed to pornography at a younger age, the complex nature of its impacts on their attitudes, specifically towards gender and their sexual behaviour, is at the core of this study.

Method: This secondary research study is a systematic review of peer-reviewed papers and reports found in two online databases; *University of Dundee* and *JStor*, published in English between 2014 and 2024. Studies focussing on the impact of online pornography on attitudes of young people were selected for a full-text review. Studies focussing on sexual exploitation material featuring children were not included in the review. The studies' individual methodologies included mixed methods, qualitative and quantitative primary studies from any geographic location, providing the population sample was mostly younger than 18-years-old.

Findings: The review found that adolescents are impacted by theirs' and others' consumption of online pornography to varying degrees. The main findings highlighted the use of pornography as an educator in the absence of an effective sex-education curriculum. Evidence was found of young people imitating, or being forced to imitate, what they have seen in pornography, sometimes in harmful and violence ways. The presence of sexual objectification of girls and other elements linked to Objectification Theory, such as unrealistic expectations of body-image and being judged by appearance was also present in the findings.

Conclusion: Evidence suggests that educational reform from a harm-reducing standpoint, is vital to ensure adolescents have access to comprehensive and relevant sex-education. The policy reform should adopt an empowerment and protective education approach and uphold a judgement-free dialogue on themes such as; body-safety, emotional well-being, inclusive gender attitudes, healthy sexual practices and relationships, sexual violence and coercion, and sexually explicit online material.

Keywords: Sexually explicit online material, online/internet pornography, sexual violence, adolescents, young people, attitudes, gender, relationships, education.

Introduction

The number of young people becoming exposed, whether intentionally or accidentally, to online pornography has increased significantly over recent years. The phenomenon of adolescents consuming sexually explicit online material is a concerning outcome of the culmination of several key contributing factors. These factors include the trajectory of advances in internet technology, young people's ubiquitous ownership of internet-enabled personalised devices, (smartphones, gaming devices, iPads and laptops), and them spending greater time, mostly without the supervision of a caregiving adult, in openly accessible online social spaces, some of which offer unrestricted and anonymous routes into the mainstreaming of pornography. This review explores young people's consumption of pornography and its emerging themes, focusing on the impacts on their attitudes towards gender and their sexual behaviours, it also discusses recommendations from literature for educational reform from a harm-reducing standpoint. It is not concerned with a broader, moral question or judgement of pornography generally, but it is concerned with the impacts of pornography on its youngest consumers.

The Prevalence of Pornography and Young People

Young people's consumption of online pornography has increased considerably over the last few decades, (Paulus, 2023; Jhe et al., 2023; Giordano and Cashwell, 2017) with growing concerns about the lowering age of first exposure, frequency of engagement and content of what is being viewed, (Dawson et al., 2024). Characteristics of engagement in pornography viewing activity among adolescents contains many variables, but research suggests that children are exposed to sexually explicit online content from a young age, with boys overwhelmingly more likely to engage in viewing explicit content online than girls at the rate of 86% and 69%, respectively, (Crabbe, Flood and Adams, 2024).

A recent UK report surveying over 1000 young people, provided a snapshot of the landscape of young people's encounters with online pornography, 64% said they had seen online pornography. Half of the young people in the report, who admitted to have

seen pornography online, had done so by the age of 13 years old, (Children's Commissioner for England, 2023). Although some reports state that first exposure is averaged at age 11 years old, (Klassen and Peter, 2014). The UK report detailed that the average age of children, equal for boys and girls, first seeing pornography was just under 13 years old, and for 10% of children, as young as 9 years old. Boys viewed pornography more frequently than girls which is consistent with several recent studies on the subject, (Brown and L'Engle, 2009; Peter and Valkenburg, 2006; Wolak, Mitchell and Finkelhor, 2007; Ybarra and Mitchell, 2005). Frequency of viewing revealed 21% of boys and 7% of girls watched explicit material online daily, and 27% of boys and 24% of girls viewed pornography between 2-6 times per week, categorising those young people as *frequent users*. Further, 79% of young people reported seeing sexual violence in pornography, which included graphic imagery of coercive, degrading or pain-inducing sexual acts, before they were 18 years old. (Children's Commission for England, 2023).

Children Online

There are several contributing individual elements which offer an introspection on the common characteristics of different groups of young people and their interaction with sexually explicit online material. Factors such as gender, sexual orientation and certain personality characteristics are considered antecedents which can predict who is more likely, and how they're likely to interact with pornography, (Peter and Valkenburg, 2011), and also media usage, social contextual and demographic characteristics, (Doornwaard, Regina and van den Eijnden 2015). These precursors are explored further in this paper, but at a basic level, technological devices and internet connection are a universal accessibility factor to children aged between 11-18 years old spending on average over 4 hours online per day, (OfCom 2024a).

Almost all, (97%), of UK households with children residing in them, have high-speed, internet access. Mobile phone ownership increases as children grow older, with 27% of 3-4 year olds having their own mobile phone and this rising steadily to 99% of 17 year olds. As children grow older, their online activities are supervised less by parents or caregivers, and the form of supervision moves gradually from direct, to indirect, (OfCom, 2023). In essence, children in the UK have the necessary technical

components to grant them free, anonymous, and unrestricted access to streamed explicit content.

Availability of Sexually Explicit Online Material

How pornography is commonly accessed has changed in line with technological advances. Young people access sexually explicit material by using non-traditional, online methods rather than traditional methods such as books, magazines or physical copies of movies, (Ybarra and Mitchel, 2005). The availability of explicit material online is widespread. Pornhub is the most popular pornography website in the world with an average 12.8billion clicks per month in 2023, (PornHub Insights, 2024). It occupies the place of 4th most visited website globally, beaten only by Google, YouTube and Facebook. In 5th place is Xvideos.com, another pornography website, (Statista, 2024). Gaining access to mainstream pornographic websites is relatively unrestricted as most offer unlimited access to free sexually explicit material by operating a 'click-to-view' policy where the visitor must click that they are over 18 in order to grant access to their vast online content libraries. No further verification is needed and no personal information is required. Instantaneously, visitors have access to unprecedented volumes of explicit material. Although unsubstantiated by Pornhub's self-published statistical information, one report claims that Pornhub alone has 11 petabytes worth of material, equal to almost 7000 years of viewing (Spitznagel, 2019), most of which is unregulated. A concern about the content of non-traditional versus traditional methods of accessing sexually explicit material, is that online content is broadly unregulated, (Wright and Donnerstein, 2014). It is of significant concern that several studies have highlighted that young people view online pornography as a helpful source of information as it can fill gaps in their sexual knowledge and understanding, (Arrington-Sanders et al., 2015; Crabbe, Flood and Adams, 2024; Rothman et al., 2015).

Children being exposed to and interacting with sexually explicit online material is widespread. The effects of adolescents consuming pornography, whether violent or non-violent, on their attitudes and behaviour are under-researched, (Baker, 2015), making clear the need to understand more about the Implications, so as to assist in forming appropriate policy and education curricula.

Background Chapter

Defining Pornography

Many definitions of *pornography* exist and are open to contestation as this form of media is without doubt highly personal, subjective and multifaceted. Throughout this study, a range of phrases are used interchangeably to refer to what is traditionally known as '*pornography*', they are; *sexually explicit online/internet material or content*, *online or internet pornography*, and *explicit sexual images*.

(MacKinnon and Dworkin, 1988 p.35) produced a definition of pornography, part of which is "...*graphic sexually explicit subordination of women through pictures and/or words*", the observation that women are objectified in pornography, is also reflected in an overview of pornography by, (Russell, 1998), who states that core identifiers in pornography include the presence of men in dominant roles and increasing depictions of female nakedness. It is difficult to disagree with either of these perspectives, but for the purposes of this study, when we refer to pornography, we will use the definition from prominent researchers on the topic, thus "...*professionally produced or user-generated pictures or videos (clips), intended to sexually arouse the viewer. These videos and pictures typically depict sexual activities, such as masturbation and oral sex, as well as vaginal and anal penetration, in an unconcealed way, often with a close-up on genitals*", (Peter and Valkenburg, 2016 p.510). This definition frames what pornography means for the purposes of this study, as it includes the critical aspect of *self-generated content*, a pertinent issue facing adolescents and their relationship with pornography.

The Trajectory of Pornography in Recent Years

The scale of pornography consumption has escalated to significant levels in recent years alongside the advancement of internet technology. The desire for sexually explicit material is considered to be one of the key engines powering the internet's development, (Brown and L'Engle, 2009), and has brought to the forefront the use of free, sexually explicit content, (Cooper, 1998; Wood, 2011). Pornography use is not only widespread, but normative in most parts of the world, (Wright, Sun and Steffen, 2018) and has transcended from morally deplorable to socially acceptable,

(Löfgren-Mårtenson and Månsson, 2009). Observations of how pornography, a media type that was discrete only a few decades ago, is now present in popular culture, for example; Amazon in Japan have *PornHub* branded merchandise including back-packs, and hoodies, for sale on their website. Another example is the success of the cocktail the *Pornstar Martini*. A further circumstantial observation of how pornography and sexualisation is becoming more normative in mainstream culture is via popular music. A content analysis that 36.9% of the 279 popular songs analysed, referenced sexual activity and 65% of those references were considered as degrading, (Primack et al, 2008). These observations in popular culture are somewhat underpinned by the theory of *pornification*. (Nikunen, Paasonen and Saarenmaa, 2007), discuss the mainstreaming of *pornification* within popular media eluding to three levels. Those being; *the development of media and the expansion of the porn industry*, *the deregulation of media in relation to pornography* and lastly, *the general sexualisation of culture*. Sexually explicit online material has evolved over the last few decades from relatively passive, traditional media such as magazines and personal physical copies of explicit videos, to mainstreaming movies and live streaming online experiences, (Gorman, Monk-Turner and Fish, 2010). Users have an abundance of genres to search for and choose from, while browsing sexually explicit online content, that they can view in private, usually for free and anonymously, (Horner, 2020; Jhe et al., 2023), enabled by a combination of elements labelled the *Triple-A*; *Access, Affordability, and Anonymity*, (Cooper, 1998). For adolescents, having access to a widely unregulated media environment and its unlimited library of sexually explicit content raises concerns, (Klassen and Peter, 2015; Paulus et al., 2024), such as the depiction of violence, blurred messages about consent and the adoption of unrealistic harmful attitudes about sex and gender roles. With the prevalence of pornography's increasing normative presence in popular culture, it is no surprise that emerging research on adolescents and their consumption of pornography, highlights apprehension that online pornography engagement is becoming compulsive for some, (Alexandraki et al, 2018). It is critical that research surrounding the impacts that online pornography exposure is having on adolescents broadens.

Young People and Pornography: Predictors of Use

Young people are increasingly accessing sexually explicit online content as they spend more of their lives in online spaces. Although curiosity about sexuality is considered developmentally normative for adolescents, it is questionable whether it is appropriate to regularly engage with an unlimited supply of graphic content on demand, (Owens et al., 2012). It is critical to understand the scale and scope of the phenomenon for young people, what the implications of this behaviour are and what characteristics are those most at risk likely to possess.

A predictor is described as a variable that forecasts the characteristics of individual adolescents who are more likely to view pornography, (Peter and Valkenburg, 2016). The overwhelming predictor which is clear in several studies on the subject of young people and pornography consumption, it that boys, including LGBTQ+ boys (Böthe, 2019), are more likely to be viewing it and with a greater frequency than girls, (Braun-Courville and Rojas, 2009; Crabbe, Flood and Adams, 2024; Luder et al, 2011; Martellozzo et al, 2020; Peter & Valkenburg, 2006;) which is in line with representative usage of adult men, (Carroll et al, 2008). Statistics vary between studies, however a similar picture is illustrated in most investigations into viewing habits, showing that more boys are found to watch pornography than girls and do so more frequently. A study of young people in Germany recorded 93% of males and 61% of females having seen pornography, with 47% of boys and 3% of girls reporting that they watched almost daily or several times a day, (Weber, Quiring and Daschmann, 2012). 54% of young men in Australia reported weekly use, compared to 14% of young women, (Crabbe, Flood and Adams, 2024). In England, gender differences were also highlighted, with 34% of boys and 17% of girls having deliberately sought out pornography in the 2 weeks prior to being surveyed, and 21% of boys as opposed to only 7% of girls admitting to frequent, everyday or several times a day, engagement with sexually explicit online material, (Children's Commissioner, 2023). Gender appears to be the prominent common predictor of exposure to online pornography, however according to some studies not the only one. In addition to gender, (Crabbe, Flood and Adams, 2024), established a connection between current age, the age of first exposure and intentionality of first exposure. This is partly in contrast to a study of antecedents to the first viewing of

pornography among adolescents, where age was not a predictor of exposure to sexual content online, but positive links were established between boys, but not girls, who had previously been exposed to sexual self-presentations or sexts online, and girls, but not boys, who identified as hypergender, (Vandenbosch and Peter, 2016). As well as being male, which is main predictor in all papers assessed, further indicators from various papers include; alcohol and substance consumption in both boys and girls, spending a lot of time on social media, just boys (Cerbara et al., 2023), boys who are advanced pubertally, sensation-seekers, with a weak parental connection or troubled homelife, (Peter and Valkenburg, 2016), and higher levels of sexual activity in boys, (Ševčíková et al., 2014). Interestingly, it was also noted that the gap between boys and girls viewing pornography was narrower in more liberal countries, (Ševčíková et al., 2014), with more girls engaging in viewing explicit online content in countries considered more politically liberal. There are several contradictions between global studies on the subject of predictors to adolescents using sexually explicit internet material. These variants could be because of different levels of liberalism within a country's culture and its general acceptance of sex, or possibly who has access to the internet in a given country and to what level is pornography considered normative, (Peter and Valkenburg, 2016). Studies on the effects of pornography on adolescents are dominated by negative outcomes, but (Jhe et al., 2023), argues that the understanding of the actual impacts is quite complex as studies can highlight contradictions and arrive at inconclusive outcomes, and they can be susceptible to methodological challenges and cultural bias. The only universally agreed on antecedent found to adolescent and, in fact adult, intentional engagement with sexually explicit online material, is the gender is more likely to be male.

Young People, Social Media and Sexualisation

Adolescents are spending an increasing amount of their time in online social spaces. The internet is at the core of young people's lives, with 84% of 3-4 year olds in the UK spending time online, rising to 100% of 16-17 year olds, (OfCom, 2023). A study in the US, found that the average time spent online for teenagers was 4.8 hours per day, with 37% of respondents stating that they spent more than 5 hours per day online, (Rothwell, 2023). 23% of 3-4 year olds in the UK, access popular social media apps such as WhatsApp, Snapchat, and TikTok, rising to 97% of 16-17 year olds, (OfCom, 2023) -

See Appendix, Table 1. The majority of young people are online, for a considerable amount of time each day and they are spending a large portion of their online time on social media sites.

There is unease around the rise in sexualisation of mainstream social media sites.

Sexualisation has been defined by (Zurbriggen et al., 2010, p.1) as having the following components present; *sexuality inappropriately imposed upon a person, a person is sexually objectified, is held to a standard that equates physical attractiveness, a person is valued because of their sexual appeal over their characteristics*. According to this definition, sexualisation is present in the online spaces where young people spend much of their time. The viewpoint that sexualised images of females are normalised on social media was held by 14-17 year old adolescent girls in a recent Australian study, (Papageorgiou et al., 2023). The qualitative study found that there was an expectation for girls to conform by posting sexual images of themselves, in a transactional exchange for acceptance or approval from peers, in the form of ‘likes’. The theme of *conformity*, particularly for girls, threads through the issue of sexualisation of social media.

‘*Pressure to conform*’, alongside ‘*potential for comparison*’ were key themes prevailing with regards to girls’ experiences of sexualisation on social media, according to parents of adolescent girls, (Papageorgiou, 2022). In synthesis with this, a report of 11-16 year olds voiced concerns over the pressures of self-generated images and found that 36% of adolescents who had taken naked or partially naked images of themselves, shared that they had been asked to show them to someone online, (Martezello et al., 2020).

Pressure and self-objectification in the form of self-posting sexualised pictures of themselves on social media, often in order to increase heterosexual appeal, despite their negative feelings towards these images, provide an insight into the complexities of gender role issues and body conformity that adolescent girls, and in some cases boys, are navigating, (Daniels and Zurbriggen, 2016). Gender inequalities are common in pornography, (Carrotte, Davis and Lim, 2020). With the influential nature that pornography offers on gender attitudes, the theme of pressure and conformity reportedly being experienced mostly by adolescent girls, but some boys, in social media spaces, draws a parallel to how they potentially view their role within pornography, as having to conform to male dominated sexual scripts and enacted gender inequalities.

Young People and the Potential Harms of Pornography Exposure

Boys may be engaged more frequently with the watching of online pornography, but that does not mean they are necessarily more at risk to potential harms caused by exposure than other genders. For most social media sites, the age restriction on having an account is age 13, however, research carried out by (OfCom, 2023), found that one third of children aged 8-17, had fake adult accounts on at least one of the main social media sites, making it possible to view or receive, possibly uninvited, explicit content. X outperformed dedicated pornographic websites as the main source for accessing pornography among young people, with 41% of those surveyed using the platform for their online pornography. Instagram was the next most popular social media site for accessing pornographic content at 33%, (Children's Commissioner, 2023). If we explore how adolescents first become exposed to sexually explicit online material, recent studies portray a disturbing picture. For young people, the most common method of arriving at pornography accidentally online, was via an internet pop-up or Google search, (Crabbe, Flood and Adams, 2024). There is further evidence that young people are targeted specifically by accidentally clicking on innocent looking links or pop-ups in popular online spaces such as gaming platforms or major social media platforms like Facebook, Snapchat and TikTok, (Martezello et al., 2016; Children's Commissioner, 2023;). This method is just as prevalent to young people first finding pornography, as those who deliberately sought it out, most of whom reported negative feelings such as shock, shame and disgust, but also curiosity on first seeing pornography online, (Martezello et al., 2016).

Those exposed with sexually explicit material at a younger age and those with frequent viewing habits, are core predictors for the likelihood of seeking out sexually violent content for sexual gratification, (Children's Commissioner, 2023). Online pornography portrays more examples of extreme forms of sexual violence in comparison to traditional pornography, (Collins et al, 2017). Depictions of sexual violence are overwhelmingly more likely to show men perpetrating violence against women. (Fritz et al., 2020), discusses the normalisation of violence against women, but not against men, in pornography and references a content analysis in which women bore 97% of

aggression in acts such as choking, spanking and hair-pulling, carried out by men 76% of the time. Disturbingly, the women's reactions were usually portrayed as neutral or positive, and rarely negative. There was at least one violent act in 40% of the scenes examined on free pornography websites. Sexual aggression in adolescents is more commonly present in those who watch violence pornography, but not nonviolent, (Peter and Valkenburg, 2016), however, if 40% of the scenes are likely to include graphic sexual violence, this posits as a potential risk factor to adolescents engaging in the consumption of pornography. The Children's Commission for England reported that almost half of 16-21 year olds they asked thought girls expect sex to involve physical aggression, (Children's Commision, 2023), it is not clear what girls are considering to be normative sexual practices and what has contributed to constructing that reality. Other possible harmful outcomes of young people's consumption of sexually explicit online content are not limited to, but include developing notions of women as sexual objects, (Peter and Valkenburg, 2009), permissive sexual attitudes, (Brown and L'Engle, 2009), sexual coercion and abuse, (Stanley et al., 2018), perceived realism, (Peter and Valkenburg, 2006), self-objectification and body dissatisfaction in both boys and girls, (Hald and Malamuth, 2008), and emulating behaviours learnt from pornography, (Martelezzo et al., 2016), although it is unclear which emulating behaviours, whether violent or not, 44% of boys surveyed wanted to emulate.

Available Knowledge on Pornography and Young People

Research on pornography and young people has grown over recent years. Studies and literary journals which were published over 30 years ago, run the risk of lacking relevance for the complexities surrounding pornography today, as they pre-date the rapid technological advancement and mainstream accessibility of pornography online, which is a core factor confronting contemporary adolescents. This was a concern proposed almost 20 years ago by, (Buzzell, 2005), yet still resonates today as technological developments appear to progress faster than knowledge and sense-making constructs around the subject. For example, in 2024, adolescents and educators are reactively navigating to the developments and impacts of artificial intelligence (AI) in pornography and child exploitation sexual material, much before

researchers have fully made sense of the intricacies of the phenomenon and how it could affect our lives, the lightning developments of (AI) have not been matched by equivalences in research, (Steel, 2024).

Previous studies on pornography and young people have centred on several outcomes such as the impacts of exposure on sexual violence and coercion, (Brown and L'Engle, 2009), and cross-sectional measurements of adolescents pornography use, (Peter and Valkenburg, 2016). Expansion of current research is needed which directly explores the effects of young people's viewing of pornography on various aspects of their sexual development, relationships and developmental outcome, (Fritz, 2020; Martezello et al., 2016; Pathmendra et al., 2023; Peter and Valkenburg, 2011), in addition, research is needed to better understand the relationship between pornography use and gendered attitudes in early and later adolescents, (Yu et al., 2021).

This study explores contemporary studies in a bid to synthesise findings, broaden knowledge and address the following key research questions:

Research Questions:

RQ1: How are young people's sexual attitudes and behaviours impacted by their consumption of pornography?

RQ2: How are young people's attitudes towards gender impacted by their consumption of pornography?

RQ3: What is the role of schools and education with regards to emerging issues of young people and pornography consumption?

Methodology and Literature Search Strategy

Methodological Approach

Given the sensitive nature of this study, *pornography and young people*, it was appropriate that a secondary literature review would be the most ethical route to take, rather than an empirical primary, in-person one. (Cohen et al., 2018, p165), argue that “...all educational research is sensitive; the question is one of degree.” Sensitive research, that is research which could potentially pose a threat to those involved, (Lee, 1993, p5), can be labelled as such for a variety of reasons. Characteristics of research which are outlined by, (Cohen et al., 2018), I have assessed would have deemed this study as particularly sensitive are; consequences for the participants and possibly other people, the content is *taboo* or emotionally charged, (Fareberow, 1963), e.g. sex, violence or criminality, and the intrusion into private and intimate personal experiences, (Lee and Renzetti, 1993), including sexual behaviour. I believe it to be restrictive to social research that ‘*taboo*’ subjects exist, as researchers may be discouraged from tackling them, particularly as increasing the knowledge constructed around those issues could help to reduce their status as *taboo*. The wider societal question of *why* subjects are considered *taboo* are complex and should be reflected on by applying the model of reflecting-in-action, reflecting-on-action, (Schön, 1983), and by considering powerful political and humanistic components which may be external to those within the realm of researcher and the research subjects, (Henn et al., 2009). Reflecting back to Cohen’s ‘*question of degree*’, it is clear that the bones and body of this particular study are of a high degree of sensitivity.

This study, therefore, is a secondary systematic literature review. It follows a methodological and rigorous process to comprehensively search for and review relevant literature that will contribute to answering the predetermined research questions. The systematic review’s foundations are in the adherence to progression through each stage in the search for quality, relevant studies. (Cooper, 2010), suggests a seven-step model, which was followed for this review. The steps, reductively, are; 1) identifying the type of evidence to answer research questions, 2) searching the literature, 3) extracting information from studies, 4) evaluating the quality and suitability of studies, 5) analysis,

6) interpretation and, finally, 7) presentation. There are recommendations for the critical 2nd stage in Cooper's model, *searching*, laid out by principles for systematic reviews, by (Evans and Benefield, 2001). They propose the specification and application of inclusion and exclusion criteria to include several determiners. This contributes to transparency of methods and allows replication of the process, (Grant and Booth, 2009).

Systematic reviews are popular in social research. They aim to bring knowledge on a particular subject together and more recently, incorporate a broader range of study designs, (Grant and Booth, 2009). The importance of young people's voices are reflected in inclusion and exclusion criteria in a bid to capture an ethnographic picture of the perceived problem of young people's exposure to pornography. (Crabtree and Miller, 1992; and Tracy, 2020) discuss the value that qualitative research particularly has on obtaining a deep understanding of a subject's world and culture which could provide insights into broader societal issues.

The matters of adolescents, their exposure to online pornography and the role of education, have the hallmarks of social policy. Systematic reviews are generally employed to inform social policy, (Sarantakos, 2013), as they evaluate the quality of studies and draw from them conclusions and recommendations for policy, (Cohen et al., 2018). Criticisms of systematic reviews exist. (Grant and Booth, 2009), identify the design of a systematic review as limiting and having the potential to exclude important studies because of stringent study design. This is echoed by (Uttley et al., 2023), who argue that inclusivity is a flaw in the design of systematic reviews. They continue, however, to highlight possible weaknesses which seem to be connected to the accountability and skills of the researcher, rather than the research design itself. This is an interesting criticism as it is true of many research designs that the integrity, professionalism and skill of the researcher is what brands the quality of the research. I would argue that if the process is followed as recommended, the nature of the design helps to focus and signpost the researcher in extracting the best available evidence to answer their research questions and assist in the safeguarding of bias with its transparency and replicable nature, assuming researcher integrity and skillset is intact.

Literature Search Strategy

Two electronic databases were searched: *University of Dundee Library* and *JStor*. One search was completed using the following search terms and the *Boolean* method:

Search: ‘*online pornography*’ AND ‘*adolescents*’ AND ‘*attitude*’.

To be included in the systematic review, studies must adhere to the inclusion and exclusion criteria outlined in Figure 1.

Figure 1: Inclusion and Exclusion Criteria for Study Selection.

Subject	Inclusion Criteria	Exclusion Criteria	Rationale
Language	English Language	Languages other than English	<ul style="list-style-type: none"> Primary language spoken in the UK and spoken language of the author
Text	Peer reviewed papers and reports	Review of papers, non-peer reviewed papers, whole books	<ul style="list-style-type: none"> Peer reviewed papers and reports offer a benchmark of academic quality
Date of Publication	Published 2014-2024	Published pre 2014	<ul style="list-style-type: none"> A major systematic literature review by (Peter and Valkenburg, 2016) took place in 2015 assessing studies between 1995-2015 - <i>Adolescents and Pornography: A Review of 20 Years of Research</i> With the advancement in technology and smartphone ownership in recent years, focusing on papers published within the last 10 years should reflect a recent picture of the situation and emerging trends
Research Design	Primary research papers Mixed methods, qualitative and quantitative papers Cross-section and longitudinal studies	Secondary research papers such as systematic reviews, narrative reviews	<ul style="list-style-type: none"> The systematic review aims to draw upon primary evidence
Study Population	Any; <ul style="list-style-type: none"> Gender identification Sexual orientation Geographic location 		<ul style="list-style-type: none"> All young people's experiences with online pornography are relevant to the study
Age of Population	Focus of study is <i>mostly</i> people aged 18 years or under	Focus of study is people aged <i>mostly</i> 18 years old or over	<ul style="list-style-type: none"> Study is centred on the attitudes of young people and adolescents
Subject Content (medium for accessing pornography)	Modal for accessing pornography is non-traditional: internet/online	Model for accessing pornography is traditional: magazines/books/physical copies of videos	<ul style="list-style-type: none"> Study is centred on young people's consumption of internet/online pornography
Subject Content (Other)	Studies that involve legally produced pornography, aimed at and involving adults, aged 18+	Studies that involve child sexual exploitation material, previously referred to as <i>child pornography</i>	<ul style="list-style-type: none"> Study is centred on the impacts of young people accessing legally produced, mainstream and widely available pornography

The search identified a total of 983 studies across the two databases and after screening and review, 22 final studies were selected for final review. The majority of the final selected studies' methodologies were quantitative (59.1%), (22.7%) were

qualitative and (18.2%) were mixed-methods. Studies were eliminated as illustrated in the PRISMA Flow document in Figure 2.

Figure 2: PRISMA flow diagram of study search selection process.

PRISMA 2020 flow diagram

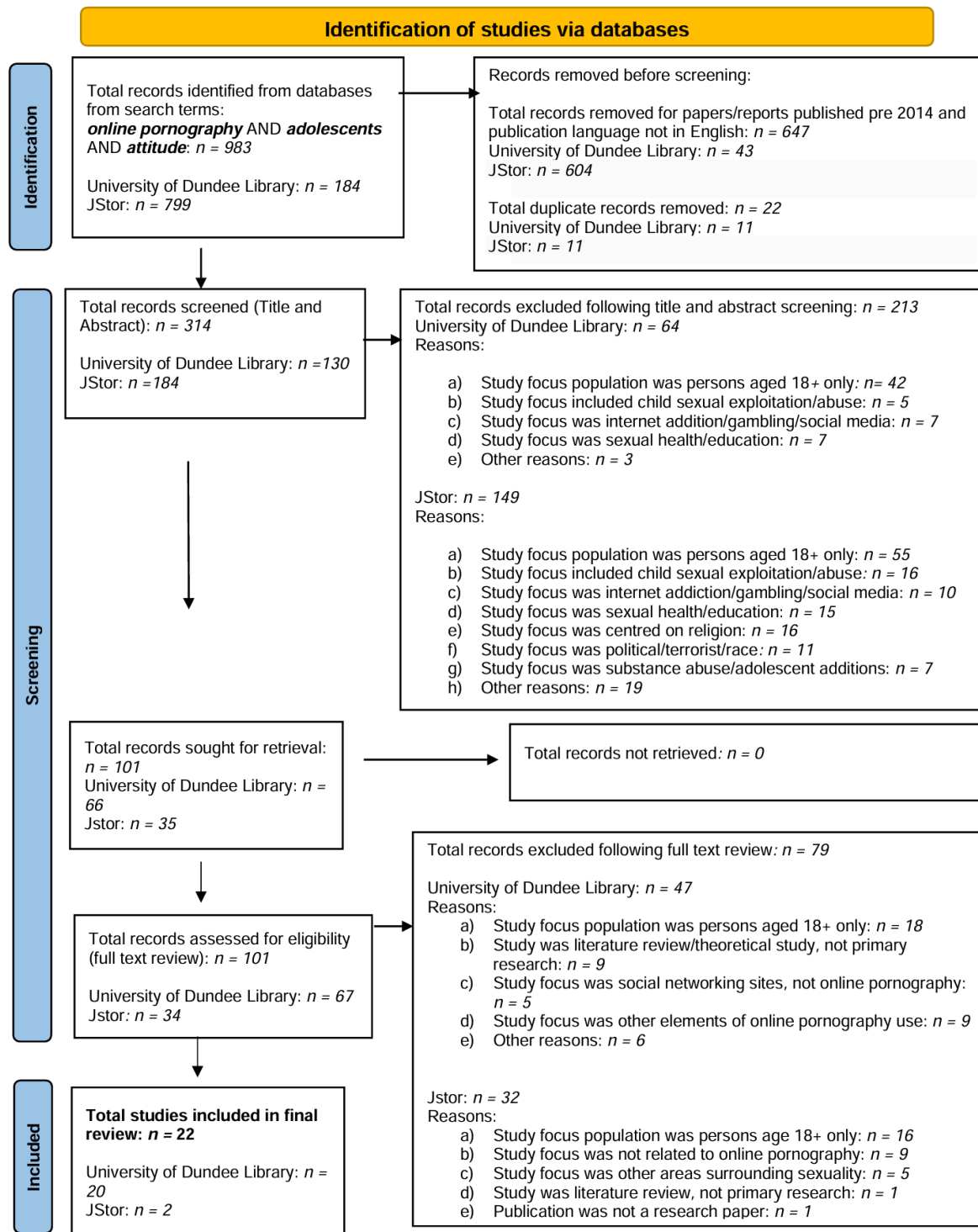


Figure 3: Bibliography of studies included in the final literature review.

Study	Authors and year	Title	Country
1	Doornwaard et al, (2015)	Differential Developmental Profiles of Adolescents Using Sexually Explicit Internet Material.	The Netherlands
2	Doornwaard et al, (2017)	Dutch Adolescents' Motives, Perceptions, and Reflections Toward Sex-Related Internet Use.	The Netherlands
3	Dinh, O'Neill and Green, (2024)	<i>"I don't think I've been permanently scarred or anything"</i> Irish Teens' Preferences around Discussing Porn with Peers, Teachers, and Parents.	Ireland
4	Ybarra et al, (2022)	Youth Characteristics Associated With Sexual Violence Perpetration Among Transgender Boys and Girls, Cisgender Boys and Girls, and Nonbinary Youth.	USA
5	Rousseau et al, (2023)	Prevalence and Factors Associated with Active Cybersexuality among Teenagers Between 15 and 17 Years old: A Cross Sectional Study in Normandy, France.	France
6	González-Ortega, Vicario-Molina, Martínez and Orgaz, (2015)	The Internet as a Source of Sexual Information in a Sample of Spanish Adolescents: Associations with Sexual Behavior.	Spain
7	Anderson et al, (2024)	The Media and Sexual Violence Among Adolescents: Findings from a Qualitative Study of Educators Across Vietnam.	Vietnam
8	Healy-Cullen, Taylor, Ross and Morison, (2021)	Youth Encounters with Internet Pornography: A Survey of Youth, Caregiver, and Educator Perspectives.	New Zealand
9	Rothman et al, (2015)	"Without Porn... I Wouldn't Know Half the Things I Know Now".	USA
10	Koletic, Kohut and Štulhofer, (2019)	Associations Between Adolescents' Use of Sexually Explicit Material and Risky Sexual Behaviour: A Longitudinal Assessment.	Croatia
11	Ybarra and Thompson, (2017)	Predicting the Emergence of Sexual Violence in Adolescence.	USA
12	Tomic, Buric and Štulhofer, (2017)	Associations Between Croatian Adolescents' Use of Sexually Explicit Material and Sexual Behavior: Does Parental Monitoring Play a Role?	Croatia
13	Doornwaard, ter Bogt, Reitz, van den Eijnden, (2015)	Sex-Related Online Behaviors, Perceived Peer Norms and Adolescents' Experience with Sexual Behavior: Testing an Integrative Model.	The Netherlands
14	Maes, Schreurs, van Oosten and Vandenbosch, (2019)	#(Me) too much? The Role of Sexualizing Online Media in Adolescents' Resistance Towards the metoo-movement and Acceptance of Rape Myths.	Belgium
15	Shin and Hwan Lee, (2019)	Exposure to Internet Pornography and Sexually Aggressive Behaviour: Protective Roles of Social Support among Korean Adolescents.	Korea
16	Wright, Herbenick and Paul, (2020)	Adolescent Condom Use, Parent-adolescent Sexual Health Communication, and Pornography: Findings from a U.S. Probability Sample.	USA
17	Rodríguez-Castro et al, (2021)	Intimate Partner Cyberstalking, Sexism, Pornography, and Sexting in Adolescents: New Challenges for Sex Education.	Spain
18	Stanley, Barter and Övertien, (2016)	Pornography, Sexual Coercion and Abuse and Sexting in Young People's Intimate Relationships: A European Study.	Europe: Bulgaria, Cyprus, England, Italy and Norway
19	Gesser-Edelsburg and Elhadi, (2018)	Discourse on Exposure to Pornography Content Online Between Arab Adolescents and Parents: Qualitative Study on its Impact on Sexual Education and Behavior.	Israel and Palestine settlements
20	Cecilia, (2019)	Relationships between Exposure to Online Pornography, Psychological Well-Being and Sexual Permissiveness among Hong Kong Chinese Adolescents: a Three-Wave Longitudinal Study.	Hong Kong
21	Martellozzo, Monaghan, Davidson, and Adler, (2020)	Researching the Affects that Online Pornography Has on UK Adolescents Aged 11 to 16.	United Kingdom
22	Baker, (2015)	Online Pornography – Should Schools be Teaching Young People about the Risks? An Exploration of the Views of Young People and Teaching Professionals.	England

Quality of Evidence

The systematic review did not exclude primary studies on the basis of research design therefore, mixed methods, qualitative and quantitative studies were included in the review. Because different explanations and representations of knowledge are included in the final review, it was not possible to assess the quality of evidence in a formulaic

and statistical way. The most appropriate method of applying value to the final studies, in addition to the bar that had been set by the inclusion and exclusion criteria, is to assess the study's fitness for purpose in answering the research questions using the Weight of Evidence Framework, (Gough, 2007). This takes into consideration individual study's suitability to providing quality evidence against three sets of judgements; A) *a generic (non review-specific) judgement about the integrity of evidence in its own terms*, B) *a review-specific judgement about the appropriateness of study design in answering the review's research question*, and C) *a review-specific judgement about the relevance for the evidence in answering the review's research questions*. These three judgements then culminate to inform a final overall judgement, D) *how well the study can answer the review's question?* This contemplative element underpinned the screening and reviewing of studies during the systematic review, in the form of core questions considered when assessing studies for selection, although this was not formalised, scaled or recorded.

Researcher Positionality

Ontology and Epistemology

My ontological perspective of the world is from a constructivist standpoint. It is my view that there are multiple realities grounded in context and that social constructions exist, influenced by complex power relationships and the availability of knowledge. In constructionist theory, realities are created or constructed by the individual as part of their personal experiences, which are both shaped and informed by interpretations made up of cultural and historical understanding and familiarity, (Sarantakos, 2013), (Lincoln and Guba, 1985). As a researcher, a critical part of this ontology is awareness that I am a fundamental element of the research process and cannot be separated from it. My participation will contribute to a social knowledge construct, (Tashakkori, Burke-Johnson and Teddlie, 2021), as knowledge is a co-construct between researcher and participants. Being conscious of the existence of fragility in construction, may reduce vulnerabilities of the study as constructed realities can be deconstructed and reconstructed, (Collins and Stockton, 2018).

My epistemological outlook is interpretivist. (Cohen et al., 2018, p19), states that the interpretive paradigm is typified by; “...*a concern for the individual*”, as too, is this study as it strives to understand the layers of human experience. Knowledge is the influence of personal contributions, driven by the process of interpretation and involving a cyclical process of reflection emboldened in the introduction of new understanding, re-evaluation, and the production of a new aspect, (Sarantakos, 2013). The norms and values of the study’s subjects in their societal context, are vital to the interpretation and understanding of the outcomes.

Feminist Theory

Feminist research is underpinned by floodlighting the life experiences of women and girls regardless of who they are and legitimising them by giving them value. It is at its core an emancipatory inquiry, (Sarantakos, 2013), as the construction of knowledge in this study, has been obtained mostly through the perspectives of adolescents, and on a small number of occasions, from core people in their communities, such as parents and educators, to understand more about their perspectives and experiences. With a feminist lens, this study strives to bring to the foreground young people’s collective

voices and empower them as capable agents who are equipped to interpret and negotiate their sexual discourses and practices, (Karaian and Van Meyl, 2015). Feminist standpoint theory (Longino, 1993) posits that the voices of adolescents in this case, are necessary to hear in order to understand, as they occupy the best position to interpret their experiences. As feminist theory is concerned with disassembling social inequalities surrounding gender imbalances, race and class structure, (Nkansah, 2023), this research is activist in the drive to provide a voice for young people in order to examine the structures and systems of power which narrate societal power structures.

Phenomenology

This study constructs knowledge by synthesising findings from studies surrounding a human phenomenon of a sensitive subject. Edmund Husserl', widely regarded as the founder of phenomenology, described it in its infancy the 'essence' of something and the bringing it back to itself, (Merleau-Ponty, 1974). To adopt Wilhem Dilthey's notion of *verstehen*, (to understand), and acquire an insight into another's viewpoints, (cf, Tracy, 2020). The study's core subject, pornography, is an intimate human behaviour, as a researcher, it is core that reflection on the subject is active, yet where possible, it is bracketed in a conscious effort to see what the true essence of it is without researcher bias. Without this, it might not be possible to see how the experience is for the participants.

Foucault

Foucault's *Theory of Power* prompts the questioning of social, political and historical aspects of the research context, as the idea of power is thematically threaded through this subject. The idea of an overarching dominating system, contributed to by individuals who shape and reshape into dominating themselves, (Foucault, 1980), is a theory that could be applied to the modern smartphone and the consumption of pornography. Power is critical in pornography, considering male dominance depictions, intrusive methods from corporations to engage the consumer and the self-power of the viewer. The marketing of the appeal of pleasure is key to the success of today's online pornography industry and the powers that control it. Foucault references pornography in

The History of Sexuality and how the 19th century economised pleasure, which draws clear parallels with the pornography industry today. Foucault's work on Bentham's panopticism could be conceptualised in today's smartphone, as users become conditioned into self-surveillance.

Acknowledging Bias

It is of critical importance to the integrity of this study to confront and reflect upon possible biases which may arise, both in the researcher and in the research.

(Hammersley and Gomm, 1997 p1), refer to a commonly understood meaning of bias as “...*systematic error: deviation from a true score*”, which implies that the presence of bias, and possibly unaddressed bias, provides incorrect results. They argue that on the one hand, bias is ambiguous in social research and can sometimes be seen as a positive feature, as it may reveal previously hidden elements of a phenomenon. On the other hand, the overarching negativity surrounding bias remains, but that this could obscure more than it reveals. Bias is an ever present concern in social research, regardless of whether it is viewed as a positive or a negative aspect in the assemblance of scientific knowledge, the important stage is that bias forms an honest part of the dialogue around an issue. In academic pornography research, there is an argument for bias being a particularly serious concern as the subject itself can be seen as unwelcome in society therefore creating difficulty for authenticity to prevail over the influence of societal attitudes, risking scientific objectivity, (Christenson, 1990).

The subject of pornography can provoke strong and decisive perspectives as it is enveloped by human experience. (Attwood, Maina, and Smith, 2018 p.2) offers a similar perspective and suggests that debates surrounding pornography are “*rarely value-free*” and that contrasting attitudes have informed research and policy on pornography, for example conservatism in the United States and liberalism in Scandinavia. This viewpoint corroborates, in essence, with observations that the pornography-use gap between boys and girls is smaller in more liberal countries, (Ševčíková et al., 2014), as those country's fewer biases may have informed sex educational policies for pornography and sexual dialogue to be more open and accepted.

Engaged researchers are not neutral in their area of interest, (von Seggern et al, 2023). My axiology - values, biographies and perspectives, form an integral part of how I view the world and how I make sense of its complexities. Rather than try to separate oneself from the world, which is not possible, researchers should acknowledge and disclose themselves into the research, being aware of their influence on it, as reflexivity suggests. (Cohen, et al., 2018). It is critical to the validity of this research, that I am aware of my own power, influence and perspectives and continue to exercise positional reflexivity, being aware of who I am and what I bring to the research.

A systematic review has several characteristics which contribute to minimising bias, (Cohen et al., 2018). Selecting a systematic review, a transparent and replicable process, (Moher et al., 2009), as the method of literature review, is an attempt to reduce researcher bias. The pre-decided search's inclusion and exclusion criteria form the guidelines which determined whether a study was included, thus contributing to the study's overall research outcomes, regardless of the individual papers' findings. Justifications were made and are recorded in Figure 1, detailing the reasons for the inclusion and exclusion criteria being selected. For this project, I was unable to include a team of at least two independent reviewers to assess papers, as recommended by (Pai et al., 2004), which would have contributed to a reduction of bias. Including any primary study design, assists further in the reduction of bias in the research, (Denscombe, 2014).

Ethical Considerations

Ethical code of conduct guidelines outlined by the University of Dundee were upheld and adhered to for this study. According to the University's guidelines, ethical approval was not required for this project, because its design is a secondary literature review and the studies accessed contained no identifying features to individuals. All studies used in this review were freely available online or in academic textbooks, therefore permission for further analysis and study is implied, (Tripathy, 2013). Ethical consideration regarding the use of other researcher's data to answer research questions different from the original study intention, was given adequate thought. It was judged appropriate to include all studies meeting the predetermined inclusion and exclusion criteria.

Results

Figure 4: Results from Systematic Review of Literature

	Authors and Year	Title	Country	Study Population	Research Design	Code	Findings for RQ1: Attitudes and Sexual Behaviour	Findings for RQ2: Attitudes towards Gender	Findings for RQ3: Issues relating to Education
1	Doornwaard, Regina and van den Eijnden, (2015a)	Differential Developmental Profiles of Adolescents Using Sexually Explicit Internet Material.	The Netherlands	787 subjects 412 boys (52.4%) Average age: 14.33	Quantitative 4 wave longitudinal	SA/SB EI	<ul style="list-style-type: none"> - Boys and girls, but boys more so than girls, who engaged in viewing OP perceived it to be instructive and realistic. - Boys who watched OP had an increase in their sexual behaviours more than boys who did not watch OP. - Girls who watched OP at the most frequent level, had the greatest change increase in their sexual behaviour 	No relevant findings in this study.	- Need for tailored educational messages informing responsible sexual behaviour, including guidelines on how to interpret the one-sided nature of OP.
2	Doornwaard et al., (2017)	Dutch Adolescents' Motives, Perceptions, and Reflections Toward Sex-Related Internet Use.	The Netherlands	36 subjects (72.2% girls) aged 16-19	Qualitative, using web-based focus groups	SA/SB	<ul style="list-style-type: none"> - Boys and girls (mostly girls) believe OP is instructive, and can teach and give ideas about what to try and how to perform certain sexual techniques such as oral sex. - OP acts as an '<i>instruction manual</i>' particularly to younger viewers, they may think acts have to be emulated, including dangerous or violent acts. - Girls find OP less arousing and desire more romantic intimacy rather than passionless sex. - Girls believe OP is more for men. - Girls can feel ashamed to watch OP, it is a taboo. - OP can make boys and girls feel embarrassed, discomfort, anti-climax. - OP is viewed as unrealistic, fake: lengthy performance times, too rough, lack of emotions, performers have exaggerated expressions. 	<ul style="list-style-type: none"> - Unrealistic because of the submissive role of women, seen as subordinate. - In OP, women are treated disrespectfully. - Sexual violence by men to women shows slapping across the face, the man might think he can engage in choking. - Women are viewed as sexual objects in pornography, there only to pleasure the man. - Men may subscribe to "rape myths" as they watch too much porn and not understand that a woman does not ask to be raped. - Unrealistic expectations about female bodies, particularly affecting adolescents. 	No relevant findings in this study.
3	Dinh, O'Neill and Green, (2024)	<i>"I don't think I've been permanently scarred or anything"</i> Irish Teens' Preferences around Discussing Porn with Peers, Teachers, and Parents	Ireland	4 subjects aged 16-17 (1 boy, 3 girls)	Qualitative cross-sectional using interviews	SA/SB/ GA/EI	<ul style="list-style-type: none"> - OP depicts unclear perspectives when it comes to consent. - Concerning, particularly for younger viewers of OP, who may be unaware of the notion of consent. 	<ul style="list-style-type: none"> - Harmful body issues: girls feel insecure about their bodies because they do not look like girls do in porn. - Girls worried about the gender dynamics in OP and having to act and do the things that the performers do. 	<ul style="list-style-type: none"> - Education around OP is too little, too late and is 'around' not 'about' OP. - Need for wider-ranging sex education discussions about adult content dealing with gender dynamics. - Teachers' efforts to address issues with OP are ineffective and narrowly focussed on avoiding online sexual content, risky body image issues, and a lack of focus on matters of consent. - Sex education in Ireland is insufficient and reflects Irish attitudes towards sex, sexuality remains conflicted. - Adolescents indicate that the responses of educators fall short of meeting their needs.

	<i>Author and Year</i>	<i>Title</i>	<i>Country</i>	<i>Study Population</i>	<i>Research Design</i>	<i>Content Code</i>	<i>Findings for RQ1: Attitudes and Sexual Behaviour</i>	<i>Findings for RQ2: Attitudes towards Gender</i>	<i>Findings for RQ3: Issues relating to Education</i>
4	Ybarra et al., (2022)	Youth Characteristics Associated With Sexual Violence Perpetration Among Transgender Boys and Girls, Cisgender Boys and Girls, and Nonbinary Youth	USA	4193 subjects: aged 14-16	Quantitative cross-sectional study using baseline data from a national online longitudinal survey	SA/SB/GA	- Nonbinary youths who reported past-year exposure to violent OP or nonviolent OP, were more likely than those not exposed to OP to report using sexual violence. - CIS gendered: Positive correlation for boys to engage in rape behaviour following exposure to OP, including nonviolent OP.	- Sexual violence by men to women shows slapping across the face, the man might think he can engage in choking.	No relevant findings in this study.
5	Rousseau et al., (2023)	Prevalence and Factors Associated with Active Cybersexuality among Teenagers Between 15 and 17 Years old: A Cross Sectional Study in Normandy, France.	France	1208 subjects aged 15-17	Quantitative observational cross-sectional multi-centre study using a questionnaire	SA/SB/EI	- Association of cybersexuality and OP consumption was higher for girls than boys. - Females watching OP daily showed higher risk of cybersexuality, poor self-esteem, and drug-use.	- Girls are more likely than boys to feel forced into sending sexts.	- Cybersexuality has to be addressed during sexual education classes, which are still taught in a heterogeneous manner across France. - Sexual health should not be reduced to notions of genitality, pregnancy, contraception, and sexually transmitted infections, but addressed in a global way.
6	González-Ortega, Vicario-Molina, Martínez and Orgaz, (2015)	The Internet as a Source of Sexual Information in a Sample of Spanish Adolescents: Associations with Sexual Behavior.	Spain	3809 subjects (49.4% boys) aged 12-17	Quantitative cross-sectional study using a survey	SA/SB/EI	- Receiving more sexual information online was significantly associated with having engaged in non-coital and coital sexual behaviour. - Boys found sexual information available online more useful than girls.	No relevant findings in this study.	- Online sexual information is relevant to sex education interventions. - Adolescents should be taught critically towards sexual information online including identifying reliable websites. - Teach skills to access high-quality sexual information, to prevent harm and risk online.
7	Anderson et al., (2024)	The Media and Sexual Violence Among Adolescents: Findings from a Qualitative Study of Educators Across Vietnam.	Vietnam	Focus on young people's experience as viewed by those in their educational community	Qualitative cross-sectional using interviews	SA/SB/GA/EI	- Lack of perceived awareness among adolescents that sexual violence illustrated in OP is not normal sexual behaviour. - Risk of imitating sexually explicit material, sometimes violence is more likely as official guidance is absent - OP viewed as normal sexual behaviour. - Increased sexualisation of media linked to non-consensual sharing of images and covert filming of others. Images sometimes later used to blackmail the person in the picture.	- Men may imitate what they see in OP and make the woman feel uncomfortable. - Women's voices and experiences of rape and sexual violence are not heard - Sexualised images that are depicted in OP and other media often reinforce inequitable and stereotypical gender-roles.	- Need for official, science-based curricula on sex and sexual violence developmentally tailored to high school and university students. - Stronger need for comprehensive sexuality education at the high-school level, including education on healthy relationships and media literacy. - Need for comprehensive education about the types of sexually explicit material that may heighten risks of sexually violent behaviour for both groups, given the high prevalence of exposure at a young age in Vietnam.

	Authors and Year	Title	Country	Study Population	Research Design	Content Code	Findings for RQ1: Attitudes and Sexual Behaviour	Findings for RQ2: Attitudes towards Gender	Findings for RQ3: Issues relating to Education
8	Healy-Cullen, Taylor, Ross and Morison, (2022)	Youth Encounters with Internet Pornography: A Survey of Youth, Caregiver, and Educator Perspectives	New Zealand	256 subjects aged 16-18 and 217 caregivers and educators	Mixed-Method cross sectional online survey, part of a larger mixed-methods study	SA/SB/GA/EI	<ul style="list-style-type: none"> - Girls accessing OP to learn about sex and prepare for future sexual experiences. - Overall feelings about OP were negative with concerns over 'dark web, evil people, pedos, offensive sites'. - Boys are more likely to view OP for gratification and sexual pleasure. 	<ul style="list-style-type: none"> - OP described as objectifying, degrading, abusive, and exploitative of women. 	<ul style="list-style-type: none"> - Lack of open communication between significant adults and adolescents about OP. - Understanding youth encounters with OP across genders regarding motivations for viewing OP and primary sources of information about sex and sexuality. - Acceptance of OP as a cultural resource for adolescents. - Include adolescents in dialogue about how they make sense of the resource and how these understandings look in gendered ways.
9	Rothman et al., (2015)	"Without Porn... I Wouldn't Know Half the Things I Know Now".	USA	23 subjects aged 16-18	Qualitative, cross-sectional using semi-structured interviews	SA/SB/GA/EI	<ul style="list-style-type: none"> - Girls and boys report learning most of what they know about sex from watching OP. - Girls were likely to engage in sex acts they otherwise would not have after watching OP. - Boys and girls report imitating behaviours viewed in OP material. - Behaviours include watching OP in public places like school and on a public subway train. 	<ul style="list-style-type: none"> - Evidence of males sharing sexually explicit content, unclear whether females in the videos have given consent. - Pressure from males towards females to imitate what is seen in pornographic films, including positions which feel like rape or being forced. - Evidence of males feeling uncomfortable with name calling and treatment of women in OP. 	<ul style="list-style-type: none"> - Educators should know that pornography may be contributing to a sexualized school climate that facilitates harassment.
10	Koletić, Kohut and Štulhofer, (2019)	Associations Between Adolescents' Use of Sexually Explicit Material and Risky Sexual Behaviour: A Longitudinal Assessment.	Croatia	617 subjects aged 15-17 at baseline	Quantitative 5 wave longitudinal study	SB/EI	<ul style="list-style-type: none"> - Association between increased OP use and sexually risky behaviour was too small to be significant. - Association between increased OP use and increased sexual partners was too small to be significant. 	No relevant findings in this study.	<ul style="list-style-type: none"> - Growing recognition of OP issues has seen development and implementation of sex education programs that include a pornography literacy module. - Evidence programs can assist young people with navigating sexual media. - Potential opposition from parents, often based on the false premise that talking with adolescents about OP means promoting its use.
11	Ybarra and Thompson, (2017)	Predicting the Emergence of Sexual Violence in Adolescence	USA	1586 subjects aged 10-21	Quantitative 6 wave longitudinal study, using surveys	SA/SB/GA	<ul style="list-style-type: none"> - Exposure to violent, but not non-violent OP predicted engagement of each type of sexual violence: <i>sexual harassment, sexual assault, coercive sex, attempted rape and rape</i>. 	<ul style="list-style-type: none"> - Boys are more influenced by the sexual scripts viewed in OP and may apply more pressure on girls to engage in sexual activity. 	No relevant findings in this study.
12	Tomic, Buric and Štulhofer, (2017)	Associations Between Croatian Adolescents' Use of Sexually Explicit Material and Sexual Behavior: Does Parental Monitoring Play a Role?	Croatia	2241 subjects (58% female) mean age 16.2	Quantitative, cross-sectional using online survey	SA/SB	<ul style="list-style-type: none"> - More frequent OP use was predictive of increased sexual experience. - More frequent OP use, for boys and girls, was linked to increased perceived realism of pornography. - Use of OP correlates with engagement in sexting behaviours. 	No relevant findings in this study.	No relevant findings in this study.

	<i>Authors and Year</i>	<i>Title</i>	<i>Country</i>	<i>Study Population</i>	<i>Research Design</i>	<i>Content Code</i>	<i>Findings for RQ1: Attitudes and Sexual Behaviour</i>	<i>Findings for RQ2: Attitudes towards Gender</i>	<i>Findings for RQ3: Issues relating to Education</i>
13	Doornwaard, ter Bogt, Reitz, van den Eijnden, (2015)	Sex-Related Online Behaviours, Perceived Peer Norms and Adolescents' Experience with Sexual Behavior: Testing an Integrative Model.	The Netherlands	1132 subjects aged 11-17	Quantitative 3 wave longitudinal study	SA/SB/GA	- Boys who used OP more often were more likely to perceive their peers to be approving of sexual behaviour. - Boys who use OP are more likely to be sexually active.	- OP seen as male dominated, girls unable to identify with what is seen in OP. - OP sexual scripts depict male sexual-assertiveness.	No relevant findings in this study.
14	Maesa, Schreurs, van Oostenc and Vanden-Bosch, (2019)	#(Me) too much? The Role of Sexualizing Online Media in Adolescents' Resistance Towards the metoo-movement and Acceptance of Rape Myths	Belgium	568 subjects (58.3% girls) aged 15-18	Quantitative cross sectional, using a pen and paper survey	SA/GA	No relevant findings in this study.	- The use of OP was a significant predictor of notions of women as sex objects. - Exposure to OP was not directly related to rape myth acceptance - however, mediation found a possible significant indirect relation between OP and rape myth acceptance via the notion of women as sex objects, the same applies to the resistance towards the #metoo movement.	No relevant findings in this study.
15	Shin and Hwan Lee, (2019)	Exposure to Internet Pornography and Sexually Aggressive Behaviour: Protective Roles of Social Support among Korean Adolescents	Korea	210 subjects (46.7% boys) high-school age	Quantitative cross sectional, using a questionnaire.	SA/SB/EI	- Male adolescents who had more exposure to OP showed a strong effect towards predicted experience with sexually aggressive behaviours. - Adolescents with more exposure to OP were more likely to exhibit sexually aggressive behaviour, this effect is weaker with high levels of parental or friend support.	No relevant findings in this study.	- Proactive development and distribution of sex education internet to address sexual curiosity currently sought using OP - Should combine efforts to improve the ability of adolescents to control their own use of OP by making them aware that internet pornography is harmful for their sexual health. - Active educational interventions from early childhood are essential. - Make policy efforts to strengthen the role of school teachers for the healthy sexual development of adolescents.
16	Wright, Herbenick & Paul, (2019)	Adolescent Condom Use parent-adolescent Sexual Health Communication, and Pornography: Findings from a U.S. Probability Sample.	USA	95 subjects (56.84% female) aged 14-18	Quantitative, data extracted from a larger national study	SA/EI	- OP exposure was associated with a higher likelihood of condomless sex, but not significant. - Parental communication surrounding sexual health and OP exposure resulted in higher likelihood of condomless sex decreasing.	No relevant findings in this study.	- In addition to assessing the moderating role of parental communication about sexual health, studies could investigate whether scholastic sex education has a buffering effect.

	<i>Authors and Year</i>	<i>Title</i>	<i>Country</i>	<i>Study Population</i>	<i>Research Design</i>	<i>Content Code</i>	<i>Findings for RQ1: Attitudes and Sexual Behaviour</i>	<i>Findings for RQ2: Attitudes towards Gender</i>	<i>Findings for RQ3: Issues relating to Education</i>
17	Rodríguez-Castro et al., (2021)	Intimate Partner Cyberstalking, Sexism, Pornography, and Sexting in Adolescents: New Challenges for Sex Education.	Spain	993 subjects (46.1% boys) average 15.75	Quantitative cross-sectional, using a questionnaire	SA/SB GA/EI	<ul style="list-style-type: none"> - Participants who viewed more OP content were more active in sexting behaviours. - Boys and girls who consumed OP performed more internet partner cyberstalking (IPCS) behaviours than those who did not consume OP. 	<ul style="list-style-type: none"> - Hostile and benevolent sexism were positively related to OP consumption. - Those with more sexist attitudes consumed the most OP content. 	<ul style="list-style-type: none"> - Need to address the problems of adolescents with sexist attitudes, consuming OP, practising sexting, and carrying out violent behaviours. - Need to train adolescents in the field of affective-sexual education. - Sex education model in Spain is anchored in a moral/conservative model. - Current model demonises sexuality and cautions risk by using fear and disease. - Existence of widespread traditional, sexist, and heteronormative view of affective-sexual relationships. - Purpose of sex education <i>should</i> be to create a model of liberating, critical sexuality; it is necessary to have adequate comprehensive sexual training. - Essential to implement sexual education programs in schools focused on the prevention of gender-based violence. - Sex education programs should be integrated into the curriculum at all levels of education as just one more subject. - Essential content includes subjects such as body identity, gender identity, sexism, gender stereotypes, sexual orientation, self-esteem, emotions, egalitarian relationships, sexual behaviour, and sexual health.
18	Stanley, Barter and Överlien, (2016)	Pornography, Sexual Coercion and Abuse and Sexting in Young People's Intimate Relationships: A European Study	Europe: Bulgaria, Cyprus, England, Italy and Norway	4564 subjects aged 14-17	Mixed Methods cross-sectional using a survey	SA/SB/GA/EI	<ul style="list-style-type: none"> - OP consumption linked to high rates of experience of sexual coercion and abuse for girls in 3 out of 5 countries, most taking the form of being pressured into intimate touching or sexual harassment. - OP linked perpetration of sexual coercion and abuse of a partner was considerably higher among boys, with rates being particularly high in 2 of the 5 countries. - In 1 of the 5 countries, 34% of boys acknowledged that they had pressured a partner into kissing, intimate touching, or intercourse and 17% of boys admitted to forcing a partner into kissing, intimate touching, or intercourse following consuming OP. 	<ul style="list-style-type: none"> - In all five countries, boys who regularly watched OP were significantly more likely to hold negative gender attitudes. - Boys who watched OP regularly were very much more likely than those who did not do so, to agree with the attitudes statement on sexual violence which was worded: "<i>Women lead men on sexually and then complain about the attention they get.</i>" - Evidence of watching OP linked to normalisation of revenge porn and coercive behaviour by boys to girls with regards to the sharing of naked images without consent. 	<ul style="list-style-type: none"> - Sex and relationships education should foster critical approaches which promote an understanding of OP and acknowledge its lack of congruence with lived experience including gendered attitudes that inform its scripts. - Finding that the perceived realism of OP mediates its impact on sexual behaviour. - Sex education should draw on expertise to encourage analytic and gendered understandings of OP and its uses.

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19	Gesser-Edelsburg and Elhadi, (2018)	Discourse on Exposure to Pornography Content Online Between Arab Adolescents and Parents: Qualitative Study on its Impact on Sexual Education and Behavior	Arab Schools in Nazareth, Kafr Sullam, Reina, Kafr Nin, and Ein Mahel (Israel and Palestine settlements)	20 subjects aged 14-18 and 20 Mothers	Qualitative, using interviews	SA/GI / EI	<ul style="list-style-type: none"> - All boys watched OP to learn about sex as there is zero discourse at home, no sex education as it is forbidden culturally. - Boys experience guilt for watching OP - Girls have incorrect ideas regarding how to get pregnant as there is no education or dialogue at school or home for girls. - Girls are embarrassed about sex - If a youth has premarital sex, there are severe consequences. - Adolescents that have unrestricted access to OP can lead to sexual harassment, blackmail and abuse. 	<ul style="list-style-type: none"> - Mothers reported that they know their boys probably watch OP and turn a blind eye, but they keep the girls busy with housework as they hope to marry them off early to maintain family honour. - If a girl has premarital sex, she is known as "used goods" and no man will accept her. 	<ul style="list-style-type: none"> - Absence of sex education, so adolescents search for information online. - Unchecked exposure to OP highlights need to change discourse and provide effective tools to address the situation. - It is not enough to transmit information and factual data as has been done so far by the school system. - Encourage meaningful conversation to prevent violent consequences. - Introduce and manage sexual discourse in a controlled, transparent, and critical manner to help youth make informed decisions concerning OP viewing and sexual behaviour. - Lectures about sex education would reduce the risk of sexual abuse and rape.
20	Cecilia, (2019)	Relationships between Exposure to Online Pornography, Psychological Well-Being and Sexual Permissiveness among Hong Kong Chinese Adolescents: a Three-Wave Longitudinal Study	Hong Kong	1401 subjects from age 12	Quantitative 3 wave longitudinal study	SA	<ul style="list-style-type: none"> - A higher level of exposure to OP is found to be associated with higher levels of sexually permissive attitudes. 	No relevant findings in this study.	No relevant studies in this study.
21	Martellozzo et al., (2020)	Researching the Affects that Online Pornography Has on UK Adolescents Aged 11 to 1	United Kingdom	1100 subjects aged 11-16	Mixed methods, 3 stage sample	SB/GA EI	<ul style="list-style-type: none"> - Evidence of assimilation of ideas from OP about expected behaviours during physical sex. - Watching OP gave adolescents, boys more than girls, ideas about what they wanted to try out during sex. - Exposure to OP can harm children and young people's perception of sex, healthy relationships, and how they view their own bodies. - OP was considered as unrealistic among both boys and girls. 	<ul style="list-style-type: none"> - OP gives an unrealistic view of sex and girls bodies as girls are not developed that way yet. - OP is male dominated and puts girls off having relationships in case it is like in porn. - OP is not trusting or romantic and it does not promote any good. - Boys can become different and think they can act and behave in ways like in OP. - Boys look at girls and think one thing and women should not be viewed that way. 	<ul style="list-style-type: none"> - Adolescents' rights to comprehensive educational awareness of issues and dangers surrounding their engagement with OP, focus on online safety, digital privacy and health are needed. - Young people's needs for quality relationships education and improved digital literacy are negatively impacted by potential obstructions such as the RSE curriculum; - Refusal by some schools to teach sexual behaviour. - Attention drawn to professional skills of teachers designated to deliver new content and whether parents can withdraw their adolescents on religious/ moral grounds from provision, where it exists, must be considered. - Balance parental rights with duties to prepare adolescents for their future lives, allowing them to benefit from RSE.

	<i>Authors and Year</i>	<i>Title</i>	<i>Country</i>	<i>Study Population</i>	<i>Research Design</i>	<i>Content Code</i>	<i>Findings for RQ1: Attitudes and Sexual Behaviour</i>	<i>Findings for RQ2: Attitudes towards Gender</i>	<i>Findings for RQ3: Issues relating to Education</i>
22	Baker, (2015)	Online Pornography – Should Schools be Teaching Young People about the Risks? An Exploration of the Views of Young People and Teaching Professionals.	England	218 subjects (79.3% female) 16-17 year olds and 23 adults who worked as teachers/educators	Mixed methods including surveys and focus-groups	SA/SB GA/EI	<ul style="list-style-type: none"> - OP does not offer realistic views on sexual relationships. - OP glamorises sex. - OP might encourage younger sexual relationships and sex without a condom. 	<ul style="list-style-type: none"> - Watching OP might encourage sexist behaviours or beliefs such as seeing women as sexual objects. 	<ul style="list-style-type: none"> - Staff and students thought it was a good idea for schools to teach about the potential effects of OP use. - Staff commented that parental engagement in, and support for sex education programmes is vital and education about OP should be a joint effort by parents and schools. - In support, schools should work in partnership with young people and parents to devise and deliver a detailed SRE programme, starting early in primary school and extending throughout secondary school. - Programme should tackle the multiple issues associated with OP use, including: safer sex practice, body image and self-esteem, behaviour and attitude towards the opposite sex, respect and empowering young people to make informed decisions about engaging in sexual activities. - Current Department for Education and Employment guidance on sex education (DfEE 2000) is outdated and needs amending to include reference to issues that may arise from viewing OP.

Content Code key: SA: Sexual attitudes, SB: Sexual behaviours, GA: Gender attitudes, EI: Educational Issues
OP = Online Pornography

Discussion

This systematic review identified 22 studies published in the last 10 years that focus on varying aspects concerning young people and their pornography exposure. Broadly, the review found that young people's exposure to, and consumption of pornography, did in some way contribute to changes in sexual attitudes and behaviour, and shaped some of their perspectives about gender. The studies also gave prominence to the role of education in preparing, navigating and supporting adolescents as they encounter and engage with sexually explicit online material, and highlighted the impacts of its absence.

RQ1: *Impacts upon Sexual Attitudes and Behaviour*

The themes which emerged from the studies addressing RQ1, showed that consumption of pornography was impacting young people's sexual attitudes and behaviours and a variety of ways.

Pornography as an Instructive Resource and Emulating Behaviours

In 10 of the 22 (40.9%) final studies, the role of *pornography as educator* and emulating behaviours seen in pornography emerged as a prevalent notion among young people, who use explicit content online as a resource to learn about sex and intimate relationships. Both boys and girls, particularly those who were younger, were found to be using online pornography as an "*instruction manual*" to learn about sex, (Doornwaard, 2017, p8). In the same study, girls especially, used pornography not only to learn about sexuality, but also to utilise the graphic element to teach them how to perform sexual acts and provide inspiration for things to try with their partners, this was viewed as a positive aspect of pornography for some. This was contrasting to (González-Ortega et al., 2015), who found that 78.1% of boys and 59.2% of girls, are sourcing sexual information online. In (Doornwaard, Regina and van den Eijnden, 2015), a Dutch longitudinal study of almost 800 adolescents, were asked to score their confidence level on a scale of 0-1, on their agreement with the statement", "*The Internet gives reliable information on sex and relationships*". The value of 0.82 was recorded, showing that they possess a high confidence that the information they are accessing online is reliable, although it was unclear from the study if their sources were made up of only explicit content. This was contrary to a qualitative study conducted on

Italian 16-18 year olds, who found sexual information available on the internet to be unreliable, because it is user-generated and is represented mainly by pornography, (Scarcelli, 2014). Reliability of sexual information online is clouded by self-generated content. Levels of reliability are complicated, as it would depend on which resources are being accessed and by whom they are regulated and funded. The Internet Watch Foundation (IWF) found that of the 153,369 webpages they explored during 2020, almost half (44%) were assessed as containing self-generated content. As online users are increasingly uploading sexualised self-generated content, it is concerning that the information available is largely unregulated. Girls, but not boys, listed accessing pornography as a way to learn about sex in a New Zealand study (Healy-Cullen et al., 2022), and girls are also found to engage in sexual acts following viewing online pornography, that they otherwise would not have, (Rothman et al., 2015). Nearly all (91.3%) of the adolescents questioned, 9 males and 14 females, in the USA (Rothman et al., 2015) study, said they learned to have sex by watching pornography. Some imitated or asked their partners to imitate what they had seen, sometimes with unpleasant consequences for females who reported suffering pain from trying anal sex, feeling under pressure or even being forced to try uncomfortable positions. These sentiments were shared in a mixed methods study of 11-16 year olds from the UK where 44% of boys and 29% of girls assimilated ideas about what to try out from watching online pornography, (Martellozzo et al., 2020). Some compelling comments from the study were:

“...you can learn bad things like watching anal sex and then some boys might expect anal sex with their partner.”

(Female, 13)

“One of my friends has started treating women like he sees on the videos—not major—just a slap here or there.”

(Male, 13)

These findings are in agreement with (Marston and Lewis, 2014), who reported that one of the reasons young people are having anal sex is because men want to imitate what they watch in pornography. They continue in their report of 16-18 year olds experiences with anal sex, that girls being '*badgered*' for anal sex until they relinquish, is considered normative and that pornography viewing is one of the foremost reasons for this. Boys and girls both recognised that by viewing pornography, boys might think that girls are persuaded into having sex and are willing to do the same sexual acts, (Doornwaard et al., 2017). Concern about emulating behaviours from watching pornography were also present in a study from Vietnam where a university lecturer shared that explicit online content contained harmful imagery of sexual activity that they thought powered desires in men to imitate these behaviours in real life which they considered to be violent or uncomfortable for the female, (Anderson, et al., 2024). Although this viewpoint is not from an adolescent male themselves, and instead, an educator working with young people, the observation is consistent with outcomes from previously mentioned studies. In only one of the final 22 studies, no significant association between online pornography use and an increase in sexual partners was found, (Koletić, Kohut and Štulhofer 2019), also found no significant association between using online pornography and increased risky sexual behaviours. Interestingly, their results and findings in several strands of their research are in contrast to several other similar studies. Young people using online pornography as an instructive model and emulating behaviours was a prominent outcome of the systematic review in relations to RQ1. This finding is consistent with several studies, including, (Arrington-Sanders et al., 2015; Brown and L'Engle, 2009; Martellozzo et al., 2016; Owens et al., 2012), who found that adolescents learn sexual behaviours from observing it in online sexually explicit material.

Changes in Sexual Activity including Sexting, Cybersex and 'Risky' Behaviour

Half of the studies in this review provided evidence relating to young people's changes in sexual activity, including their online sexual behaviours such as sexting and cybersex, but also real-life risky behaviours. Several studies found that engagement with sexually explicit online material was positively correlated to an increase in sexual activity. (Tomic,

Buric and S̃tulhofer, 2017) found that, among other factors, increased use of online pornography was linked to earlier sexual experiences and sexual permissiveness, this was lowered with increased parental involvement and monitoring. (Doornwaard, Regina and van den Eijnden, 2015) found that boys who watched online pornography had an increase in their sexual behaviour compared with boys who did not watch. In the same longitudinal study on Dutch adolescents, girls who watched pornography at the most frequent level, saw the greatest change increase in their sexual behaviour. This observation was echoed in a study from Hong Kong as a higher level of exposure to online pornography was found to be associated with higher levels of sexually permissive attitudes in young people, (Cecilia, 2019), although the study does not define specifically what behaviours are judged to contribute to a *permissive attitude*. The connection between pornography and permissiveness in attitude is upheld by several other studies, (Brown and L'Engle, 2009; González-Ortega et al., 2015; Peter and Valkenburg, 2006). (Baker, 2015), had a speculative approach to the possible risks to young people's engagement with explicit content, as the mixed methods study welcomed responses from adolescents on why they think young people viewing pornography is a bad thing. Among several harmful behaviours, the respondents said it *might* encourage sexual partners and it *might* encourage young people to have unprotected sex. Although these outcomes are consistent with other studies, this particular study did not present from first hand experience making it difficult to accept. However, it is interesting that the respondents arrived at several concerning behaviours which have been found to be present in other studies.

Online sexual behaviour was also found to be affected by adolescents' engagement with sexual content online. Cybersex is defined as “... *interactive experience, which usually involves two or more participants having sexual exchanges online with the purpose of sexual arousal and stimulation*” (Qiaolei, Xiuqin and Ran, 2013).

(Stanley et al., 2018), found that in a study of over 4500 European adolescents, sexting behaviours and pornography consumption correlated positively with strong correlation existing between sexting and pornography consumption, further, those who viewed more pornographic content were more active in sexting behaviors. Two-thirds of teenagers are engaged in the practice of cybersex, (Rousseau et al., 2023). The study

found no gender differences in cybersex prevalence, but that girls are at a higher risk of cybersexuality if they, alongside other indicators such as poor self-esteem, drug-use, watched online pornography on a daily basis. There was a significant difference highlighted when 'sexting' was explored as part of cybersexuality. Sexting, the sending and receiving of sexually explicit messages by phone, was the most common activity, 62% said they had received sexts and 22% said they had sent sexts. Boys and girls reported sending similar numbers of sexts, but boys reported receiving more sexts than girls, with 65% and 59% respectively. The act of 'secondary sexting', that is sending on, showing others or uploading a naked picture, was especially higher for boys at 12%, than girls at only 2%. It is unclear from the report whether permission had been sought to share the explicit images to third parties. This behaviour in boys could indicate a need to affirm their sexuality among their peers, by sharing images they have been sent. (Rodríguez-Castro et al, 2021), found that boys carried out more sexting behaviours than girls, but that they also viewed pornography more than girls. Their results drew a clear parallel between pornography consumption and sexting, stating that they were strongly related, further, as explicit content consumption increased, so did the sexting behaviours. When young people and online pornography consumption are increased, risky sexual behaviours are often related, (Peter and Valkenburg, 2016). How they manifest is variable, and what is considered as '*risky*' in some contexts to some people, may not be to others, it is a subjective context and therefore difficult to measure. Some risky behaviours linked to pornography were identified in some studies in this review. Watching online pornography and engaging in condomless sex, drew a positive but not significant correlation, (Wright, Herbenick and Paul, 2019). The bivariate nature of this study factors in the impact of greater parental communication on matters around sexual health, which were found to be positive but not significant. No association between internet pornography consumption and condomless sex was found by, (Koletić, Kohut and Štulhofer, 2019). Evidence of *risky* behaviour emanated from, (Rothman et al., 2015), where respondents admitted to watching online pornography in public places such as at school and on public trains, which suggests a normality around watching explicit content online.

Sexual Violence, Coercion and Consent

Sexual violence, including coercion and issues surrounding consent, were present in 31.8% of studies in the review. Sexual violence, as defined by the World Health Organisation, is: “...*any sexual act, including rape, an attempt to obtain a sexual act, or other act directed against a person’s sexuality using coercion, by any person regardless of their relationship to the victim, in any setting.*” There is concern about the normalisation of sexual violence in online platforms, 79% of young people reporting having seen sexual violence online, (Children’s Commissioner, 2023).

(Klaassen and Peter, 2015), highlighted the three key sexual scripts illustrated in popular pornography as: *objectification, male dominance, and violence.*

A content analysis found that of the 304 scenes analysed, 88.2% contained physical aggression in the form of spanking, gagging and slapping, 47.7% contained verbal aggression. The perpetrators were usually male aggressors against a female, the female usually responded with neutrality or pleasure, illustrating no repercussions, (Bridges et al., 2010). A study ten years later, revealed that women were the target for 97% of violence depicted, (Fritz, 2020). In (Doornwaard et al., 2017), the issue of unrealistic depictions of sex was raised with concerns that online content was ‘too wild and rough.’ Violence, particularly violence against women is overrepresented in free online content and it is evidenced in studies that consumers of violent pornography are more likely to demonstrate acts of sexual violence. (Ybarra et al., 2022), established that exposure to non-violent and violent pornography showed a positive correlation with perpetrating sexual violence, this was found in nonbinary youths and cisgendered youths. An association was found for cisgendered boys to engage in rape behaviour following exposure to violent and non-violent pornography. Other general risk factors such as spousal violence exposure, alcohol abuse and acceptance of rape attitudes were considered to formulate the correlation. In an earlier study, (Ybarra and Thompson, 2017) found that exposure to violent, but not non-violent pornography, was a positive predictor for each type of sexual violence: *sexual harassment, sexual assault, coercive sex, attempted rape and rape.* Although theirs is a bivariate study considering factors such as delinquent and aggressive behaviour, watching violent pornography increased the odds fourfold of perpetration of sexual violence, and the

average age of first sexual harassment perpetration for boys was 15 years old, with males being overrepresented as perpetrators. A positive link was identified in (Shin and Lee, 2019) study on young people in Korea, they found that exposure to internet pornography showed a strong effect on sexually aggressive behaviour and that higher levels of exposure predicted more sexually aggressive behaviours. The report is concluded rather compellingly by the researchers who state that the issue of exposure to pornography and sexually aggressive behaviours were not serious issues for the sample of their study because; *'...the respondents' sexually aggressive behaviours were mostly minor in nature, so they could be classed as sexual harassment such as looking at the bodies of the members of the opposite sex and making obscene remarks during internet conversations'*. I would argue that these are issues of concern, however the authors continue to analyse and defend their sample of 210 youths (46.7%) male, by stating that they found few instances of forcibly kissing or caressing, (3.4%), forcibly asking to have sex (1.5%), or trying to have sexual contact with a neighbour or relative, (4.2%) and that; *"only one respondent reported committed an act of rape or more during the past year."*, (Shin and Lee, 2019, p8). 1 out of 98 males admitting to at least one act of rape over the last year is of serious concern, particularly as 63% of men who have raped once go on to commit repeated rapes, (Lisak et al., 2010). It is difficult to accept this data as non-serious as sexual assault should not be normalised, regardless of how *'minor'* the offence is judged to be. The paper stated that their findings were inconsistent with other studies and that there is a rise in public concern in Korean society as the number of adolescent sexual offences are increasing.

There is evidence that the widespread imagery of sexual violence in pornography, creates notions of normalisation of this as a sexual behaviour among young people in Vietnam, including the normalisation of non-consent, (Anderson et al., 2024). The qualitative study gave insights into issues of consent, one female respondent stated; *"...in Korean/Chinese movies or love novels that the young usually read and watch, the main characters typically force their partner into having unwanted sex or physical contacts, such as hugs or kisses. Consequently, the readers form a notion that it is okay for the male to force such activities, and the female does like it."* (Anderson et al., 2024, p 7-8). Respondents highlighted the representation of non-consent in the media as it

being normalised. This was consistent with another qualitative study from Ireland, where the observation that pornography doesn't necessarily show consensual relationships and perspectives on consent were unclear, was raised as a worry, (Dinh, O'Neill and Green, 2024). The issue of consent was represented in the European study where pornography consumption was linked with higher rates of sexual coercion and abuse for girls in 3 of the 5 countries featured in the study, with coercion manifesting as girls feeling pressured into sexual activity, (Stanley et al., 2018). Their study is also consistent with (Ybarra et al., 2022) in that perpetration was considerably higher in boys. 34% of boys in 1 of the 5 countries, acknowledged that they have pressured a partner into sexual activity including intercourse, and 17% admitted to forcing a partner into sexual activity following watching pornography.

According to the studies in this review, sexual violence, overwhelmingly against girls by boys, is one of the most concerning aspects linked to adolescent use of sexual online content. The prevalence of pornography engagement amongst adolescents is contributing, alongside other variables, to the normalisation of sexual violence, coercion and pressures to engage in sexual activity. This must not be reduced to being non-serious.

RQ2: *Impacts on Gender Attitude*

The themes which emerged from the studies addressing RQ2, showed that consumption of pornography was impacting young people's attitudes towards gender.

Objectification of Women and Rape Myth Attitudes (RMA)

Issues surrounding the representation of women in pornography featured in 14 of the 22 studies, (63.6%), with the core themes identified being women as sex objects, receptors of violence and occupying subordinate roles. It is clear that misogynistic messages are prominent in online content. (Doornwaard et al., 2017 p.7), found that almost all participants in their study thought pornography was misogynistic and that; "...*women are objectified as obedient sex objects, subordinate to muscular men*". Participants shared that they thought women were treated disrespectfully, contributing to most of the girls in the study stating that they thought pornography was mostly for men.

This qualitative study places an insightful lens on adolescents' perspectives on gender depictions in pornography and it is evident that these depictions are transcending into adolescent notions of sex.

"[Porn] is very disrespectful toward women. It shows a very unequal picture: men are in charge and women just serve as sexual objects. At least, this is how women are often displayed, especially in videos where they get slapped in their face, etcetera"
(Male, 17)

"I think that men may believe they can easily seduce a woman into having sex because the women in porn are depicted as "easy." [... They] are often very willing to have sex."
(Female, 16)

"I read something disturbing a while ago, that men don't understand that women don't actually ask to get raped if they are dressing provocatively? What the hell! That really drives me mad."
(Female, 16)

"Maybe they have viewed too much porn and as a result they do not realize anymore that women are also human beings rather than sex objects they can "use" to pleasure themselves ... unbelievable"
(Female, 16)

Participants in the study from Vietnam described how Asian movies they watch reinforce gender-stereotypes, where women are submissive to masculine coercion. They were also aware that some young people imitated the situations and actions they had seen in sexual media which included sexual violence and non-consent. This showed associations between exposure and gender stereotypical beliefs, (Anderson et al., 2024). Further descriptions of gender misrepresentation were outlined in (Healy-Cullen et al., 2022), as they found the scenes were degrading, abusive and exploitative of

women. This is consistent with other studies. However, there was no direct evidence in the report that the illustrated attitudes about gender transcended into consumers mindsets.

Sexual scripts reinforced in pornography, where violence is perpetrated by men against women, can contribute to sexual violence and the perception that young people, particularly girls, are expected to have sex, (Ybarra and Thompson, 2017). Hostile sexism linked to viewing online pornography was found in (Rodriguez-Castro et al., 2021) and in all 5 countries of the European study by (Stanley et al., 2018), boys who regularly watch online pornography were significantly more likely to hold negative gender views. The Mixed-Methods study conducted an assessment of gender attitudes, inviting accordance with the following statements, (Stanley et al., 2018, p.8):

- *For the most important job, it is better to choose a man instead of women*
- *Women lead men on sexually, and then complain about the attention they get*
- *It is sometimes acceptable for a man to hit a woman if she has been unfaithful*

It was significant that boys who watched pornography regularly were particularly more likely than those who did not, to agree with the attitudes statement on sexual violence.

Males pressuring females to have sex and recreate scenes in pornography was present in, (Rothman et al., 2015), as too was girls feeling forced act passively, as if they were being raped, by their partner during sex. Alarmingly, evidence of secret filming of consensual intercourse by males of females and possible non-consensual sharing of that media also emerged from that study. Normalisation of sharing naked images without consent was associated with watching pornography and was consistent with findings in the European study.

Viewing of online pornography was found to relate to greater levels of RMA and notions of women as sex-objects, (Maesa et al., 2019). Sexually explicit online material was seen as an educator in acquiring sexual beliefs and resistance towards the #metoo movement, an activist movement which deplores sexual assault. Objectification Theory, in essence, women treated as bodies that exist for the use of others, (Fredrickson and Roberts, 1997), was strongly connected with the outcomes of the resistance to #metoo

study, and is upheld with the outcomes of this review as the theme of women as usable, subordinate sex objects is apparent.

Cultural factors contribute to deeper understanding of the study outcomes.

(Gesser-Edelsburg and Elhadi, 2018) undertook a qualitative study of Arab schools in Israeli/Palestinian settlements where culturally girls are treated very differently to boys. With a total lack of sex education in the home or at school, there are severe misunderstandings about sex. It was found that boys who had unrestricted access to pornography may enact sexual harassment, blackmail and abuse. Girls are embarrassed about sex and considered as ‘used goods’ if they indulge in premarital sex, unlikely to be matched to a suitable husband. With polarising gender attitudes firmly embedded in culture, it is unclear how exposure to pornography impacted these views further. In a UK qualitative study, the following comments were made, giving an insight into the impacts of explicit content consumption on user gender attitudes, (Martellozzo et al., 2020 p.7):

“Well you see what is happening in porn and you almost get worried about other people’s relationships and it puts me off having any future relationships as it is very male dominated and not romantic or trusting—or promoting good relationships.”

(Female, 13)

“It would put pressure on you to do things you don’t feel comfortable with.”

Female, 14

“They (boys) become a different person—and begin to think that it is alright to act and behave in such ways. The way they talk to others changes as well. When they look at a girl they probably only think of that one thing—which isn’t how women should be looked at.”

(Male, 14)

Many studies in the review share a consistent message that viewing online pornography can negatively impact gender attitudes and can contribute to the sexual objectification

of women, violence and coercion, and acceptance of rape myths, which is a significant concern.

Appearance Pressures

A prominent notion in Objectification Theory, (Fredrickson and Roberts, 1997), is the relentless observation and judgement of female bodies and the cultural pressure imposed upon women to maintain a certain physical appearance, can be internalised. Despite this theory being espoused almost 30 years ago, it is entirely relevant in 2024. Several studies in the review posed that girls were subject to unrealistic expectations placed upon their bodies. Girls in a focus group shared a belief that pornography glamorises bodies and can create insecurity and anxieties within them if they feel their bodies do not meet the standard depicted. Interestingly, this view came from girls who did and did not watch pornography, (Doornwaard et al., 2017). This view was echoed in (Dihn, O'Neil and Green, 2024), where a major concern for the adolescents was the expectation to look like performers in pornography. Exposure to online pornography can be harmful to adolescents' self body image, in a qualitative study, the following comment was made, (Martellozzo et al., 2020):

“It gives an unrealistic view of sex and our bodies makes us self conscious and question why bodies are not developed like what we see online.”

(Female, 13)

It is clear that pressures are placed on girls to look a certain way by society. The rise in popularity of eating disorder promotion websites (*pro-ana* and *pro-mia websites*) are an indicator of social media's pivotal role in presenting perceived body-image norms, (Mento et al., 2021), and there is evidence in this review that this is exacerbated by adolescents' engagement with sexually explicit images. The case is likely for boys too, although evidence could not be found in these studies.

RQ3: *The Role of Education*

The themes which emerged from the studies addressing RQ3, showed that education and, moreover, the lack thereof, played or could play a critical role in not only aiding to prevent some of the undesirable attitudes and behaviours linked to pornography consumption among adolescents, but also to providing tools, support and guidance when issues are encountered.

The Absence of Appropriate Sex Education

The role of education featured in 15 of the 22 studies, (68.1%). The recognition of a stark absence of comprehensive, relevant and effective sex education was a key finding and labelled as one of the propellers driving young people to seek out their sex education from online pornography.

Several elements of effective sex-education were found to be substandard for multifactorial reasons. Contextual barriers, including political and religious influence, were linked to perceived conservative attitudes towards sex. This was found to be the case for studies from Ireland, Israel/Palestine and Spain. Sex education, if indeed it existed, was overly reflective of the countries' socio-political positionality. Sex-education in Ireland was found to be insufficient and overly reliant on aligning with the country's conflicting views on sexuality, (Dinh, O'Neil and Green, 2024). This was echoed in Spain where poor sex-education was attached to the country's conservative model where sexuality is demonised, and threats of STIs are intended to cause fear, (Rodriguez-Castro et al., 2021). Strong hetero-normative views are widespread, as are traditional and sexist viewpoints. They recommend the purpose of sex-education, should be to affirm a liberating model which promotes equality in sexuality and provide the essential elements addressing core issues such as sexism, gender stereotypes, body image and self-esteem, and the problems facing adolescents who consume online pornography, practice sexting and carry out unsafe sexual behaviours. Given its prevalence, online pornography and its associated subthemes, were recommended for inclusion into sex education in many of the review's studies, (Anderson et al., 2024, Baker, 2015; Dinh, O'Neil and Green, 2024; Doornwaard, Regina, and van den Eijnden, 2015; Gesser-Edelsburg and Elhadi, 2018; González-Ortega et al., 2015; Healy-Cullen et al., 2022; Martellozzo et al., 2020; Rouseana et al., 2023; Shin and Lee, 2019;

Stanley et al., 2018). The promotion and normalisation of '*porn literacy*' as an intervention for promoting sexual health is also championed by (Jhe et al., 2022). Prohibiting factors to the implementation of up to date, comprehensive and robust sex-education include parental resistance, (Koletić, Kohut, and Štulhofer, 2019), who state that parents have the idea that talking about a subject like pornography will promote it. There are references to teacher/school resistance and educators lacking skills to be able address contemporary issues effectively, (Dinh, O'Neil and Green, 2024; Martellozzo et al., 2020). Several studies propose that as young people are the experts and are living these experiences first hand, they should be involved in shaping the sex-education curricula, (Baker, 2015; Healy-Cullen et al., 2022; Stanley et al., 2018).

Assimilating the highly concerning and unsafe impacts of adolescents' complex and compelling relationship with online pornography, it is paramount that a drastic and contemporary reform to current sex-education programs is considered and effective, harm-reducing curricula is devised. The need to go beyond the simplistic scientific, biological frameworks, should be considered imminently. It is not appropriate to assume that biological teaching about pregnancy and contraception is enough to equip young people to be critical, informed and safer. (Gesser-Edelsburg and Elhadi, 2018), echo this notion by stating that the transmission of factual data is insufficient, and meaningful dialogue which is transparent and critical and involving topics such as online pornography, could aid adolescents in making informed decisions and potentially prevent them from experiencing violence. (Davis et al., 2020), also called for digital pornography literacy programs to address emerging health issues. An Australian study of proposed educational initiatives to address issues with young people and pornography, saw 85% of young people in support of school-based pornography education, taking care to ensure that initiatives would not harm or shame pornography users, (Lim et al., 2020). Comprehensive, authentic and relevant school-based protective education programs that have an open and judgement-free dialogue about online pornography and its emergent themes, is evidently a critically needed intervention in order to inform, navigate and support adolescents with online safety, from a firmly harm-reducing standpoint.

Limitations and Implications

Limitations

This study is subject to several limitations. The nature of a systematic review is that many different methodologically styled studies are retrieved for synthesis, making measuring effect sizes or weighing of evidence difficult. Knowledge and results are presented in different ways, which creates complications around which studies have weightier evidence to support externally written research questions. In some cases, aspects of some quantitative data, particularly with bivariate longitudinal studies, was impenetrable and reached beyond my statistical analysis skills. This meant relying on the study's simplified worded analysis, which may not have provided as much detail as the statistical data.

The systematic review also imposed restrictions of digressing from the preset inclusion and exclusion criteria. Having a firm age restriction on the population of the studies eliminated some potentially valuable evidence. Studies were selected during the screening process where the titles or abstract included phrasing relating to the sample as; "*emerging adults*" or "*young people*", however, at the full-text review stage, the population sample included mostly people aged 18 or over, for example, 17-24 year-olds, or 15-29 year-olds, meaning those studies has to be excluded from the review. Studies where the population sample was *mostly* 18 years-old or under, for example, 13-19 years-old, were included. A repeat of this process would hold less rigidity around population age.

Some of the studies included small samples, one as small as four participants. Allocating appropriate weight to qualitative responses was a considered task, especially as some studies had thousands of respondents and it was important that there was representation from each study. Guidance from (Gough, 2007) *Weight of Evidence Framework* assisted in assessing the fitness of each study to answer the research questions. Having at least two investigators reviewing studies is recommended to maintain transparency and objectivity during the screening and selection process, (Ahn

and Kang, 2018; Pai et al., 2004). However, other techniques came into play to assess quality. For example, paying attention to the names of authors during the screening process and thinking about their presence in the subject's field. I reflected upon whether I had noticed them being cited in other studies or listed in the biographies of other papers.

I attempted to eliminate as best as possible, cultural bias as it was important that the review captured experiences of young people from a breadth of countries and cultures in order to appraise the scope of any potential issues arising. However, studies from western perspectives were prevalent in the search results and there seems to be a drastic underrepresentation from African, South-American, and some regions of Asia. There are likely differing and multi-layered reasons for this outcome, but possibly they include stages of technological development, fewer liberalist nations where this type of research is undertaken and views on sex are conservative or possibly bound by restrictions imposed by religion. There were contradictions in some findings, which could be down to cultural differences on this divisive and multifaceted subject.

The review is regrettably based on mostly hetero-normative experiences and viewpoints and there is underrepresentation of studies on those identifying as LGBTQ+. This was a challenge as a feminist theoretical research standpoint was assumed, and those marginalised in society should be represented equally.

Implications

Evidence from this review signposts the need for educational reform in the domain of sex-education. There is evidence of attempts to regulate the pornography industry that have so far been insufficient. Tech companies operating multinational pornography platforms are being urged by the UK government, who introduced the Online Safety Act in 2023, to restrict algorithms which recommend harmful content to children and put in place more robust age-checks, (OfCom, 2024b), and in the first Social Media Summit, held in Australia in October 2024, experts called for a ban on social media until at least age 14, citing many issues raised in this paper as negative impacts on young people, (NSW.com.au, 2024). This issue is clearly topical and gaining traction, and although

these are positive steps in the right direction, we must question whether ecommerce motivations, often underpinned by profits, are to be trusted to lead the way in safeguarding adolescents, which is why educational reform is likely the most appropriate pathway.

This review is critical to current practice as adolescents are experiencing instances of harmful, sexually motivated behaviour. For example, a story emerged from mainstream news recently of ‘*rape lists*’ being drawn up by student in schools where their peers are categorised based on appearance and deemed as ‘rapeable’ or ‘unrapeable’ and posted it online, (9news.com.au, 2024). This story is not in isolation. The BBC, also reported on the rise of sexism in schools and referenced boys watching violence pornography as a contributing factor, (BBC.co.uk, 2024). *Rape culture* in schools, did not appear from nowhere. It is a culmination of broader societal expectations on gender stereotypes, affecting both boys and girls, and is manifested and validated by what adolescents are seeing as normalised behaviour online. Using this review’s evidence and its recommendations for educational reform, school’s can begin to champion open dialogue with their students and utilise them to contribute to worthwhile and relatable sex-education and gender policy development. Schools should examine what subliminal messages they are transmitting everyday with regards to gender, for example, uniform policy, expectations around student communications with each other, and educators themselves. They should strive to create a safe culture where comments on physical appearances, no matter how minor they may be, are called-out. Educators should work to create a safe, egalitarian learning culture. Educational policy reform using the core findings and recommendations found in this review, is a vital next step to prevent escalating harms as outcomes of engagement with sexualised social media and online pornography.

This review has identified a distinct lack of research in the area of online pornography and its impacts on marginalised LGBTQ+ young people, including a focus on gender attitudes. Research in this area would create a more informed picture of what their online experiences consist of and whether they are impacted in similar ways as this

review has found. Further research on whether boys are experiencing physical appearance pressures in connection with pornography, would also be critical to enrich the development of an inclusive sex-education curriculum, where all adolescents are represented, empowered and have a voice.

Conclusion

This systematic literature review incorporated 22 peer-reviewed studies, published in English over the last 10 years, from 17 different countries on the subject of online pornography and its impacts on the sexual attitudes and behaviours of adolescents. The review also looked at the role of education. The studies were selected based on their synergy with the inclusion criteria and their fitness in answering any of the three research questions.

Young people's exposure to sexually explicit online content is more mainstream than ever before because of advances in internet technology, the prevalence of smartphone ownership and the availability of an unlimited amount of free, explicit material that can be accessed anonymously at the click of a button. The review found that pornography was used by adolescents in the absence of comprehensive sex-education, to learn about sex, and that emulation of behaviours seen in pornography, are appearing to be normalised. Online sexualised activities such as cybersex and sexting were prevalent. Because of the heightened presence of sexual violence and blurred messages about consent depicted in online pornography, adolescent boys who engaged in violent online pornography were more likely to impact sexual violence in their relationships, girls being the most likely receivers of this. Unrealistic expectations surrounding body-image and the sexual objectification of women were core themes which came to light, drawing a parallel to Objectification theory.

There is a significant gulf between the prevalence of adolescents' engagement with online pornography and their access to comprehensive and reliable education, including its potential harms. The review found that there was a chronic lack of effective sex-education available to adolescents, and that education was insufficient and out of date. Educational reform is needed to help adolescents make sense of what they are going through. Recommendations for a well-founded curriculum included open communication on issues facing adolescents such as; gender roles and identity, clear teaching about online sexual presence such as interacting with online pornography, sexting and the potential harms associated. To create an authentic curriculum, it should

include adolescents' contributions to its structuring, so authentic lived experiences can be shared and discussed. The teaching of criticality was also prominent, so young people can question what they see online. Restrictions from less liberal government bodies in some conservative countries, and religious stipulations could pose a threat to the development of a sex-education curriculum that is relevant to adolescents making their way through the complex online world.

It is important to bear in mind that although findings from the systematic review has evidenced clear correlations between young people's engagement with pornography and alterations to their sexual behaviour and attitudes, adolescent sexuality is incredibly complex and highly personal, and many study outcomes are multifactorial and rooted in contextual circumstances.

Nonetheless, given the known risks discussed, it would be difficult to be complacent about what young people are inescapably encountering online. The critical driver for positive change lies with courageous educational reform. It needs to shift towards a contextual reality and openly address, without judgement, both the emergent and embedded implications of online pornography to young people's health and well-being. As educators, we should strive to be our student's loudest and most steadfast cheerleaders. We should not be turning a blind eye to the complex and all encompassing issues that they are facing in the online space everyday, as our apathy and silence will only force internalisation and drive their behaviour and emotions underground. Educators and policy-makers should react with unconditional positive regard when constructing an effective, relevant and comprehensive sex-education curriculum from a harm-reducing standpoint that enables us to confidently guide, support and most importantly, empower adolescents so they can navigate the online world confidently, joyfully and most importantly, safely.

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9news.com.au	<p>Channel 9 News</p> <p>Accessed on 18th October, 2024</p> <p>Link to story: <i>Students at Queensland Christian college investigated over reported 'rape list'</i></p> <p>https://www.9news.com.au/national/mueller-college-brisbane-students-investigated-over-alleged-rape-list/48a95ae4-a02d-4cb4-b639-5d327785c4de</p>
bbc.co.uk	<p>BBC UK</p> <p>Accessed on 25th September, 2024</p> <p>Link to story: <i>Rise in school sexism down to phones, says union</i></p> <p>www.bbc.com/news/education-68731795</p>
nsw.com.au	<p>New South Wales government website detailing the Social Media Summit held in Australia in October, 2024.</p> <p>Link to webpage: Social Media Summit</p> <p>https://www.nsw.gov.au/nsw-government/social-media-summit</p>
pornhub.com	<p>PornHub</p> <p>Link to information:</p> <p>https://www.pornhub.com/insights/</p>
statista.com	<p>Statista</p> <p>Link to information: Most visited websites worldwide 2023</p> <p>https://www.statista.com/statistics/1201880/most-visited-websites-worldwide/</p>

Appendix

Table 1: Mobile phone ownership among children and how time is spent online (OfCom 2023)

Age	% mobile phone ownership	% that go online (using mobile phone or tablet)	% accessing online Video-Sharing Platforms (VSPs) E.g. YouTube	% playing games online	% sending messages or making voice or video calls	% accessing online social media apps e.g. Whatsapp, TikTok, Instagram, Facebook
3-4	27	84	92	18	48	23
5-7	26	96	93	34	59	30
8-11	61	98	96	67	82	63
12-15	96	100	98	76	98	93
15-17	99	100	97	72	98	97