

Sexual rights and sexual risks among youth online

A review of existing knowledge regarding children and young people's developing sexuality in relation to new media environments

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Preface

This research comprises a desk-based literature review. It was undertaken on behalf of the European NGO Alliance for Child Safety Online (eNACSO).

eNACSO is a European Children's Rights NGO network working on children's and young people's safety online, funded by the European Commission. The network was established in 2008 and currently has 28 members from across Europe (www.enacso.eu).

eNACSO is a unique network in that it brings together the views, experiences and voices of non-governmental/civil society organisations that have children's needs and rights at heart. Its mission is, in fact, based on the 1989 UN Convention on the Rights of the Child (UNCRC) and aims to promote and support actions at national, European and international level, to protect children and promote their rights in relation to new media.

Children and young people benefit enormously from access to the Internet and constitute one of the fastest-growing groups of internet users. However, there are many issues that need to be addressed in order to ensure their rights are respected even in the new media environment.

eNACSO monitors emerging trends of the digital world while identifying priority issues whenever serious violations of children's rights in this context are detected. Furthermore it develops analyses, and then uses the results to produce position papers and recommendations, as well as effective advocacy strategies at all policy levels to ensure that child protection and empowerment become a high priority on the overall political agenda.

Within this framework, a number of issues arise when we look at how young people may behave online in relation to sexuality. It has become quite clear that they use new media to explore, find information or, in a word, experience their sexuality. There is nothing odd or unusual about this, given the fact that young people and children are so intimately involved in the new media.

There are some potentially negative consequences that might be caused by behaviour based on a lack of experience and knowledge. There is an urgent need to ensure the safety of children and young people by providing them with the information and relevant tools they need to develop their own sexuality.

This study represents a first step in the investigation and identification of instances in which children and young people sexual rights are being violated in the new media environment with the aim of devising the most appropriate strategy to tackle it at policy level.

Executive summary

The review set out to examine the risks and opportunities that 10- to 17-year-olds face when seeking or encountering sexual information or experiences online. Following a detailed search of key databases and consultation with a range of experts, the review's findings can be summarised as follows.

Cross-cutting themes

- Much more research focuses on online risk rather than opportunities. Many study designs are cross-sectional and correlational, so cannot identify cause and effect. Most of the current quantitative research has been conducted in North America, followed by some European research, and some Australian research.
- There is a tension in the literature between those who argue that young people have rights to sexual expression and those who argue that children need to be protected from potentially harmful online behaviours. More research into age, consent and young people's experiences could help inform these debates.
- Risks are highly linked: adolescents who encounter one type of risk online are likely to encounter others too, both online and offline. Similarly, the more adolescents engage in sexual activities online, the more they engage in them offline, and vice versa.
- At-risk youth offline are also at risk online. Youth who are more at risk online tend to be older, have risk-taking tendencies, or have family or interpersonal difficulties such as poor relations with parents, low self-esteem, or poor body image. Being sexually active online and offline during adolescence is linked to negative outcomes, but overall it is unclear as to whether this only applies to at-risk subgroups, and the direction of this relationship is unclear.
- Age is an important factor in going online to access sexual content or experiences; older youth are more likely to access sexual content, engage with others, and take other risks online. Specifically, according to the literature, the 9-12 age range seems to mark an important stage in beginning riskier online behaviour.
- Many of the problems associated with children and young people's uses of information communication technologies (ICTs) for sexual purposes are linked to unequal gender dynamics, gendered pressures on sexual behaviour and low levels of knowledge or discussion of consent from peers, schools, parents and the media.

- Minority, vulnerable and at-risk youth need more attention from researchers, schools and parents. They are especially vulnerable to certain risks online and offline.

Sex education and information-seeking

- Online sources of information about sexual health are important to all youth, and especially to low-income, lesbian, gay, bisexual and transgender (LGBT) and homeless youth.
- The source and credibility of information seems to matter to youth, but it is unclear which online sources they are using, including to what extent they see pornography as a credible source of information about sex.
- More information is needed about what types of information about sexual matters youth want and seek online and offline.
- More information is needed about what roles parents, schools and web resources should play in informing youth, and if youth use or trust information from some sources more than others.

Pornography and sexually explicit internet material

- A notable proportion of children and young people are exposed to or access pornography online and offline, although exact estimates vary.
- There are gender differences in viewing pornography, its impact and attitudes towards it.
- Exposure to pornography appears to affect young people's sexual attitudes, expectations and beliefs, mainly adversely.
- Adolescents who view pornography, especially those who are more frequent viewers, experience an array of negative health and wellbeing outcomes, but the direction of the relationship between these factors is not clear.
- It is unclear what types of pornography adolescents are exposed to or seek access to, and whether this makes any difference to their attitudes and perceptions.

'Sexting' or sharing self-generated explicit images

- Girls face greater pressure to send 'sexts' and much harsher judgements when those images are shared beyond the intended recipient.
- Some studies report small percentages of young people sharing sexual messages, while others report higher percentages. Since studies have used differing definitions, it is unclear overall how many youth share sexual images.

- Older youth and those with risk-taking or sensation-seeking behaviours are more likely to engage with sexual messaging, but more information is needed regarding the demographics and other characteristics of these youth.
- There is a tension in the literature between youth rights to sexual expression and privacy and child protection. It is unclear how young people are thinking about consent, what they are being taught, and their understandings of consent in relation to 'sexting' and sharing pictures.

Grooming, trafficking and the commercial sexual exploitation of children

- Girls are more likely to be sexually solicited online and to report finding sexual solicitations disturbing. However, they are also more likely to show received sexual messages to an adult (to gain help or advice) than boys. Boys may also be at risk and may be under-represented in the literature due to under-reporting when they receive these types of messages.
- ICTs seem to make online grooming more efficient for groomers, although offline grooming and assault by a known offender poses an equal or possibly more significant threat.
- Youth who exhibit more vulnerability factors, such as lack of parental involvement, previous sexual abuse or more risk-taking behaviours, are less resilient in protecting themselves against online grooming.
- More research is needed on the rates of internet-facilitated commercial exploitation and trafficking, and the unique risk factors and vulnerabilities of the children and young people involved.
- More research is needed on whether online exploitation involves different methods and tactics depending on the age of the child, and whether different preventative strategies and social services are needed.

Recommendations

- *Recognising rights.* As children and young people turn to, and increasingly rely on, the internet as a means of actualising their rights to information, expression, experimentation (the right to play) and meeting others (the right to assembly), as instantiated in the UN Convention on the Rights of the Child (UNCRC; UN, 1989), it is vital to develop a holistic approach that prioritises and respects both children's opportunities as well as their protection from harm. This requires explicit attention to safety matters when developing new online opportunities and, conversely, explicit attention to children's positive rights (information, expression, participation) when developing new safety practices or resources.
- *Recognising voices.* Adolescents' voices and opinions need to be considered in these debates. Their preferences for sources and contexts of information and guidance should be identified, and they should be invited to comment on

research and to participate in boards and panels designing education programmes and policy interventions.

- *Better education.* Comprehensive sex and relationship education needs to be introduced early on in the school curricula – ideally from before young children begin to get interested in sexuality, and continuing through adolescence. Curricula should cover emotions, consent, sexual identity, dynamics of healthy (and unhealthy) relationships, sources of trustworthy information, critical media analysis tools and critical analysis of pornography, in addition to sexual and reproductive health issues. Further, rather than (or as well as) designing dedicated ICT-related or digital literacy sessions, the importance of the internet in exercising sexual rights and ensuring sexual protection would be better embedded in teaching and resources for sex and relationships education.
- *Supporting parents.* Schools and governments should offer more support and materials to parents to enable them to provide advice and guidance to children and young people on issues related to sex, relationships and sexualisation in commerce, the media and online. Parents especially need resources for talking to younger children in an age-appropriate manner. All these resources must be carefully tailored to children’s diverse needs, including those who are at risk or from a sexual, ethnic or other minority, avoiding inappropriate assumptions about ‘typical’ or ‘normal’ development.
- *Evidence-based policy.* Policy and practice should be soundly evidence-based, and further research is needed to develop and evaluate interventions and educational approaches, and to identify how best to support parents in supporting their children to develop healthy uses of ICTs and critical understandings of media. Research is also vital to keep up to date with changing opportunities and risks facing children and young people on- (and off-)line, and to capture these changes for the full diversity of children, including those who are at risk or from a sexual, ethnic or other minority.
- *Next steps.* This report concludes with a proposal for qualitative research with children and young people to consult them on their views.

Context and aims

The present research was commissioned to advance eNACSO's efforts to 'monitor emerging trends of the digital world in which children are fully-immersed and active participants.' The objectives of this specific review are to:

- Gather evidence from experts and stakeholders (academics, psychologists, social workers and NGOs) as well as from varied database searches.
- Examine recent evidence relevant to sexual rights and sexual risk of harm in relation to children and young people, their developing sexuality and their use of new media.
- Inform the design of focus groups to gather feedback on the results and recommendations from children and young people.
- Assess the effectiveness and adequacy of existing measures to help children realise their rights and avoid from being exposed to inappropriate risks.

The results of this review will be used to inform policy positions and recommendations, as well as effective advocacy strategies aimed at making sure that child protection and empowerment remain a high priority at the regional and global level.

The societal context of sexual development in a digital age

In what ways do children and young people develop their sexual identities? How does this social developmental process intersect with early sexual knowledge and sexual experience online, whether positive or negative? This review examines the literature ranging from the potentially positive opportunity of accessing sexual health information online to the extremely negative experiences of grooming and trafficking.

The questions guiding this research are grounded in the recognition that the period of adolescence is one of cognitive, emotional, social and physical development. The age span of adolescence appears to be spreading, with children both 'getting older younger', in the sense of their claiming agency, rights, consumer choices and even sexual interest at ever younger ages, and also 'staying younger longer' as the economic and educational transition to adulthood becomes extended.

Historians, sociologists and psychologists continue to debate whether and how childhood transitions to adulthood have changed over recent decades and further, which factors – including the advent of mass internet access – influence such transitions (Arnett, 2011; Coleman and Hagell, 2007; Cunningham, 2006).

All agree, however, that a host of complex changes occur during the overall process of development, from a child heavily dependent on his or her family to a young person able to live independently. These include factors relating to family, school, peers, culture, media and religion, among others. In short, sexual development is a complex and multifaceted process that varies greatly depending on individual circumstances and cultural context. Furthermore, there is a complex dynamic between individual sexual development, gendered family dynamics, gender polarisation in society and other mediating influences.

Yet in everyday life, despite the visibility of media, marketing and consumer representations of adolescent sexuality (even, some worry, childhood sexuality; see Bailey, 2011; Buckingham, 2009), it remains difficult for teachers, parents, child welfare bodies and policy-makers to acknowledge, address and provide for the sexual interests and rights of adolescents. The practical difficulties of sheer embarrassment regarding sexual matters and young people are part of the problem. Cultural and religious diversity in sexual norms within the adult population, which often encompass cultural practices concerned with when and how it is acceptable for young people to gain sexual knowledge and experience, compound the difficulty on a cultural (or national) level. Provision of information and guidance is difficult to deliver in a culturally nuanced manner, even if this were a consensually desired aim.

A further challenge is that the very process of addressing an issue seems to impose normative pressures on a developing child. For example, to offer information about sexual development or health before a child is sufficiently mature or ready to hear about it seems to set up the expectation that the child 'should' by now be interested, perhaps even to undermine their present state of innocence of sexual matters. Yet to leave the provision of such information 'too late' is to risk them obtaining information from inappropriate or misleading or exploitative sources, or to lack the information or awareness vital to guide their legitimate sexual exploration.

So while it is easy to say that children should be permitted the freedom to develop at their own pace, in their own way – in sexual matters as perhaps in others – this is difficult to manage in a culture replete with sexual representations, some of them age-inappropriate, some of them harmful. In other words, there are risks to freedom as well as benefits, as this review documents.

Moreover, since children are social beings, it is difficult to claim an autonomous maturational process of sexual development to a state of 'readiness' that occurs independently of cultural, family and peer influences, from birth onwards. Exactly when sexual knowledge becomes age-appropriate is thus a matter of culture as well as individuality, with controversies over when to tell children thus becoming entangled with what to tell them (i.e., over what is considered 'normal' in a culture and what is 'problematic' or 'abnormal').

The importance of how children develop into sexually mature and responsible adults can be seen in terms of child welfare and also child rights. The UNCRC (1989) specifies

that the child shall have the right to freedom of expression (Article 13), including in any medium of the child's choice. It also states that 'in all actions concerning children ... the best interests of the child shall be a primary consideration' (Article 3), and that these should be judged 'in a manner consistent with the evolving capacities of the child' (Article 5). The Convention does not specify that the right to expression includes sexual expression, according to the child's evolving capacity, although there is no reason to exclude this. How it can be supported as a right, however, is far from straightforward in practice (Gillespie, 2013).

It is not our intention here to engage in culturally relativist speculation. We are clear that very young children need know little about sexual matters and that, when told something, their reaction tends to be one of disgust or turning away. We are equally clear that by the late teenage years, the window for wise guidance and helpful information provision from family, school or community is closing, with many young people having taken on the responsibility for discovering what they wish to know and experience.

For this reason, our report focuses on the years from 10 to 17, this being the period during which most children gain sexual knowledge and experience of varying kinds and to varying degrees. The age of sexual consent varies by country (see the figure below), but in most of Europe it varies from 14 to 16 years old. Laws and regulation regarding images of sexual activity on the internet vary also by country, with explicit sexual images of children generally being regulated by child pornography legislation for those depicted who are below the age of 18 (Gillespie, 2013).

Our present questions centre on whether and how widespread access to the internet and digital technologies makes a difference, for better or for worse, and whether some kind of intervention in or mediation of the internet is specifically needed. If the question of children's sexual rights is contested in practice (and in some contexts, also in principle), so, too, is the question of children's digital rights – or their right to expression in a digital and online environment. Both offline and online, what's at stake are the considerable risks of harm to children from the sexual activities, representations (many of them highly stereotyped) and sometimes-exploitative, coercive or abusive intentions of others.

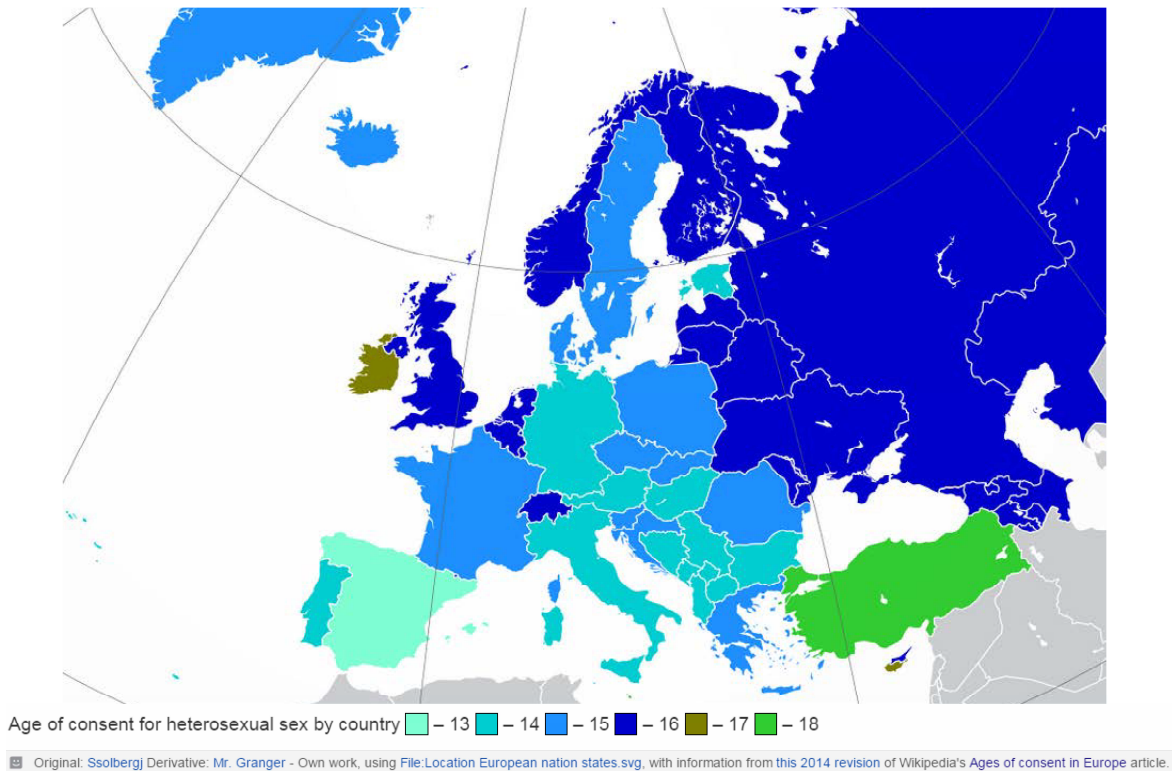


Figure: Age of consent across Europe

In short, while the importance of supporting children’s sexual development is widely endorsed, few institutions take active steps to ensure this, for the most part leaving it to parents. By contrast, the importance of protecting children from sexual harm is not only widely endorsed but also implemented by a range of social structures and regulations. While the persistence of sexual abuse of children means that it can hardly be claimed that such structures and regulations are entirely successful, the challenges they face have become newly visible in the digital age. On the internet, child protection from sexual harm – from adults, from child peers, from the wider culture – is proving particularly contentious (Livingstone, 2011). There are several reasons for this:

- The internet is new, complex, fast-changing and relatively little understood by parents, teachers and others responsible for supporting children.
- The internet is relatively (although not entirely) unregulated in terms of child protection, and under-developed in terms of provision for children’s rights.
- This, in turn, is partly because it is difficult, if not impossible, to determine which internet users are children, and partly because the business models developing online are mainly not customised to address children’s needs.
- Also important for our present purposes is the difficulty in drawing the line between online opportunities (for information, expression and exploration)

and online risk of harm (in terms of sexual misinformation, coercion and exploitation).

The implications of this last point will be seen throughout the literature review that follows. While some online sexual content can, of course, be described as clearly beneficial and other content is clearly harmful, many kinds of online experience lie somewhere in between, and the consequences depend on the particular interaction between a child, and both online and offline contexts (Livingstone and Helsper, 2010).

Research questions

It is with these considerations in mind that we frame the present report in terms of children's sexual rights versus the risk of sexual harm to children. But as will be seen, nearly all the research identified for this literature review concerns the risk of harm rather than information or expression rights, with the exception of the research literature on sex education in schools.

In what follows, we review the available research literature, weighed in terms of its relevance to the following questions:

- How do young people develop their sexual identities in the digital age?
- What do we know about the opportunities, risks and consequences of seeking or encountering sexual content or experiences online?
 - How and why do 10- to 17-year-olds search for sexual content online?
 - How and why do they take risky sexual opportunities online?
 - How and why do they encounter risk of sexual harm online?
- Which vulnerability/resilience factors shape who is at risk? For instance, what specific issues arise in relation to minority, vulnerable and at-risk youth in relation to their online sexual experiences?
- How are young people's practices related to the exercise of their rights to sexual information and expression and to protection?
- What are the implications of these findings? What tools or policies may be needed?

Methodology

Study design

This research was commissioned with a three-month timeline in mind, and the purpose of reviewing as much literature in that period as possible. The goal was to collect recent literature from a diverse group of stakeholders and experts in the subjects at hand, as well as varied database searches. Then all evidence collected was reviewed and weighed against inclusion and exclusion criteria in different phases.

Identifying the literature

Through 27 unique database searches we targeted literature relevant to 10- to 17-year-olds that addressed the following topics:

- General risks and opportunities with sexual experiences online.
- Accessing sex education and sexual health information.
- Access or exposure to pornography and sexually explicit content.
- ‘Sexting’ or sharing self-generated explicit images.
- Online grooming, trafficking and the commercial sexual exploitation of children.

First we set basic criteria we could use to determine which literature was to be included or excluded. This meant research was only included and reviewed if it fit within the following parameters:

- Research published in the last decade (2005-15).
- Available in the English language.
- Any research methodology.
- Studies focused on children aged 10 to 17. In cases where the research included participants both within and beyond this age range, a study was included only if there were more ages within than outside these lower and upper limits. For example, a study of 17- to 24-year-olds would be excluded, but a study of 14- to 20-year-olds would be included.

We worked with eNACSO to identify a list of stakeholders across multiple fields that could be contacted to suggest literature (see Appendix 2). We emailed these experts with a purposefully general request for research focused on children, sexuality and ICTs, and reached out with the same request through online networks including the EU Kids Online Facebook Group and listserv (see Appendix 3).

We used the initial literature suggestions we received from the 'expert list' as one tool to help us develop a list of search terms to identify further research. We also used a 'risks and opportunities' framework to help us think through the overlap between adolescent sexuality and ICT use, meaning we identified clear risks and opportunities, as well as 'risky opportunities' that children could experience when interacting with or using ICTs for sexual purposes (Livingstone, 2008). These search terms were designed to gain access to a wider scope of literature and to make sure that the literature selected for inclusion was not biased by the network of experts selected for input.

We developed specific guidelines for conducting the searches as well as a list of 27 search terms (see Appendix 4). Academic databases were selected based on recommendations from the London School of Economics' librarian for Media and Communications. From a list of 12 possible databases we selected four that had the greatest scope yet least overlap with one another in terms of content (see Appendix 5). Where possible the searches were set to include only articles from 2005-15 and were sorted by relevance. From there we selected the first 20 results from each set of search terms, in each database.

Focusing the results

Once these searches were conducted, we ended up with 2,098 results (not all searches produced 20 or more results), as well as over 200 expert suggestions. At this stage, the titles, abstracts, executive summaries and other basic information were compared against the inclusion criteria and for topical fit. Research that passed this stage was imported into EndNote. After using EndNote to delete any duplicates, we were left with 383 articles and books to review.

Full text versions of these 383 articles and books fitting the inclusion criteria were then obtained for review. These were then read and considered for inclusion against the above criteria. Ultimately 150 of these articles were critically reviewed and included in the findings. A number of additional texts were also read to frame, theorise and contextualise child and adolescent development.

Limitations of the literature

This review set out to examine both the risks and opportunities online youth face when seeking or encountering sexual content or experiences online. What is clear from the evidence is that current research largely focuses on the risks. This is not surprising given that the public and policy-makers show considerable interest in understanding and managing the risks. In terms of popular perception, these risks seem threatening and ever changing given the nature and applications of new ICTs.

Still, there is some critical concern that such popular perceptions are skewing the research agenda, and there remains insufficient attention to the opportunities to exercise sexual rights online, on the one hand, and on following through from evidence

of risk to evidence of actual harm, on the other (Baumgartner et al., 2010b; O'Sullivan, 2014; Slavtcheva-Petkova et al., 2015).

As is common in this field, most of the research has been conducted in the US, with some known about European children (and even less about the rest of the world). In terms of methodology, much research is cross-sectional – in other words, it is informative about a particular point in time, usually through a survey or qualitative interviews. But this makes it difficult to examine cause-and-effect claims about either benefits or harms as they play out over time, within a child's life and/or within a culture. For this, more longitudinal research designs are required – and indeed, highly desirable.

Consulting children and young people

Much of the research discussed below relies on surveys or interviews with children and young people. Thus their voices are well represented in the research literature. However, this report is centrally focused on a research and policy dilemma, namely, how to navigate the fine – and sometimes blurred – line between children's right to information and participation in sexual matters online and their right to be protected from sexual exploitation, misinformation or other harms. On this matter, which is crucial to the formation of evidence-based policy, children and young people have rarely been consulted. Some researchers argue that recent reports on youth and sexuality advance the voices of adults at the expense of young people's rights to self-expression and sexual expression (e.g., Bragg, 2012). In Appendix 5, therefore, we propose the basis for a methodology to consult children across Europe, as part of the policy process that we hope will follow the publication of this report.

Findings – cross-cutting themes

Offline versus online risk

As is now widely recognised, online and offline domains are increasingly connected, with the frequency and intensity of connections between them growing, to the point where many young people make little distinction between the two. It is not surprising, therefore, that research is revealing significant links between young people's online and offline experiences.

Particularly relevant here is the growing evidence showing that adolescents who encounter one type of risk online are likely to encounter others too, online and offline. Similarly, the more adolescents engage in sexual activities online, the more they engage in them offline, and vice versa (Ševčíková and Konecny, 2011; Sorbring et al., 2014).

Some indicators of offline vulnerability have been shown to have implications online. Adolescents who are more at risk online tend to be older, have risk-taking tendencies, or have family or interpersonal difficulties such as poor relations with parents, low self-esteem or poor body image (Baam et al., 2013; Doornwaard et al., 2014a; Livingstone and Görzig, 2014; Livingstone and Helsper, 2010; Sorbring et al., 2014; Vandoninck et al., 2012; Wells and Mitchell, 2008; Wolak et al., 2007).

Research also indicates that being sexually active online and offline during adolescence is linked to negative outcomes, but overall it is unclear as to whether this only applies to at-risk subgroups. Furthermore, the direction of this relationship is unclear; there is a link between being sexually active online and negative feelings or reduced wellbeing, but it is not certain whether being sexually active online results in lower feelings of welfare, or if these feelings lead to using ICTs for sexual purposes (Sorbring et al., 2014).

Child's age

Across much of the research reviewed for this report, the child's age emerges as an important factor, with older teenagers more likely to access sexual content, engage with others and take other risks online (Doornwaard et al., 2014a; Sorbring et al., 2014, Flander et al., 2009). This means that more research is needed to examine the risk of harm by age. As children get older, it must be remembered that the risky behaviours may nonetheless be developmentally appropriate. Indeed, it is a vital dimension of gaining independence, competence and resilience that teenagers should take risks, explore their environment and learn to cope with the challenges they meet (Schoon, 2006).

Insofar as older teenagers experience less harm or report being less upset by online sexual experiences or information-seeking, as some research indicates, this could indicate which activities may be more developmentally appropriate and which age

ranges should be targeted for education and other interventions. Specifically, according to the literature, the 9-to 12-year-old age range seems to mark an important stage in beginning riskier internet behaviour, so educational initiatives should target youth as or before they reach this age group (Dowell et al., 2009; Livingstone et al., 2014).

Gender

Across various ICT uses, girls and boys are faced with performing highly gendered roles. Girls face the difficult task of negotiating the line between performing the hyper-feminine sexuality that is often seen in the media, and stepping outside what is 'proper' behaviour for a girl. Boys are pressured to perform an emotionless, detached, and often aggressive masculinity. Research by de Ridder and van Bauwel (2013) argues that some discourses on SNSs challenge gender norms, but many are reinforcing heteronormativity and highly gendered behaviours. Much of the research indicated that highly gendered ideals are being reinforced in new media environments.

More research is beginning to look at critical approaches to masculinity and how such approaches can influence violence and sexual exploitation prevention education (e.g., Albury et al., 2011; Altamura, 2013). Representation of masculinity in sexually explicit content is considered especially problematic. Some, but not all, young people recognise that porn and other sexualised and explicit media create unrealistic physical standards and often impose double standards towards boys and girls' behaviour.

Much of the literature focuses on the unfair pressures put on girls, and there are some hints in the literature that boys feel 'performance anxiety' from media and pornography, but there is little research on whether there is pressure on boys to watch pornography, collect pictures of girls or perform other acts associated with masculinity. For example, Ringrose (2010) looked at how 14- to 16-year old young women have to navigate the 'pornification' present on online social networks, by portraying themselves in a more sexualised and commodified way online in their Bebo profiles. There is little research that examines whether or how boys feel pressure to portray hyper-masculine appearances or sexual prowess online, although there is some research on 'sexting' that shows boys feel pressure to perform masculinity by displaying pictures of women or girls.

Among interviews with 125 10- to 12-year olds, Renold (2013) found that all children, but especially girls, felt pressured to conform to gender norms. Ringrose and Barajas (2011) found that girls were operating in an environment where hyper-sexual femininity is normative, and where girls' behaviour is policed and regulated by using the words 'slut' and 'slag'. Tiggemann and Slater (2013) found that more time spent online might lead to more pressure on girls; in a study of girls in the first two years of high school (approximately ages 14-16), they found that the amount of time spent online was significantly associated with internalisation of 'the thin ideal' body type, body surveillance and drive for thinness. Overall, Facebook users (75 per cent of the sample) scored higher on body concern measures. The literature seems to suggest that

new media is reinforcing and even amplifying some of the worst gendered aspects of old media.

Young children are absorbing gendered identities and behaviours early on. In a qualitative study of young children (US grades 1–6), Gillander Gadin (2012) found that the construction of masculinity, femininity and sexual behaviours starts earlier than puberty as children begin negotiating the practices they see as related to gender identity development, such as sexual harassment. Girls in grade 5 had received pornographic pictures and been harassed in other ways. Other older girls had also been in contact with boys on the internet who asked to have sex with them, and had experienced physical sexual harassment with boys pawing them between their legs. Some girls reported that when they complained, they often received the answer that the boy was just doing it because he liked her.

In a systematic review of research on online sexual abuse, violence and grooming aimed at children under 18, Ainsaar and Loof (2010, p. 96) concluded that about half of European adolescents had been subjected to sexual harassment or solicitation online. According to this report, many young people had more than one experience of harassment, and online sexual abuse affected girls two to four times as much as boys, which is similar to rates of offline sexual abuse.

Fears of girls' overly sexualised behaviour may be blown out of proportion and represent the conservative fears of adults that are rooted in gendered and heteronormative thinking that seeks to protect mostly white, heterosexual and middle class girls (Egan, 2013, Duits and van Zoonen, 2011; Gill, 2012, Hawkes and Dune, 2013; Thompson, 2010). Parents may also be compelled to accept class-based standards for what is acceptable sexual behaviour for girls, leading to judgements on working-class women and girls that are similar to discourses that hold women responsible for violence committed against them by men (Bragg and Buckingham, 2013). At the same time, it is evident from the literature that young people are learning gender performance from sexually explicit media, and feel pressure to conform to new pornographic norms. Young women may be limiting their aspirations for higher education and other career goals; by observing such pervasive sexualisation of women young girls are learning that being feminine, sexy, and attractive are more important. (Coy, 2009). Education has a key role to play in correcting this by challenging stereotyped or oppressive gender portrayals from an early age, and focusing on gender equality and critical media skills.

Consent

Across all of the literature in this review, but especially in the literature on 'sexting', the issue of consent is a recurring theme. The issue of sending self-generated explicit images or images taken by an intimate partner brings consent under a microscope, especially for teens who may willingly share images, but in many countries are not deemed legally able to give consent (Albury and Crawford, 2012). Much of the literature contends that 'sexting' can involve a lot of pressure and coercion for girls

(e.g., Ringrose et al., 2012). Furthermore, it can be devastating for young women (and sometimes young men) when these pictures are shared without consent beyond the intended recipient.

Powell (2010) argues that young people today operate in different environments when it comes to navigating relationships, and the boundaries between consensual and coerced sex are blurry. Even though women are more empowered to seek sexual pleasure, rates of sexual violence against women remain high. According to Powell (2010, over 90 per cent of victims are female and 99 per cent of perpetrators are male. This suggests that young women are still disadvantaged in interpersonal relationships and seen as sexual objects. Furthermore, young women are often taught that they are to blame for failing to better negotiate relationships after an assault has taken place.

There is little research that elucidates young people's attitudes towards the understanding of consent. Furthermore, there is evidence that sexual harassment towards girls is starting at young ages, and that pornography and other sexualised media are reinforcing ideas of women as sex objects and men as dominant (Gillander Gadin, 2012; NSPCC, 2011).

With many confusing messages about sex so readily available from media sources, it is more important than ever to engage young people in conversations about consent (Kearney, 2011). Many researchers argue that educational programmes need to counteract ideas that devalue female sexuality, and young people should be educated about the responsibility of obtaining enthusiastic consent, where both parties express mutual pleasure, not a form of consent where women are required to make their refusal or displeasure loudly heard (Powell, 2010).

Minority, at-risk and other vulnerable youth

Boyd (2014, p. 123) states that 'the risks that youth face online are not evenly distributed. Teens who are most at risk online are often struggling everywhere.' The literature in this review echoes this sentiment – young people who are more vulnerable to risk are vulnerable both online and offline. Young people who have already been victimised or who experience psychological distress may be more vulnerable to future victimisation (Cuevas et al., 2010, Noll et al., 2009). More research is needed to explore the intersection of ICTs and the lives of vulnerable youth, but the literature in this review does suggest that those who are at greater risk of harmful online sexual experiences are youth who are part of a sexual minority, vulnerable due to past abuse or difficult family circumstances, or otherwise at risk due to disability, discrimination, poverty, homelessness or other difficult personal circumstances.

Mitchell, Ybarra and Korchmaros (2014a), using data from the Teen Health and Technology online survey of 5,907 13- to 18-year-old US internet users, found that LGBT youth reported the highest levels of sexual harassment online: 81 per cent of transgender youth, 72 per cent of lesbian/queer girls, 66 per cent of bisexual girls and 66 per cent of gay/queer boys reported sexual harassment. They also found that sexual

harassment was most frequently perpetrated in person and then followed by online harassment. Many of these youth were so bothered by this harassment that they reported distress in the form of interference with school, family or friends. LGBT teens overall face high risks of being targeted by online solicitations and sexual requests (Svedin and Priebe, 2009).

This is especially problematic given that evidence suggests LGBT youth and other at-risk youth (such as homeless or runaway youth) are highly reliant on the internet for accessing sexual health information that is not available to them elsewhere (Barman-Adhikari and Rice, 2011; Brown and L'Engle, 2010; Rice et al., 2010).

There is very little research on young people living with disabilities or special needs and their online interactions. Research by Wells and Mitchell (2014) indicates that young people receiving special education were more likely to report online interpersonal victimization and their online risk needs deeper assessment. This is especially important since some research does indicate that young people living with a disability are exposed to more sexual abuse offline. Again, this is highly problematic if these patterns of abuse are reproducing online, because online interactions may be preferred by disabled youth since technology allows easier interactions for those with certain disability types (Ainsaar and Loof, 2010).

Past research also shows pubertal timing is linked to engaging in online sexual activities for boys, and this may also be the case for girls, since early pubertal timing has been linked to early sexual activities for girls in offline settings (Sorbring et al., 2014; Skoog et al., 2013; Stattin et al., 2011). However, youth who experience early pubertal timing may start engaging in sexual experiences, both online and offline, before having received any sex education or support, putting them at high risk of engaging in unsafe behaviours – and more vulnerable to exploitative or misleading media messages (Brown et al., 2005).

Since online and offline risks are closely interrelated, it seems that greater support needs to be offered for those young people who are at risk offline due to their minority or at-risk status, and further research must be used to advance our knowledge about the uses of ICTs among these subgroups (Smith, 2014; Livingstone and Brake, 2010).

Information rights vs. child protection

While writing this review, the authors attended an event where the Internet Watch Foundation released a study on 'youth-produced sexual content' that detailed online explicit video images of children as young as seven (Internet Watch Foundation, 2015). Many of the experts in areas of online child safety and child protection felt strongly that the term 'youth-produced' was highly inappropriate as it ascribed agency to children who are unable to give consent and had likely been coerced or manipulated into sharing these images (Mason, 2015). At the same time, literature in this review has argued that young people have rights to sexual expression online and may find 'sexting'

pleasurable, while others have reported that it is often coercive (Ringrose et al., 2013; Ringrose and Harvey, 2015; Simpson, 2013).

This same tension between child protection and children's sexual and information rights is present in the literature on pornography – some of the literature posits that the harms to young people from pornography are great, while others argue that accessing pornography is starting to become a normal behaviour, and that young people are equipped to deal with interpreting pornographic content (Löfgren-Mårteson and Månsson, 2010; Sabina et al., 2008). Obviously a young person's age and other contextual factors matter a great deal in these debates; nonetheless, there is a significant tension between those who advocate for child protection and those who advocate for young people's information and expression rights. Child Rights International Network (CRIN, 2014) argues that many internet filters aimed at protecting children, including those implanted in the UK, are overly broad and get the balance wrong in favouring children's protection over children's rights to information. These filters can block sex education, politics and advocacy sites, and may ultimately prevent children from engaging with adults on these topics and forming their own opinions or resilience to problematic content.

This tension in the literature will continue to be present and difficult to resolve until we know more about young people and the previous three themes: gender, consent, and minority/vulnerable/at-risk youth. Until there are more equal gender dynamics, until young people demonstrate solid and positive understandings of consent, and more is understood about the unique factors of the most at-risk young people, it will be impossible to fully weigh the merits of a rights-based argument.

Findings – by topic

The main body of this report explores the literature according to four topics:

- Sex education and information-seeking online.
- Pornography and sexually explicit content.
- ‘Sexting’ or sharing self-generated explicit images.
- Online grooming, trafficking and the commercial sexual exploitation of children.

At the start of each section, the main findings from the reviewed literature are categorised in terms of the strength of the evidence base for a claimed finding:

- *Strong evidence* indicates that much of the literature supported a similar finding.
- *Moderate evidence* means that there was some support in the literature, but there may have also been contradictory literature, or only a few articles supporting the finding.
- *Need to know more* indicates findings for which there was only one study supporting the finding, no research at all, or there was a significant tension between opposing views in the literature.

A. Sex education and information-seeking online

Strong evidence	1. Online sources of information about sexual health are important to all youth, but especially low-income, LGBT and homeless youth.
Moderate evidence	2. The source and credibility of information seems to matter to youth, but it is unclear which online sources they are using, how they judge credibility, and whether or not they see pornography as a credible source of information about sex.
Need to know more	3. What types of information youth want and seek about sex, health and relationships. 4. What role parents, schools and web resources should play in informing youth, and if they use or trust information from some sources more than others

1. Online sources of information about sexual health are important to all youth, but especially low-income, LGBT and homeless youth.

A majority of youth use the web for accessing health information (Buhi et al., 2009; Santor et al., 2007; Zhao, 2009). There is evidence that youth search for sexual health information more than any other type of health information (Buhi et al., 2009). Older studies have found that adolescents use the internet to find sexual health information, discuss problems and share advice among peers (Hansen et al., 2003; Kanuga and Rosenfeld, 2004; Levine et al., 2008). A more recent study found that although 88 per cent of teens studied were not comfortable sharing health concerns on social networking sites (SNSs), 84 per cent reported using the internet to access health information (Wartella et al., 2015). Another study supported these findings, concluding that young people are open to accessing sexual health information on SNSs, especially if it is entertaining or humorous while still being informative, but they do not want to risk their bullying or stigma in their social networks due to viewing such content (Byron et al., 2013). More research is demonstrating that young people learn about sexuality from many sources, including media, and that they seek out more entertaining forms of information (McKee, 2012). While peers remain a popular source of information and misinformation, internet sources now offer youth an instant and seemingly private means by which they can access information on sexual health, sexual pleasure and communicating with sexual partners (Brown et al. 2009).

Zhao (2009) conducted a US study that compared the health information-seeking habits of youth from high education families versus youth from low education parents. The findings show that while youth from high education parents have easier access to the internet and means of getting online, youth whose parents have lower levels of education have higher engagement in online health information-seeking. The results also showed that children of parents who do not use the internet at all are more likely to seek online health information than children of parents who do use the internet. Interestingly, a study in Ghana confirmed these findings, despite the two differing country contexts (Borzekowski et al., 2006). In Ghana, out-of-school adolescents had much less access to the internet, but the internet was a relatively more important source of information for sexual health information for out-of school than for in-school youth. This evidence strongly suggests that the internet is a vital source of health information for less advantaged youth.

Ralph et al. (2011) looked at use of the internet among a diverse sample of teens living in low-income communities across California, and findings confirmed that teens seek information about their personal health online, and find that there are unique advantages to using the internet to find health-related information, including its convenience and feelings of privacy and anonymity. Four out of ten teens surveyed had looked for sexual health information online. One in five had used the internet to search for a clinic to access sexual health services.

In another US study, Barman-Adhikari and Rice (2011) found that runaway and homeless youth were often reluctant to seek help from traditional health providers, and

the internet could be very useful in engaging this population and in meeting their needs for sexual health information, including information about HIV and other sexually transmitted infections (STIs). The female and gay male participants most frequently sought sexual health information online. Results also showed that among runaway and homeless youth, continued connection with parents via the internet was significantly associated with youth seeking HIV or STI information, and that more youth who were sent health information online also reported seeking HIV information and HIV-testing information. In other words, among homeless youth there were factors that indicated greater resiliency for some than others, such as maintaining family connections.

Given that homeless youth use the internet to access health and sexual health information and to stay in touch with family, it is imperative that internet access and high-quality information is made available for them, as they often rely on public libraries and youth services agencies to gain access to the internet and to search for sexual health information. The internet should also be seen as a key tool for social workers and other service providers to use in disseminating health information.

LGBT youth (who may also have higher rates of homelessness) more likely have a greater reliance on seeking sexual health information from online resources, possibly due to a lack of available information for them elsewhere. Mitchell et al. (2014b) showed that sexual minority youth were more likely to seek out information about sexual health online in comparison to heterosexual youth, often because of curiosity, privacy and having no one else to ask.

Sexual minority youth report that websites provide much-needed advice and support, help them feel less isolated, and help them cope with the stress and stigma of their orientation (Mustanski et al., 2011). Some research has looked specifically at young men who have sex with men, and found that these youth get little support or education from school and family, and thus learn mostly from internet pornography and sexual experiences (Mutchler, 2005).

There is little research on under-18 LGBT youth and their sexual health information-seeking, but a study of 18- to 24-year-old men (in Los Angeles) who have sex with men found that during their first sexual encounter, they had extremely limited information about HIV and STIs, and some perceived sex acts such as unprotected sex as 'low risk' (Kubicek et al., 2010). Many of the young men in this study reported that they learned about anal sex during their sexual debut, and many described painful, unpleasant experiences. The main sources of information for these men were older, experienced partners, the internet and online pornography.

Magee et al. (2012) conducted research among a diverse sample of LGBT young people and found that they widely used the internet to seek sexual health information, especially about STIs and HIV. The LGBT young people in the study sought sexual health information mostly because of immediate personal relevance (i.e., having symptoms of an infection or a pressing need for information) or for school research. Still many of these young people also reported not using the internet due to a fear of

stigma, lack of personal relevancy, disinterest or mistrust of online information. Males in this study reported greater internet use for HIV and STI testing and treatment information. Females or those identifying as female-to-male transgender saw sexual health information as less relevant to their lives. Hispanic and Latino participants also expressed a less pressing need to know sexual health information, and black participants expressed greater fears of the stigma attached to searching for LGBT sexual health information.

The internet is an important tool for youth seeking sexual information. For some, it may be the only source they feel they can comfortably access, which makes it even more imperative that they are steered towards credible resources and imbued with critical thinking skills. This is especially important because, as later research indicates, pornography plays a key role in shaping ideas about sex.

2. The source and credibility of information seems to matter to youth, but it is unclear which online sources they are using, how they judge credibility, and whether or not they see pornography as a credible source of information about sex.

In some of the research on the online resources that youth use for sexual health information, they point to search engines, but not the end sources. For example, participants (16- to 17-year-olds) in focus groups in Australia reported that Google and YouTube are top sources for sexual health information (Evers et al., 2013). They also reported that there is a lot of misinformation online, that the credibility of sites they visit is important to them, and they identified university and government seals or domain names (.gov or .edu) as ways that sites could identify themselves as credible sources. Other research has confirmed the importance of domain names as well as heuristics and visual elements in determining credibility, such as spelling errors, bibliographies and interactive features (Gasser et al., 2012).

In another set of focus groups involving 29 adolescents, the participants identified that they prefer sexual health education resources that are accessible, trustworthy, safe and immediate (Selkie et al., 2011). Overall the participants were enthusiastic regarding technology for enhancing sexual health education, and also reported that they use internet search engines to find answers to sexual health questions – specifically, Google. The participants emphasised that when searching for sexual information they trust websites that appear credible because they are related to other health topics, and a frequently cited ‘trusted’ website was WebMD. However, some participants acknowledged that it was very difficult to tell whether information on some websites was accurate. According to Flanagin and Metzger (2010), children take seriously the issue of credibility and the potential negative consequences of false information found online, yet demonstrate over-confidence in their own ability to discern good information from bad.

In a study of a website designed to disseminate sexual health information, Talk with Tiff, the findings showed that adolescents are concerned about confidentiality, lack

knowledge about sexual health and hold many misconceptions (Buzi et al., 2013). It also found that many teenagers do not know where to go for help without parental consent or knowledge, and that teenagers need access to comprehensive sexual health information online in a space where they can ask additional questions.

Overall, these studies indicate that youth are seeking information online, but there is little information on which sites they use beyond the search engines. More research could also indicate exactly how youth decide what information is credible and what it is misinformation. Future research should also assess what educational information youth seek from pornography, and how they judge whether or not that information is credible.

3. What types of information youth want and seek about sex, health and relationships.

There is very little literature that specifically questions youth as to what types of information they want and in what formats. McCarthy et al. (2012) conducted interviews and focus groups with young people in the UK to establish their sexual health priorities and the features of a sexual health website that would attract and engage them. Overall the young people reported wanting straightforward information on sexual pleasure, STIs and pregnancy, how to communicate with partners, how to develop skills in giving pleasure, and emotions involved in sex and relationships. They also wanted social interaction with other young people online, and to see themselves reflected in some way, such as through images or videos.

It is important to have more research on what youth want to know about sex, sexual development and sexual health. Such research must form the foundation for online services and for educational programmes. The above research suggests that students want information beyond what are known as 'comprehensive sex education programmes' that focus on public health aspects, such as contraception and STIs (Ketting and Winkelmann, 2013). Much of the literature included in this review suggests a more comprehensive 'rights-based approach' to sex and relationship education that includes health information, but also discusses sexuality as 'a positive human potential' and includes information on healthy relationships, gender equality and pleasure (Ketting and Winkelmann, 2013, p. 251). Youth should play a key role in helping to decide what types of information are included in sexual education materials, both online and offline.

4. What role parents, schools and web resources should play in informing youth, and if they use or trust information from some sources more than others.

The literature on seeking sexual health information online largely ignores the roles of parents and schools. It is thus unclear what role parents, schools and teachers should be playing in helping to direct young people to appropriate sources of information.

A study of parents' attitudes towards discussing sex with their children suggests that parents believed it was very important to talk to their children about sex, but many had not done so (Wilson et al., 2010). Many thought their children were too young or felt ill equipped on how to talk to their children about the subject. Overall, parents found it easiest to talk to children about sex if they had a good parent-child relationship and had begun having the discussions when their children were very young.

Youth are clearly using the internet for information about sex. Parents and teachers could have a role in guiding them to the right types of information, but research is needed to make sure that youth, especially older teens, do not reject information because it is coming from a parent or other authority figure. Furthermore, this research suggests that children are better off when parents begin discussing sex with them at an earlier age, and this is possibly because it is before children encounter risks, or perhaps it is because they are at an age when their parents have more influence and their peers less. Outcomes from across Europe (i.e., lower teen pregnancy rates) indicate that children are better off when they receive holistic sex education at younger ages (Ketting and Winkelmann, 2013). More research could help determine what resources are helpful to parents in talking to their children, and in which age ranges sex education should begin.

B. Pornography and sexually explicit content

Strong evidence	<ol style="list-style-type: none"> 1. Many children and young people are exposed to or access pornography. 2. There are gender differences in viewing pornography, its impact and attitudes towards it. 3. Exposure to pornography impacts youth's sexual attitudes, expectations and beliefs.
Moderate evidence	<ol style="list-style-type: none"> 4. Adolescents who view pornography and who are more frequent viewers also experience an array of negative health and wellbeing outcomes, but the direction of the relationship between these factors is not clear.
Need to know more	<ol style="list-style-type: none"> 5. It is unclear what types of pornography youth are exposed to or seek access to, and whether this makes any difference in their attitudes and perceptions.

1. Many children and young people are exposed to or access pornography.

The studies included in this review report vastly differing levels of exposure or access to porn. This can partly be attributed to the different age ranges included in each study

and whether the study sought to examine pornography exposure or access over a short period of time (i.e., the last 12 months) or throughout adolescence. Variations in rates of exposure and access may also be caused by differing definitions of pornography and sexually explicit internet materials (SEIM) or the differing country contexts. For example, in the findings from EU Kids Online, the greatest exposure to sexual images online was among children in Northern European countries (Norway, Denmark, Sweden, the Netherlands and Finland) and Eastern European countries (the Czech Republic, Lithuania, Estonia and Slovenia) (Livingstone et al., 2011).

In the US, a survey of university students indicated that 73 per cent reported having seen online pornography before the age of 18 (93 per cent of boys, 62 per cent of girls) and that most exposure begins at ages 14 to 17 (Sabina et al., 2008). In another US study, of a nationally representative sample of 1,500 internet users aged 10-17, 42 per cent of youth internet users had been exposed to online pornography within the last year, and 66 per cent of those reported only unwanted exposure (Wolak et al., 2007). Another US study of high school-age students (around 13-18 years of age) found that two-thirds of males and more than one-third of females had seen at least one form of sexually explicit media in the past year (Brown and L'Engle, 2009). In the UK, Livingstone and Bober (2005) found that more than half of 9- to 19-year-olds who are daily and weekly internet users have seen porn online, and most is viewed unintentionally. A study of Taiwanese adolescents found that 38 per cent had some exposure to online pornography (Livingstone et al., 2005).

Wolak et al. (2007) found that, at the time, unwanted exposure was related to one main internet activity: file sharing. However, uses of the web and SNSs have dramatically changed since this study was conducted, as has the amount of time youth spend online. The authors also found that filtering and blocking software reduced the risk of unwanted exposure, as did attending an internet safety presentation by law enforcement personnel.

There is not always a clear distinction between seeking pornography and accidental exposure in the literature. In one study, only 8 per cent of 10- to 17-year-old children reported intentional online searching for pornography in the previous year (Ybarra and Mitchell, 2005). Ybarra et al. (2009) make the distinction that exposure may be unwanted, but not always involuntary in the case where youth were expecting to see one type of image or video (i.e., nudity) and instead saw something else (i.e., 'hardcore' pornography). The proportion of youth internet users reporting unwanted exposure to pornography increased between 2000 and 2005, but this had then declined by 2010 (Jones et al., 2012). A rapid evidence assessment on the effects and access of porn concluded that inadvertent exposure to pornography (or viewing it unintentionally as opposed to searching for it) was more likely than deliberate access (Horvath et al., 2013).

2. There are gender differences in viewing pornography, its impact and attitudes towards it.

Children and young people are more likely to be upset by pornography if they are younger, if they are girls, and if the pornography does not fit within their preconceived ideas of sex. Boys are more likely to be exposed to pornography and seek access than girls (Buljan Flander, 2009; Doornwaard et al., 2014a; Livingstone et al., 2011; Lo and Wei, 2005; Löfgren-Mårtenson and Månsson, 2009; Mattebo et al., 2013; Peter and Valkenburg, 2006; Sabina et al., 2008; Wolak et al., 2007). As a result, boys are more likely to view more types of images including paraphilic or criminal sexual activity, including child abuse images and sexual violence (Sabina et al., 2008). In Europe, Nordic studies tend to reveal a higher proportion of young people reporting having watched pornography, with boys accessing porn the most (e.g., Livingstone et al., 2011; Sørensen & Kjørholt, 2007; Svedin et al., 2011). Girls were significantly more likely than boys to report never looking for pornography on purpose, indicating they were involuntarily exposed (Sabina et al., 2008).

Girls were also more likely to report problematic exposure than boys (Livingstone et al., 2011). According to Sabina et al. (2008), overall boys reported more sexual excitement by SEIM and girls reported more embarrassment and disgust, but the responses were diverse, with some girls reporting excitement, and some boys reporting embarrassment or disgust. Girls and boys both reported shock, surprise, guilt, shame and unwanted thoughts about the experiences. Overall, it seems that relying on gender stereotypes about reactions to pornography may obscure a clear picture and diversity in how youth perceive and respond to SEIM (Sabina et al., 2008). However, across the board, younger children are much more likely to report being upset by SEIM, and Wolak et al. (2007) argue that these negative reactions may stem from a lack of developmental readiness.

Researchers disagree as to why boys view more pornography than girls, arguing it could be because pornography specifically caters to male notions of sex and seems distasteful to girls, that peer pressure and socialisation tells boys that viewing pornography is part of masculinity, or that girls are under-reporting pornography use because it is seen as an undesirable and inappropriate behaviour for girls (Löfgren-Mårtenson and Månsson, 2010). It is clear from the research that boys are reporting more pornography exposure and use, but there is a need for more research on what types of material young people are viewing online, and the frequency with which they are viewing it.

Mattebo et al. (2013) conducted a population-based survey of boys in Sweden and found that almost all the boys, 96 per cent, had watched pornography, but that 10 per cent used pornography every day, which differed from average users who used pornography once a week or a few times a month (63 per cent), and the non-frequent users who used pornography a few times a year or never (27 per cent). The outcomes for frequent users were significantly worse than for average and non-frequent users. Frequent users had more casual sexual experiences, such as one night stands and sex with friends, regularly spent more than 10 straight hours at the computer, and reported more relationship problems with peers, obesity, use of tobacco and alcohol. One-third of these users reported watching more pornography than they actually wanted.

In a Dutch study, girls' use of pornography was consistently low, and both boys' and girls' sexual information-seeking online were consistently low (Doornwaard et al., 2014b). More frequent use of pornography or increased use predicted more body surveillance for boys and less satisfaction with sexual experiences among both boys and girls. The study also found that for boys, online sexual information-seeking also predicted more body surveillance, and less satisfaction with sexual experiences among boys and girls, which indicates a need to further understand what sources youth seek and use for sex education. Furthermore, it indicates that while much research highlights the body image issues that girls face due to SNS use, pornography and other online sexual behaviours, boys face many of the same pressures.

Another Dutch study that looked at the patterns and trajectories of SEIM use finds that there is a great deal of variation among boys in their use of pornography – a pattern of strongly increasing SEIM use during adolescence is not common for all boys, and some exhibited decreasing use over time (Doornwaard et al., 2014a). Boys who exhibited more frequent SEIM use over the course of the study also had more permissive sexual attitudes at the beginning or baseline. Both boys and girls who exhibited frequent and occasional use of SEIM thought of sexualised internet materials as more realistic and instructive than those with lower levels of use. Overall, the study indicates that, especially for boys, use of SEIM may be dynamic and vary over time for individuals and both from person to person, suggesting that looking at frequency and use patterns over time might help distinguish between more normal and exploratory levels of usage and more frequent levels of usage that carry greater risks of harm or indicate compulsive usage.

Löfgren-Mårtenson and Månsson (2009) found that both young men and women learned from the 'pornographic script'. In other words, the norms, behaviours and themes present in pornography become part of the process of sexual socialisation just as varying cultural scripts or interpersonal scripts influence the development of sexuality. They found that the pornographic script functioned as a frame of reference for young people, especially in relation to their ideals about sexual performances and body image: young men expressed insecurities about their ability to perform sexually, and women expressed insecurities about body image. Still, the authors also concluded that overall youth seemed equipped to deal with pornography exposure, and that participants often decreased pornography use as their self-confidence increased.

Boys are exposed to and seek more pornography overall, yet there is great variation within boys' usage of pornography, and many boys experience body image issues, embarrassment, disgust, and feel pressured to perform in a certain way.

3. Exposure to pornography impacts youth's sexual attitudes, expectations and beliefs.

As previously stated, for both young men and women, the pornographic script functions as a frame of reference in relation to bodily ideals and sexual performances. Overall, there is agreement in the literature that adolescents can learn sexual behaviours from observing behaviours depicted in pornography (Alexy et al., 2009; Häggström-Nordin et al., 2006; Hunter et al., 2009). As discussed previously, the findings suggested that pornography exposure heavily shapes how young men and women think they are meant to look and perform during 'real world' sex, and while some research has focused predominantly on the body image pressures women face, both young men and women are impacted (e.g., Doornwaard et al., 2014a, 2014b; Löfgren-Mårtenson and Månsson, 2009).

Beyond feelings of body inadequacy and performance anxiety, SEIM use heavily shapes youth ideas of what 'real world' sex is meant to look like. Tsitsika et al. (2009, p. 549) conducted a study among Greek adolescents to explore the use of sexually explicit material, and findings suggest that adolescents who are exposed to pornography 'may develop both unrealistic attitudes about sex and attitudes towards relationships.'

Brown and L'Engle (2009) conducted a longitudinal study of early adolescents that showed a relationship between more permissive sexual attitudes and exposure to pornography, and a relationship between adolescent exposure to sexually explicit material and less progressive gender role attitudes for both males and females. They found that boys who were exposed to sexually explicit material in early adolescence were more likely to engage in sexual harassment in middle adolescence. Their longitudinal analyses also showed that early exposure for males predicted less progressive gender role attitudes, more permissive sexual norms, sexual harassment perpetration and having oral sex and sexual intercourse two years later. When they examined early exposure to pornography for girls, their analyses also predicted less progressive gender role attitudes, and having oral sex and sexual intercourse.

Braun-Courville and Rojas (2009) conducted a study in the US that examined how pornography influences young people's sexual attitudes and behaviours, finding that more frequent exposure resulted in more sexually permissive attitudes. Participants were recruited from the waiting room of an adolescent-specific primary care facility in New York City comprising underserved populations (48 per cent Hispanic and 43 per cent African-American). They found that internet pornography is readily accessible to adolescents, and those who visit sexually explicit sites are more likely to display acceptance of casual sex, engage in high-risk sexual behaviours such as having multiple partners, use substances during sex and engage in anal sex.

A study of over 700 Dutch adolescents found that increased exposure to pornography meant both genders were more likely to perceive women as sex objects (Peter and Valkenburg, 2007). Subsequently, Peter and Valkenburg (2009) determined that viewing women as sex objects was related to increased frequency in using

pornography. And a later study of over 900 Dutch adolescents sought to address whether adolescents perceive SEIM to be similar to real sex, to what extent they perceive SEIM to be a source of information about sex, and whether SEIM influences attitudes towards sex as casual or physical as opposed to relational or affectionate (Peter and Valkenburg, 2010, p. 375). The results showed that as adolescents are more frequently exposed to SEIM, their perceptions of SEIM as realistic and as a useful source of information increase, and having these attitudes results, in turn, in more permissive attitudes towards sex. Adolescents who reported high levels of exposure to pornography thought that the sex acts they viewed (i.e., anal sex, threesomes and 'moresomes') depicted sexual activities that were typical among their peers and, as in other studies, youth who watch more pornography report more physical and casual motives for sex rather than affectionate reasons (Peter and Valkenburg, 2006, 2010). Doornwaard et al., (2015) also found that higher levels of perceived realism predicted greater pornography use.

Flood (2009) also finds that exposure to SEIM helps to sustain unhealthy and sexist notions of both intercourse and relationships. For boys and young men who frequently consume pornography, consumption intensifies attitudes that are supportive of sexual coercion.

Researchers concur that young people and especially adolescents deserve age-appropriate, informative materials on sex and sexuality, and critical tools for interpreting pornography. SEIM in itself appears to be an inept and harmful source of information about sex. At the moment young people do not receive the appropriate tools to help them critically assess pornographic images, nor do they receive relationship-based sex education that discusses the positive potential of sex in a consenting, affectionate relationship.

4. Adolescents who view pornography and who are more frequent viewers also experience an array of negative health and wellbeing outcomes, but the direction of the relationship between these factors is not clear.

Youth who report intentionally viewing pornography were more likely to report both physical and sexual victimisation and delinquent behaviour and substance use (Ybarra and Mitchell, 2005). Early exposure to pornography was also linked to sexual risk-taking, including having unprotected sex, even later in life (Sinkovic et al., 2012). Youth who sought pornography also reported poorer relationships with their parents or caregivers than their peers who did not seek pornography (Ybarra and Mitchell, 2005). There also seems to be a relationship between viewing pornography and poorer mental health. Among 10- to 17-year-olds, those who sought internet pornography were twice as likely to report the clinical features of major depression compared to those who used offline pornography and non-seekers (Ybarra and Mitchell, 2005).

Some of the literature finds that having lower socioeconomic status or having less educated parents leads to high levels of exposure to pornography (e.g., Brown and L'Engle, 2009). Other literature finds that youth from low-income families may be less

likely to be exposed to unwanted sexual material than those from higher-income families, possibly due to having less internet activity (Livingstone et al., 2011). US-based studies have included more information on ethnicity, socioeconomic status and other demographic information, but still the findings are limited and tell us little about the youth who are at greatest risk or demonstrate the greatest resilience (Horvath et al., 2013).

In looking at online contact risks, but not specifically pornography exposure, Vandoninck et al. (2010) finds that those living in families with lower socioeconomic status, teens with either low or high self-confidence, and those having a bad relationship with their parents are more at risk. Other studies seem to indicate that pornography use decreases with increased self-confidence.

More needs to be understood about other important developmental aspects in the lives of young people such as religion, parental education level, parental relationships and family dynamics, relations to peers and media consumption that might lead some youth to be more resilient and others to be more vulnerable. More research specifically needs to examine the impact of internet pornography on youth who display risk factors (such as depression, interpersonal victimisation or delinquent tendencies) before their exposure to SEIM.

5. It is unclear what types of pornography youth are exposed to or seek access to, and whether this makes any difference in their attitudes and perceptions.

Very little research addresses what types of pornographic content youth are being exposed to or seeking out. This is problematic because much of the research presented is based on assumptions of what young people may be seeing.

Sabina et al. (2008) looked at types of content, and reported that there was significant exposure to violent images, paraphilic sexual activity and child abuse images, in which the viewing was probably a criminal act. From a survey of college students reporting on content they had viewed before the age of 18, 93 per cent of boys and 62 per cent of girls reported having viewed pornography. Of those who had viewed pornography, approximately 39 per cent of boys and 23 per cent of girls viewed material involving bondage, 32 per cent of boys and 18 per cent of girls viewed sexual activity between people and animals, 23 per cent of boys and 16 per cent of girls viewed sexual activity involving urine or faeces, 18 per cent of boys and 10 per cent of girls viewed material depicting rape or sexual violence, and 15 per cent of boys and 9 per cent of girls viewed sexual pictures of children.

Given some claims that content online is becoming increasingly violent, hard-core and misogynistic, it is imperative to better understand what young people are seeing and how they are interpreting it (Dines, 2011; Bridges et al., 2010).

C. 'Sexting' or sharing self-generated explicit images

Strong evidence	1. Girls face much greater pressure to send 'sexts' and much harsher judgements when those images are shared beyond the intended recipient.
Moderate evidence	2. Some studies report extremely small percentages of young people sharing sexual messages, while others report higher percentages, and many studies have used differing definitions; overall it is unclear how many youth are sharing sexual images. 3. Older youth and those with risk-taking or sensation-seeking behaviours are more likely to 'sext', but more information on demographics and other characteristics of youth who 'sext' are needed.
Need to know more	4. There is a tension in the literature between youth rights to sexual expression and privacy and child protection. It is unclear how young people are thinking about consent, what they are being taught, and their understandings of consent in relation to 'sexting' and sharing images.

1. Girls face much greater pressure to send 'sexts' and much harsher judgements when those images are shared beyond the intended recipient.

Girls often have to negotiate a difficult balancing act, navigating their way between two abject positions – being 'frigid' or being considered a 'slut'. Qualitative research on 'sexting' exposes it as a practice that is heavily shaped by gender dynamics in which, primarily, boys harass girls, boys are admired and 'rated' for obtaining explicit pictures of girls, while sexually active girls are denigrated and despised as 'sluts' for sharing these images (Albury et al., 2013; Döring, 2014; Powell, 2010 Ringrose, 2013; Ringrose and Harvey, 2015; Ringrose et al., 2012; Walker et al., 2013; Wei and Lo, 2013). This reveals intense gender-specific pressures for both boys and girls, where girls are unable to openly speak about sexual activities and practices while boys are at risk of peer exclusion if they do not brag about sexual experiences or receiving photos.

In a US study of adolescents, both boys and girls believed girls were more harmed by 'sexting' (Wei and Lo, 2013). In a qualitative study with young people in Australia, young people aged 16-17 discussed and recognised gendered double standards that apply to 'sexting' and female digital self-representation (Albury et al., 2013). One group of young women noted that their selfies were considered 'provocative' or sexual, while naked or semi-naked pictures of young men were construed as funny or jokey. Some

focus groups also responded to public education campaigns and media materials to discourage 'sexting', and remarked that the campaigns engaged in victim blaming and failed to recognise that young women could participate in a consensual exchange of images (Albury et al., 2013). Döring (2014) looked at 'sexting' risk prevention messages from 10 online educational campaigns, and found that these campaigns typically rely on scare scenarios, engage in female victim blaming, and recommend complete abstinence from 'sexting'.

Studies have acknowledged that 'sexting' is complex. It can be pleasurable for young people; it can also be coercive. Ringrose et al. (2012) report that 'sexting' is often coercive, and while it may be motivated by sexual pleasure, it is often linked to harassment, bullying and even violence. There can be a blurring between pleasurable and coercive dimensions of 'sexting' for teen girls. Using a postfeminist lens, Ringrose et al. (2013, p. 320) asked, 'What would it mean for us to live in a world where teen girls could unproblematically take, post or send an image of their breasts to whomever they wished?'

More research is beginning to look at 'sexting', gender hierarchies and the specific affordances of networked devices and SNSs. Ringrose and Harvey (2015) argue that given modern gender dynamics and the high levels of visibility enabled by networked devices, girls face an ever increasing demand to create images of their bodies, which leads to boys' online and offline behaviours in which they must perform masculinity by collecting, judging and displaying photos of girls. Other research looking at the 'profile-centric' design of SNSs enable ever more 'objectification' and rating of both women's and men's bodies (Dobson, 2011; Manago et al., 2008; Papacharissi, 2009; Ringrose, 2011).

2. Some studies report extremely small percentages of young people sharing sexual messages, while others report higher percentages, and many studies have used differing definitions; overall it is unclear how many youth are sharing sexual images.

In a review of surveys on adolescent 'sexting' it seems there is little consistency in the estimated prevalence of texting, and some studies that have found high rates of teen 'sexting' (and have received much media attention) are often problematic, using unrepresentative samples and vaguely defined terms (Lounsbury et al., 2011). Other studies that use more representative samples have found that producing online sexual images is relatively rare, and that older adolescents are much more likely to produce sexual materials than younger adolescents (Döring, 2014; Lenhart, 2009; Livingstone et al., 2011; Kerstens and Stol, 2014; Ybarra and Mitchell, 2014).

In one study of more than 600 secondary (high) school students, where 'sexting' was defined as the transfer of sexually explicit photos via cell phone, nearly 20 per cent of the participants reported they had sent a 'sext' of themselves, almost twice as many reported that they had received a 'sext', and over 25 per cent indicated that they had forwarded a text to others (Strassberg et al., 2013). In a UK study, Livingstone and Görzig (2012) found that among 11- to 16-year-olds, only 15 per cent reported having

received a sexual message, and a quarter of those respondents reported being upset by it. In a US study, only 4 per cent of teens reported having sent a sexually suggestive text message, and 15 per cent had received a sexually suggestive text (Lenhart, 2009).

Researchers need to adopt a standard definition of 'sexting', conduct more research across multiple EU countries, and conduct longitudinal research to evaluate changes in sending sexual messages over time.

3. Older youth and those with risk-taking or sensation-seeking behaviours are more likely to 'sex', but more information on demographics and other characteristics of youth who 'sex' are needed.

Some large surveys of those teens who 'sex' and those who do not have failed to differentiate by age and consider whether there is an age at which sexting might be developmentally appropriate as long as it is truly uncoerced. For example, there may be less risk-taking involved and less potential harm for a 17-year-old who sends a 'sex' within a long-term relationship than a 13-year-old who sends a 'sex' to an acquaintance or stranger. The two acts come with different risks and likely require different interventions.

Baumgartner et al. (2014) found that age and sensation-seeking were good predictors of 'sexting' in Europe, with older adolescents and those who exhibit higher levels of sensation-seeking more likely to engage in 'sexting'. 'Traditionalism' according to country context also significantly predicted gender differences in 'sexting': in some countries, more boys engaged in 'sexting' (e.g., Cyprus, Italy and Germany), in other countries more girls engaged in 'sexting' (e.g., Denmark, Finland and Norway), and in others, equal numbers of boys and girls engaged in 'sexting' (e.g., the Netherlands and the Czech Republic).

A logistic regression analysis also suggests 'sexting' is significantly linked with sensation-seeking and depression, while controlling for gender, age, family status and students' responses to economic stress (van Ouystel et al., 2014a). In a study of 329 adolescents, 'sexting' behaviours were significantly associated with the consumption of pornography, when controlling for age, gender, school track and internet use (van Ouystel et al., 2014b)

Ringrose et al. (2012) found that even though more older youth 'sex', younger children are still affected. Older teenagers interviewed appeared more mature in their resilience and ability to cope with 'sexting' pressures, while year 8 children (aged 12-13) were worried, confused and, in some cases, upset by the sexual and 'sexting' pressures and parents, teachers and others did not support them sufficiently, possibly because they did not consider children this young 'ready' for sex education and relationship support.

Very little is known about the teens who 'sex', and more research on their profiles, especially by age, could help shape appropriate interventions.

4. There is a tension in the literature between youth rights to sexual expression and privacy and child protection. It is unclear how young people are thinking about consent, what they are being taught, and their understandings of consent in relation to 'sexting' and sharing images.

Simpson (2013) argues that the internet is challenging ideas of what childhood is, and that young people have sexual rights to expression, including 'sexting'. There is a growing body of research around young people's rights to sexual expression, information, and privacy (e.g., Cullitan, 2011; CRIN, 2014; Bragg, 2012). Other research shows that 'sexting' is rooted in pressure for women to perform a hyper-feminine sexuality and is often coercive (Ringrose, 2012). There is not a clear-cut answer to whether 'sexting' is pleasurable for young people or coercive; it seems it can be both. However, more understanding of how children and young people view coercion and consent could help. If we can be certain that youth understand enthusiastic consent and that someone is at fault when they do not obtain consent, it will be easier to discuss with them whether 'sexting' is coercive or pleasurable and comfortable.

D. Online grooming, trafficking and the commercial sexual exploitation of children

Strong evidence	<ol style="list-style-type: none">1. Girls are more likely to be sexually solicited online and find sexual solicitations disturbing, but they are also more likely to show sexual messages to an adult than boys who are also at risk and may be vastly under-represented in the literature due to under-reporting.2. ICTs seem to make online grooming more efficient for groomers, although offline grooming and assault by a known offender poses an equal or possibly more significant threat.
Moderate evidence	<ol style="list-style-type: none">3. Youth who exhibit more vulnerability factors, such as lack of parental involvement, previous sexual abuse, and more risk-taking behaviours, are less resilient in protecting themselves against online grooming.
Need to know more	<ol style="list-style-type: none">4. More information is needed on the rates of internet-facilitated commercial exploitation and trafficking, and the unique risk factors and vulnerabilities of the children and young people involved.5. More information is needed on whether online exploitation involves different methods and tactics depending on the age of the child, and whether different preventative strategies and social services are needed.

1. Girls are more likely to be sexually solicited online and find sexual solicitations disturbing, but they are also more likely to show sexual messages to an adult than boys who are also at risk and may be vastly under-represented in the literature due to under-reporting.

According to the research, girls are more likely to be targeted online, receive direct requests about sexual activities, report being upset by these interactions or receiving images, and more likely to be victimised than boys (Baumgartner et al., 2010a; Brå, 2007; Buljan Flander et al., 2009; Finkelhor et al., 2005, 2009; Helweg-Larsen et al., 2011; Mitchell et al., 2007; Pereda et al., 2009 a & b; Wolak et al., 2008). Overall research suggests boys may be more likely to encounter or initiate online risks, especially content risks, but girls experience or report less enjoyment and more distress and upset feelings due to the encountered risks, solicitations and content (de Graaf and Vanwesenbeeck, 2006; Livingstone and Haddon, 2009). More research needs to be done to determine whether conforming to a masculine identity impacts on how boys report their online feelings of such content because some studies suggest that boys may have more reservations about sexually explicit content online than most research suggests, and they face clear stigma in reporting abuse (Doornwaard et al., 2014a; Löfgren-Mårtenson and Månsson, 2009; O’Leary and Barber, 2008).

However, it is important to note that much of the research conflates grooming from adults and sexual solicitation that may come from other teens. US research finds girls are more likely to receive requests for sexual photos and are more likely to be sexually harassed online (Mitchell et al., 2007, 2014a). Findings in Croatia looking at exposure to sexual images via electronic mail mirror these US findings – while over half of messages with sexual images were received by boys, and risk of exposure to these messages increased with age, girls were more likely to report these images and online chats sessions where they were asked intimate details by adults or peers (Buljan Flander et al., 2009).

Even though girls receive more solicitations from peers and adult offenders, boys still make up a significant number of victims of offline and online abuse and are at risk of sexual abuse (Wolak et al., 2008). Boys view and receive more sexual materials online, and Mitchell et al. (2005) show that offenders use sexual images more successfully when attempting to initiate sexual interactions with boys than with girls.

Since boys are less likely to report receiving images, their abuse online may be under-reported, especially because they may face even more stigma in reporting than girls (O’Leary and Barber, 2008). Boys who are questioning their sexual orientation or are gay may be particularly vulnerable to sexual abuse online as offenders may exploit their insecurities (UKCCIS, 2012; Wolak et al., 2008).

2. ICTs seem to make online grooming more efficient for groomers, although offline grooming and assault by a known offender poses an equal or possibly more significant threat.

The media has highlighted the very terrifying threat of online grooming, but perhaps disproportionately so, often neglecting the threat of offline grooming (Williams and Hudson, 2013). The internet does offer a private space for adults to attempt to engage in sexual behaviour with youth. While research indicates that offenders that are known to a child or family are at least an equal threat with online strangers, ICTs afford greater efficiency to groomers to access a much wider pool of youth (Mitchell et al., 2005). Quayle et al. (2014) find that ICTs offer groomers the opportunity to find and communicate with multiple potential victims simultaneously, wasting no time with those who do not respond, and the easily facilitated exchange of pictures and video over ICTs means groomers face fewer risks that may be associated with offline sexual interaction.

ICTs also more easily allow offenders the ability to change or manipulate aspects of identity, such as age or gender (Quayle et al., 2014). In comparing scripts and tactics of offline and online grooming, Black et al. (2015) find that many of the strategies are the same (such as discussing plans for travel, using flattery, assessing a parent's work schedule, and broaching sexuality), but that online offenders tend to assess the potential for victimisation earlier in online conversations. In other words, while tactics may be the same, online offenders often act in a more expedited manner, including introducing sexual topics earlier.

A study in the UK looked at the public perceptions of prevalence of three different types of grooming: computer-mediated, familial (grooming by a known person), and localised sexual grooming (stranger-initiated grooming without a computer-mediated aspect), and found that media was the most important factor in the public perception that computer-mediated grooming is the greatest risk (Williams and Hudson, 2013). Overall the authors argue that the public is more concerned with computer-mediated sexual grooming, and does not demonstrate enough awareness about or attention to familial sexual grooming, which is the most common threat. Thus, awareness initiatives should be implemented to protect children and young people who are victims of the very people who should be instrumental in protecting them.

3. Youth who exhibit more vulnerability factors, such as lack of parental involvement, previous sexual abuse, and more risk-taking behaviours, are less resilient in protecting themselves against online grooming.

When looking at online abuse, it is essential to remember that an overwhelming majority of youth demonstrate resilience and protect themselves against grooming by not responding to messages or responding in a safe manner (Brå, 2007; Webster et al., 2012; Mitchell et al., 2007). Still, every effort needs to be made to understand and protect the small proportion of young people online who are vulnerable. More research

needs to be done, but we know there are some significant factors that make youth more resilient and some that make youth more vulnerable.

Parental involvement or lack thereof seems to play an important role in resiliency or vulnerability to grooming and other forms of online victimisation or exploitation perpetrated by adults. Both online risk-taking and loss of family protection are major factors contributing to increased vulnerability to grooming (Whittle et al., 2013a & b, 2014). Parental involvement in a child's life and internet use was found to be a major preventative factor. The more internet access a young person has and higher online risk-taking, as well as lack of parental involvement, were all associated with greater risks of online grooming (Whittle et al., 2013).

A US study showed that girls who had previously been abused were significantly more likely to have experienced online sexual advances and to have met someone offline (Noll et al., 2009). The same study showed that having been abused and choosing a 'provocative avatar' were significantly and independently associated with being the recipient of online sexual advances, which was then associated with offline meetings. In other words, children and young people with known histories of abuse may merit extra protection, and having parents who are aware of their child's online presence, activities and self-portrayal may also be key.

However, it is clear that more research needs to be done to understand what makes young people vulnerable to grooming and sexual exploitation (commercial or otherwise). Whittle et al. (2013) suggest that living environment, ethnicity, socioeconomic status and personality may all also be related to vulnerability, but this needs more study.

4. More information is needed on the rates of internet-facilitated commercial exploitation and trafficking, and the unique risks factors and vulnerabilities of the children and young people involved.

It is clear from anecdotal evidence and horrendous media reports that ICTs are being used to facilitate the sex trafficking of minors and their commercial sexual exploitation through abuse images. However, there is very little research addressing the reach or scope of this problem and the young people who are exploited.

In one study looking at the scale and scope of internet-initiated commercial sexual exploitation of children, 82 per cent of the victims were female (Mitchell et al., 2011). This study also indicates that while commercial sexual exploitation seems to make up a small portion all arrests for internet crimes against children, these crimes were particularly gruesome, involving more serious and more dangerous offenders who profited from these crimes. There is no data on what portion of the arrests for commercial sexual exploitation of children involved internet-facilitated offences, but in the case reviews the internet is central in facilitating these crimes (Mitchell et al., 2011).

One Swedish study indicated that while it is relatively rare for women under the age of 18 to sell sex online in an open and obvious manner, for those who do so, the internet is a crucial tool and the first point of contact. The study included 15 women (ages 15-25), all of whom had experience selling sex online before the age of 18 (Jonsson et al., 2014). The study findings indicate that there are young women who are selling sex online or being lured into sexual encounters who are not easily detected by law enforcement and other authorities seeking to protect young women. These authorities need more research and training to better understand the coded communications happening online.

5. More information is needed on whether online exploitation involves different methods and tactics depending on the age of the child, and whether different preventative strategies and social services are needed.

Findings across Europe reveal that an average of one in 11 online teenagers are putting themselves at risk of meeting online groomers, but more research is needed to try and determine the prevalence of grooming and variations in tactics involving teenagers and younger children (Davidson et al., 2012). Wolak et al. (2010) suggest that internet-facilitated sex crimes involving adults and teens often fit a different model that involve the seduction of a teen and attempts to develop a relationship, as opposed to a model of forcible sexual assault or paedophilic child molesting.

It is important to gain further understanding of how grooming tactics differ according to the age of the child or young person being targeted in order to offer them developmentally appropriate prevention strategies. Wolak et al. (2010) argue that prevention methods should arm younger adolescents with awareness and avoidance skills, while educating older youths that a desire to be in a relationship is developmentally appropriate, but informing them of the pitfalls, the criminal nature and the inappropriateness of relationships with adults.

Conclusions and recommendations

A. Comprehensive sex and relationship education needs to be introduced early on in the school curricula and cover more than STIs and reproductive health issues. Curricula must look at issues like consent, dynamics of a healthy relationship, critical media analysis tools and critical analysis of pornography.

- Sex and relationship education needs to start earlier (before or around age nine), and be part of a continuous curriculum through childhood and adolescence, rather than a course that is taught once in adolescence.
- Offering sex and relationship courses in different stages for youth of different ages could allow children to receive more developmentally appropriate messages. Educators can target youth in the age ranges where they are most vulnerable to certain behaviours. For example, education about pornography could start later in adolescence, but educational lessons about consent, inappropriate touching, harassment, gender equality and staying safe online could start at around age nine.
- Overall education should be more focused on fostering ethical, respectful practices between intimate partners and within friendship networks. Especially in regards to 'sexting', educational programmes must be careful not to shame those who have sent sexually explicit messages, but instead talk about coercion and consent, and problematise the behaviours of people who forward messages or shame other students and young people.
- Education programmes need to introduce gender equality education, and link 'sexting' practices and the pornographic script to an analysis of wider gender relations and commercial culture.
- Schools should offer training sessions to help children learn how to better search for and critically evaluate health information on the internet, as this is no simple task.

B. Schools, governments and technology providers should offer more support to parents to enable them to provide advice and guidance to young people on issues related to sex, relationships and sexualisation in the media. Parents especially need resources for talking to younger children in an age-appropriate manner.

- Technology providers should look at doing more to provide age-appropriate tools for children and young people where they can avoid seeing explicit images or seek redress for distress resulting from the creation, circulation and display of unwanted sexual images and text.
- Teachers and parents need to co-develop ways of recognising and discussing the gendered sexual pressures on youth.

- ‘Sexting’ can be used as a topic to begin talking about coercive sexual pressures and enthusiastic consent, because it makes gender dynamics and the possible harms of ignoring consent very explicit.
- Information resources for adults need to offer them ways to talk to their children about sex and relationships and online sexual expressions early on.
- Parents may also need more resources for talking to children about gendered double standards, young people’s rights and responsibilities with regard to self-representation, and non-consensual production and distribution of ‘sexting’ images.
- Internet companies, government and schools should work together on a public awareness campaign for parents about how to talk to their children about consent, the unrealistic images in pornography and healthy relationships.

C. Adolescents’ voices and opinions need to be considered in these debates, and they should be invited to comment on more research and participate in boards and panels designing education programmes and policy.

- Young people need to be on committees, review boards and other policy-making groups, so that their experiences can inform changes in media literacy, relationships and sex education.
- Adolescents should also be involved in shaping public awareness campaigns and resources for adults.
- Young people should be frequently consulted about changing technology use, and curricula should be adapted to meet any changing needs.

D. Further research is needed on interventions, educational approaches and how to best support parents in supporting their children to develop healthy uses of ICTs and critical understandings of media.

- A review of current resources and tools for youth should be undertaken to better understand which resources help young people find quality information or receive support, and which types of services and information young people want (i.e., helplines, websites, classroom education, services from charities, etc.).
- More longitudinal research needs to measure young people over time that uses consistent definitions and marks changes in their technology use and the effects of new media and highly sexualised media.
- Finally, pilot programmes that are addressing relationship and sex education and equality education in schools should be tested to evaluate their impact.

To advance the recommendations made above, children and young people should be directly consulted (see Appendix 5). As stated in the UNCRC, children's voices should be heard on matters that affect them. As the present report makes clear, the difficult balance must be found between providing opportunities online to underpin young people's right to sexual information and participation, and ensuring their protection from online sexual harm. These are certainly matters that affect young people directly and on which their opinions should be heard as future policy and practice is developed.

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Appendix 1: List of acronyms

- eNASCO – European NGO Alliance for Child Safety Online
- ICT – information and communications technology
- LGBT – lesbian, gay, bisexual and transgender
- SEIM – sexually explicit internet material
- SNS – social networking service
- STI – sexually transmitted infection
- UKCCIS – UK Council for Child Internet Safety
- UNCRC – UN Convention on the Rights of the Child

Appendix 2: List of experts consulted

- Kath Albury, University of New South Wales
- Feona Attwood, Middlesex University London
- David Austin, BBFC
- Sue Berelowitz, Office of the Children's Commissioner
- Sarah Bragg, University of Brighton
- John Coleman, OBE, University of Oxford
- Maddy Coy, London Metropolitan University
- Julia Davidson, Kingston University
- David Finkelhor, University of New Hampshire
- Will Gardner, Childnet International
- Rosalind Gill, City University London
- Miranda Horvath, Middlesex University London
- Adam Joinson, UWE Bristol
- Lia Latchford, MsUnderstood
- Claire Lilley, NSPCC
- Elena Martellozzo, Middlesex University London
- Linda Papadopoulos, Psychologist
- Ethel Quayle, University of Edinburgh
- Jessica Ringrose, University College London
- Vicki Shotbolt, The Parent Zone and Executive Board, UK Council for Child Internet Safety
- Jenny Thomas, Child Rights International Network
- Janis Wolak, University of New Hampshire
- Michele Ybarra, Center for Innovative Public Health Research
- The EU Kids Online Network

Appendix 3: Letter of request to experts

Dear _____

We are about to begin a review of existing research on how young people ages 10-17 develop ideas about sexuality looking at various influential factors (family, peers, education, religion and media) with a focus on the role that ICTs play and the opportunities and risks they present.

We are consulting a list of experts who can suggest research and reports that should be included in our review, and would be thrilled if you can make some suggestions in addition to the list below. We are looking for work that is recent, rigorous and reputable. Ideally we are looking for you to send us suggestions by 15 December.

This review is independent of, but funded by the European NGO Alliance for Child Safety Online (eNACSO), a project started in 2008 envisaging the creation of a European network aiming at working on child and young people safety online.

Please let us know if you have any questions.

Best, Jessica Mason and Sonia Livingstone

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Appendix 4: Search terms employed

Where possible, according to the database capabilities, the search terms below were combined with these terms linked by the Boolean operator, OR:

- child* OR young OR adolescen* OR teen*
- online OR internet OR mobile OR devices OR ICT*OR web OR social networking sites OR tablet OR smart phone

Search terms:

Sex* educat*	Porn*
relationship educat*	Trafficking
Sexual* attitudes	Grooming
sexual* behaviour	'Sexting'
Sexual* health*	Sexual* bullying
sex* information*	Sexual* abuse
LGBT	Sexual* harassment
Healthy relationships	Sexual* explicit*
Consent	'Sexploitation'
Sexual* expression	Sexual* exploitation
Information rights	Sexual* violence
privacy	Sexual* image*
	Sexual* material
	'Revenge* porn*'
	'nonconsensual pornography*'

* The asterisk represents that various versions of the word were searched. In many search engines and databases, an asterisk after a word allows all variants of that word to be searched (i.e., child* would search child and children).

Appendix 5: A proposed methodology for consulting children and young people

Aims

To develop the insights, findings and recommendations produced by this desk literature review, it is proposed that children and young people are now consulted. The purpose of such a consultation would be to:

- discuss the key findings of this report to gain children and young people's views of their relevance and significance of the findings as well as any gaps in coverage;
- discuss the key recommendations of this report to gain children and young people's views of relative priority of these recommendations and the conditions under which they could be developed;
- compare the views of children and young people living in different cultural or life circumstances, as well as boys/girls of different ages, to pinpoint where and how future interventions should be targeted.

The proposal to consult children directly is premised on the view that it is imperative to recognise and provide for young people as developing sexual beings with sexual curiosity, a need for knowledge and the right to expression. The evidence reviewed in this report makes it clear that young people will seek out such opportunities and, if appropriate resources are not accessible, the results can be problematic. Also problematic is the evidence, more sparse yet present, showing that such resources as do exist online are often insufficient or even problematic, making it all the more urgent that constructive resources and opportunities are provided for young people. Last, the report demonstrates that as young people go online at a time of developing sexual interest and identity, they are encountering a host of problems for which they are often unprepared. Providing the resources and tools to ensure their adequate protection is also a societal imperative.

Sexual socialisation through adolescence is surrounded by cultural and individual anxieties – from parents and teachers, the wider society, and from the young people themselves. History is littered with instances of well-meaning policy-makers getting it wrong, making the case for direct consultation with young people surely the best way of trying to improve the situation in the future.

There are many pressing questions on which young people have a valuable contribution to make. Should sexual rights to information, expression and protection be led by school or home (or other places or organisations)? Is the present balance between opportunities and risks acceptable, or is more provision or protection needed (or both)? At what age should carers begin to ensure that children are appropriately resourced and protected? Is there more other stakeholders (children's charities, governments and industry) could do? It is not suggested here that young people have the answers to such questions, but rather that they have a useful contribution to make

to the debate. And furthermore, not consulting them is likely to generate policy solutions that may not work at all.

Methods

Focus group methodology is proposed, because this permits a shared discussion and exploration of the issues at hand, including a diversity of views and space for debate among the differing views. While individual interviews would also be informative, and permit a more private, in-depth exploration of children and young people's experiences, the aims of the research proposed are less to extend the primary evidence base than to deliberate over how this evidence base should inform policy and practice.

Focus group methods have proved an effective means of youth consultation provided they are conducted by well-trained and experienced moderators on a topic that young people are motivated to discuss. To achieve the above aims, one can envisage a minimal research design and a more ambitious one. Given the European focus of the present report, even a minimal design should include several countries.

Thus, we propose:

- four focus group interviews in each of several countries;
- in each country there should be a group of younger girls (possibly aged around 10-11) and older girls (aged around 14-15), and a group of younger boys (aged 10-11) and older boys (aged 14-15);
- the three countries should vary by region (Northern, Southern, Eastern Europe) and ideally, according to the country clusters identified by EU Kids Online (see <http://eprints.lse.ac.uk/52023/>).

The rationale for holding homogeneous groups according to age and gender stems partly from the sensitivity of the subject matter and partly from the likely need to develop policies specific to different target groups (rather than a 'one-size fits all' strategy). A more ambitious research design might include:

- twelve focus group interviews in each country. Eight of these would vary by age (younger, older) and gender (girls, boys), as above, as well as by income (higher, lower). Additionally, we propose selected subgroups representing the populations of particular concern: LGBT teenagers, teenagers from an ethnic or religious minority, 'looked-after' or 'at-risk' teenagers, or other groups of particular concern or interest;
- these group interviews could be conducted in a range of countries varying by European region, EU Kids Online country clusters or particular policy contexts.

Whichever design is chosen, some further considerations are important:

- Pilot focus group interviews should be conducted, ideally in each country, to test materials and the approach for linguistic and cultural issues.
- Each focus group should comprise between six and ten children. If fewer, then more groups should be conducted. If more, an experienced moderator will need to subdivide the children for a range of activities so that all get a chance to speak.
- If the focus groups are composed of ‘random’ children who do not already know each other, efforts should be made to minimise self-selection biases (e.g., not simply choosing enthusiastic volunteers). If focus groups are composed of children who already know each other (e.g., each group from a single school class), efforts should be made to gain diversity across groups (as a particular class may be influenced by local norms or subcultures).
- To move beyond superficial views and to develop an in-depth discussion in which everyone has time to speak, the groups should last around two hours. To maintain participants’ interest and motivation, this will require careful planning of a series of activities, supported by appropriate materials to stimulate useful responses.

Ethics

In each country, specific ethical considerations may apply depending on the children’s ages and cultural norms. However, to gain findings of value, it would be important that each group interview is free to address a range of sexual matters in some detail. In consequence, it is important that:

- appropriate permissions and informed consent are obtained from parents (or responsible caretakers) and the participants themselves;
- interviews take place in a comfortable and relaxed environment, preferably with no parent or teachers observing;
- ethical procedures are in place to ensure anonymity and confidentiality in reporting, ability to withdraw from the discussion at any time, care taken to respect what children say, and security in managing and storing data;
- follow-up procedures ensure that any risks or problems revealed during the research are treated with due consideration and necessary privacy.

Indicative interview guide (to be developed)

- *Purpose of the interview and the ethical protections that apply.* The purpose of the interview might be introduced in broad terms – how the internet brings risks and opportunities, how they see the balance between these, what they think their rights are online, and whether they wish for further resources or support.
- *Introductions and warm-up chat to get everyone comfortable in speaking.* Suggested focus: how they use the internet and digital media in their everyday lives, what they like and dislike, what they couldn’t live without.

- *Focus on sources of information, including personal, health, safety and sexual information.* As prompts, one might share and discuss a selection of the materials developed for this age group (whether younger or older) by reputable public and third sector organisations (these might be offline or online). Discuss what's helpful and why; how such information should be made available; how they decide what to trust; what else is needed.
- *Focus on alternative and potentially problematic sources of sensitive information.* Describe in summary some of the key findings of the report – that young people get sexual information from pornography or chatrooms or websites they don't really trust, or that they can't gain information at all. Discuss the pros and cons of this. Show the young people some materials developed for sex education curricula, ideally including the critical analysis of pornography. Discuss how they decide what to trust, what guidance should be available, whether more protections are needed. Widen this into a discussion of the sex education curriculum in their school: is this effective, what's needed and at what age?
- *Problematic forms of sexual information and experience.* Discuss online sexual risks, as they and their peers experience these. Include a discussion of the source of problems (from peers, websites, strangers, other) and judge their seriousness. It is important to pursue the reasons for their occurrence (e.g., searching for sexual health information, or difficulty of judging site reliability, or searched for mild porn and found extreme porn, etc.). Identify the contexts in which problems arise (on particular services or devices, in particular places). This section could be prompted by use of safer internet teaching and guidance materials, to legitimise the conversation and encourage responses. The focus could be on the balance between protection and participation – for which services, at what age – rather than on a general discussion of problems.
- *Policy and technical tools available.* Discuss how these are used by parents, teachers, and themselves. Include use of search engines, white lists, filtering and blocking, age verification, peer-to-peer, privacy settings, etc. Which give rise to concern, what works, what's needed? Discuss real-life examples of what's available.
- *Consideration of minority, LGBT, disabled or other special needs.* For groups where this is relevant.
- *Relate to questions of rights.* How do young people think about their rights? Are they aware of information, participation, expression and protection rights? How do they see these relating to sexual matters, and at what age (or circumstances) do they think they apply? Return to earlier questions of provision of sexual information here – given the discussion, what would they make available, for whom, and how? Could employ an exercise to design a website that answers children and young people's questions.
- *Priorities for recommendations and interventions.* Suggest they first brainstorm these based on spontaneous suggestions from the group. Then

tell them of the recommendations made in the report, followed by further discussion and refinement of their recommendations.

- *Close and thanks.* Inform participants of the next steps. Offer to follow up as needed.