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**Establishing an Evidence Base for the Development of Porn Literacy
Interventions for Adolescents**

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Thesis submitted to the National University of Ireland, Galway in
fulfilment of the requirements for the Degree of Doctor of
Philosophy in Child and Youth Research (Psychology)

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Declaration

I declare that this thesis has not been submitted as an exercise at this or any other University. I declare that this thesis is entirely my own work.

Signed: _____

Kate Dawson

Statement of Contribution

This thesis includes studies involving multiple authors. The candidate was responsible for the design, data collection, analysis and write-up of each of the six articles presented as part of this thesis. The supervisory team, Graduate Research Committee provided support in conducting the research. Two studies also involved consultation with an expert advisory group. The contributions of each co-author on each published article are described below.

Contributions of Co-Authors on Published Articles

Article 1: Dissatisfaction with school sex education is not associated with using pornography for sexual information - Kate Dawson, Saoirse Nic Gabhainn, & Pádraig MacNeela

KD was responsible for the study design, statistical analysis, and write-up, and contributed to the data collection for the study. PMN and SNG reviewed and edited the manuscript. All authors read and approved the manuscript for publication.

Article 2: Read all about it: Using a vignette methodology to study comfort with consensual and non-consensual depictions of pornography content - Kate Dawson, Chris Noone, Saoirse Nic Gabhainn, & Pádraig MacNeela

KD and PMN developed the vignettes and Delphi study design. KD was responsible for the study design, statistical analysis, and write-up, and contributed to the data collection for the study. CN contributed to data analysis and reviewed findings produced by KD. All authors read and approved the manuscript for publication

Article 3: Development of a new measure to assess young adults' learning about sex from pornography - Kate Dawson, Saoirse Nic Gabhainn, & Pádraig MacNeela

KD had overall responsibility for the study, including the design, statistical analysis, and write-up, and contributed to the data collection for

the study. Initial lists of scale items were reviewed by PMN and SNG. All authors read and approved the manuscript for publication.

Article 4: Toward a Model of Porn Literacy: Core Concepts, Rationales, and Approaches - Kate Dawson, Saoirse Nic Gabhainn, & Pádraig MacNeela

KD was responsible for the study design which was developed through discussions with SNG and PMN. PMN and SNG contributed to the data analysis. PMN oversaw the study. All authors reviewed and edited the manuscript and approved the manuscript for publication

Article 5: A Qualitative Exploration of Parents' Beliefs about the Effects of Pornography on Pre-teens and Teenagers - Kate Dawson, Saoirse Nic Gabhainn, & Pádraig MacNeela

Article 6: Strategies to support parents in talking about pornography with their children - Kate Dawson, Saoirse Nic Gabhainn, & Pádraig MacNeela

KD had overall responsibility for study 5 design (Articles 5 and Article 6), including data collection, analysis, and write-up of the articles. PMN contributed to the data analysis. PMN and SNG oversaw the study. All authors reviewed and edited the manuscript and approved the manuscript for publication.

List of works

Below is a list of publications that were completed throughout the duration of the PhD (2015-2019).

Publications

Dawson, K., Nic Gabhainn, S., & MacNeela, P. (2019). Toward a Model of Porn Literacy: Core Concepts, Rationales, and Approaches. *The Journal of Sex Research*, 1-15.

Dawson, K., Tafro, A & Stulhofer, A. (2019) Adolescent sexual aggressiveness and pornography use: A longitudinal assessment. *Aggressive Behaviour*

Dawson, K., Cooper, C., & Moore, J. (2018). ‘They giggle and I crush over them’: porn as pedagogy at Tate Modern. *Porn Studies*, 5(1), 91-96.

Dawson, K., Nic Gabhainn, S., & MacNeela, P. (2018). Dissatisfaction with school sex education is not associated with using pornography for sexual information. *Porn Studies*, 1-13.

Dawson, K. (2018). Educating Ireland: promoting porn literacy among parents and children. *Porn Studies*, 1-4.

MacNeela, P., O’Higgins, S., McIvor, C., Seery, C., **Dawson, K.**, & Delaney, N. (2018, August). Are Consent Workshops Sustainable and Feasible in Third Level Institutions?. In Evidence from implementing and extending the SMART consent workshop.

Dawson, K., Nic Gabhainn, S & MacNeela, P (2018) *The Porn Report*.

Dawson, K & O’Higgins, S. (2017).The Porn Identity. In: Sex Education: Global Perspectives, Effective Programs and Socio-Cultural Challenges

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Abstract

Background

In recent years, many claims have been made regarding the impact of pornography on young peoples' sexual development. Acknowledging the ease of access to pornography, its role as a source of sexual information for youth and the perceived risks associated with pornography engagement, educators and scholars have begun to call for porn literacy interventions to be incorporated into sex education programmes. However, few porn literacy interventions have been developed and there is little clarity about what porn literacy interventions should entail or what they aim to achieve. The present research sought to address this gap in the literature by exploring youth experiences with pornography, and engaging youth and parents in the development of a framework to support porn literacy interventions as well as parent-child conversations about pornography.

Methods

Study 1 used cross-sectional, quantitative methodology to quantify the prevalence of pornography use in Ireland with regard to age of first pornography engagement, frequency of pornography use, and motivations for pornography use, among Irish university students. Study 2 incorporated the use of Delphi methodology and structural equation modelling techniques to explore preferences for consensual and non-consensual pornography vignettes. Specifically, this study sought to explore whether more frequent pornography use was associated with being more comfortable with non-consensual pornography vignettes. Study 3 involved the development of a scale to examine what young adults report learning about sex from pornography. Study 4 utilised participatory research strategies and group discussions to engage young adults to explore their beliefs about pornography and their recommendations for adolescent pornography literacy intervention development. Study 5 and Study 6 employed the use of one-to-one interviews with parents to explore parents' perceptions about the impact of pornography on young people, their suggestions for youth porn literacy, and their recommendations for how best to support parents in talking to their children about pornography.

Results

Findings from Study 1 show that a majority of students living in Ireland see pornography for the first time during late childhood and early adolescence. Study 2 demonstrated that more frequent pornography use is not associated with a preference for non-consensual pornographic content. Study 3 shows that young adults learn about several aspects of sexuality from pornography, particularly, body aesthetic, sexual behaviour and sexual exploration.

Study 4 found that young adult's recommendations for porn literacy interventions for teenagers include a focus on reducing shame around pornography use, discussion of nine core concepts including sexual consent, body image and sexual pleasure, as well the promotion of critical thinking skills. Study 5 found that parents believe pornography to be a negative influence on young peoples' lives, however, the perceptions of the effects of pornography vary by the gender of the child. Findings from Study 6 indicate that parents want to support porn literacy efforts with their children; however, they recommend the use of different strategies which suit their parenting styles.

Conclusion

The results of these studies together suggest that young adults report varied learning about sexuality from watching pornography, however, they also believe that pornography does not provide reliable information about sex. Both young adults and parents of teenagers recommend that to support youth in navigating pornography, porn literacy interventions should facilitate the development of critical thinking skills and provide reliable information about sexual relationships in the real world.

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List of Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
BDSM	Bondage, Dominance and Sadomasochism
CI	Confidence Intervals
CFI	Comparative Fit Index
CFA	Confirmatory Factor Analysis
EFA	Exploratory Factor Analysis
IFI	Incremental fit index
KMO	Kaiser-Meyer-Olkin
LGBT+	Lesbian, Gay, Bisexual and Transgender
MSM	Men who have Sex with Men
MAR	Missing at Random
MCAR	Missing Completely at Random
NSHS	National Sexual Health Strategy
PCA	Principal Components Analysis
RMSEA	Root-Mean-Squared Error Associated
RSE	Relationships and Sexuality Education
SE	Standardised Estimates
SIPS	Sexual Information from Pornography Scale
SPHE	Social, Personal, and Health Education
SEM	Structural Equation Modelling
TLI	Tucker Lewis Index
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organisation

Introduction

Chapter Overview

The background to this research will be described in this chapter. A historical overview of sex education in Ireland will be presented. Theoretical models for the study will be outlined; an explanation of principles of sexual health and how pornography relates to these principles will be discussed. Then, the foundations of media literacy, in which porn literacy is based will be presented; the origins of porn literacy; and an overview of the porn literacy research evidence will be discussed, as well as an overview of the adolescent pornography research literature. The rationale for the current research will then be made and the outline for this thesis will be presented.

Background to the Research

Youth engage in a number of strategies to acquire information about sex. Pornography is often used in this context and has now become an important part of youth sexual socialisation (Štulhofer, Buško & Landripet, 2010; Wright, 2014). There are concerns about the impact of pornography use on young peoples' sexual behaviour, how they feel about themselves and their sexual partners. As a result educators and academics in the area of sexuality have begun to call for the development and implementation of porn literacy interventions for youth (Albury, 2014; Hutchings, 2017; Rothman, Kaczmarzsky, Burke, Jansen & Baughman, 2015; Tarrant, 2010; Vandembosch & van Oosten, 2017).

Porn literacy has been defined as “*the ability to deconstruct and critique sexual messages in pornography*” (Hutchings, 2017, p. 292). Porn literacy has a base in media literacy, but unlike media literacy, which is well-established, the study of porn literacy is in its infancy and there is little clarity around what porn literacy interventions should entail. Educators and parents are ideally positioned to provide youth with reliable information about sex and sexual health. However, formal sex education in schools continues to be criticised for focusing only on the risks related to sexuality,

and many parents feel too embarrassed and/or ill-equipped to talk about sexuality with their children. In Ireland, and indeed around the globe, this can be largely attributed to our sexual history.

The Irish Context

Social constructionist accounts conceptualise sexuality as socially and historically constructed (Jackson & Scott, 2010). Sexuality refers to one's sexual feelings, thoughts, attractions and behaviours. In the 18th and 19th century, there was a sexually conservative moral climate in Ireland. In this context most scholarly observations regarding Ireland's sexual history highlight how the Irish struggled to express their sexuality as a result (Scheper-Hughes, 1983). This was largely attributed to the influence of the Catholic Church on Irish family life (Smyth, 1995). Throughout much of its recent history, Ireland has remained a predominantly Roman Catholic country. Patrick Kavanagh, a leading Irish poet, in 1951 drew attention to the power exerted over the Irish people by the Catholic Church and wrote "*somewhere in the 19th century an anti-life heresy entered religion*" and demanded that all sexual energy be "*eliminated until expressed within the bounds of marriage*" (Henderman, 2017, p.16). Sexual repression was secured through a strong religious influence in state affairs and legislation that impacted all aspects of Irish life including gender roles, education, healthcare, and the rights of women. Accounts by Irish women who grew up during the 1930s to 1960s recall how sex was considered a sin, women were denied access to information regarding menstruation, intercourse, conception and pregnancy. However, they were also held responsible for controlling their own sexuality as well as rejecting male sexual advances (Leane, 2014). This had serious implications not only for how people could choose to live their sexual lives, but also regarding public health and medical treatment, criminal offences, and the abuse of power (Ferriter, 2010).

The legalisation of contraception, permanent closure of Magdalene laundries, and decriminalisation of homosexuality in the late 1980s and early 1990s all reflected a shift in Irish consciousness regarding sexual expression. The acceptance of multiple sexual relationships, aspirations to have sexually fulfilling relationships for both men and women, and common

adult use of pornography for sexual enjoyment are examples of ideological shifts, reflective of the change toward a non-oppressed state. More recently, results of referenda regarding same-sex marriage in 2015, abortion rights in 2018, and divorce in 2019, highlight how Ireland continues to change; the Catholic Church no longer exerts the power it once did. However, a history of internalised sexual oppression, and absence of sex education has left a lasting mark; many continue to experience a great deal of shame and embarrassment related to sexuality, and topics like masturbation and sexual pleasure are still not discussed in most sex education interventions (Inglis, 2005; Relationships and Sexuality Education Policy Guidelines, 1997; Houses of the Oireachtas, 2019). Further, important information regarding sexual safety and consent are seldom discussed.

Considering sex education only arrived in Irish schools in the early 90s most adults in Ireland are unlikely to have received any formal sexual education, and recent reports highlight how many struggle to discuss important aspects of sex with their children (YouthWork Ireland, 2018). A dearth of research exists on parent-child conversations about sex in Ireland. However, one study, in 2009, found that Irish parents tend to focus on the biological aspects of sexual intercourse and risks associated with sexual activity, and often avoid directly discussing sex with their children (Hyde, Carney, Drennan, Butler, Lohan & Howlett, 2009). Therefore, many fail to provide adequate information and skills to enable adolescents to successfully manage their emerging sexual identities.

Sex Education Policy. In 1979 calls for school-based sex education began in response to rising rates of teenage pregnancy and abortion. Interventions were delivered in a small number of schools as part of pastoral care, however, there was uncertainty amongst educators regarding what content should be delivered and many ceased delivery (Mayock, Kitching & Morgan, 2007; Nolan, 2018). The impetus behind calls to implement mandatory sex education in Irish post-primary schools began in the wake of the AIDS pandemic. This call was largely opposed by religious groups. However, overwhelming support for the initiative by the government meant that ‘The AIDS Education Resource’ was officially rolled out nationwide in 1990. Controversial topics included references to oral and anal sexual

intercourse and the use of condoms. The programme was eventually adopted in Catholic schools, under a clause that moral issues regarding AIDS transmission and the use of prophylactics should be delivered in accordance with the ethos of the school and wishes of parents (Nolan, 2018).

In 1987 Relationships and Sexuality Education (RSE) guidelines were issued to post-primary schools by the Department of Education but were largely ignored (Nolan, 2018). In 1993 A 'mandatory' RSE programme was introduced and RSE Policy Guidelines were disseminated in 1997 to assist schools in implementing the new curriculum as part of the wider Social Personal, Health, and Education (SPHE) programme. However, there were several barriers to its successful implementation, and national reports in 2007 (Mayock et al., 2007) and 2010 (Dáil na nÓg, 2010) showed that a majority of Irish adolescents received no formal sex education.

In recent years research has highlighted how young people living in Ireland use pornography to learn about sex (Youthwork Ireland, 2018). International scholars argue that this occurs in the absence of receiving relevant sexual information (Arrington-Sanders, Harper, Morgan, Obunbajo, trent & Foretenberry, 2015; Rothman, Kaczmarzsky, Burke, Jansen & Baughman, 2015). It is likely that this may also be the case in Ireland, as international reports show that Irelands approach to sex education exhibits many similarities with other countries (Brener, Demissie, McManus, Shanklin, Hawkins & Kann, 2014; WHO, 2018). For example, as with many other European countries and in America, the Irish government has produced policy guidelines regarding RSE in schools, however, comprehensive curriculum is not mandatory, schools often decide the content which is delivered, and there is a lack of support for teacher training (Demissie, Brener, McManus, Shanklin, Hawkins & Kann, 2014; International Planned Parenthood Association, 2018; WHO, 2018).

A key issue with regard to implementing comprehensive sex education in Ireland is that approximately 60% of Irish post-primary schools are affiliated with the Catholic Church. It is therefore common for Church-run schools to omit the discussion of topics that conflict with Catholic values, such as LGBT+ relationships and condom use (Nolan, 2018). It is

also common for Catholic groups to teach sex education in schools. One such group is Cura, an Irish Catholic church funded, pro-life pregnancy counseling service. Other schools invite external organisations like the Family planning agency, WISER and B4UDecide into the school to deliver comprehensive sexuality education (BeWiser.ie, 2019; B4UDecide, 2019). It is therefore likely that there is an unequal distribution of sexuality-related knowledge among Irish youth. Under the National Sexual Health Strategy, the RSE guidelines are currently under review to deal with such disparities in knowledge, and to facilitate healthy sexual development that reflects a comprehensive approach to sexuality education.

National Sexual Health Strategy 2015-2020. The National Sexual Health Strategy (NSHS 2015-2020) is the first national policy document related to sexual health and wellbeing to be developed in Ireland. The strategy takes a life course approach to sexual health and wellbeing, which is a key underpinning concept of the Healthy Ireland Framework, under which the NSHS 2015-2020 has been introduced (Ipsos, 2016). The NSHS acknowledges the importance of young people's development of knowledge around sexual health, and of building on that foundation for positive sexual health and wellbeing into adulthood and older age. Therefore, the strategy places strong emphasis on access to high quality sexual health education and information throughout a person's life, not only during adolescence.

The NSHS acknowledges that people are engaging with pornography at a young age, and draws on international research which indicates that 1 in 5 adolescents report receiving information about sex from pornography (UNICEF, 2011). This is supported by recent research which found 20% of Irish adolescents reported that they think pornography is a useful source of information about healthy sexual relationships (YouthWork Ireland, 2018). Concerns raised regarding the impact of pornography highlight how children and adolescents are particularly susceptible to being influenced by pornography. Recommendations in this context refer to educational interventions that support youth in filtering pornography messages, receiving greater access to reliable information about sex, and the development of public policy based on expert opinion and up-to-date research evidence (UNICEF, 2011).

More recently, findings from the Joint Committee on Education and Skills Report on Relationships and Sexuality Education issued in January 2019 highlights the many failings of RSE in Ireland to meet the needs of young people. This was particularly related to youth technology use and its impact on sexuality and development. The report states that “*The [RSE] programme does not deal with the role of the Internet, social media, mobile phones or pornography. The programme does not start with young people’s lived experiences*” (Houses of the Oireachtas, p. 21). Item 11 of the summary report produced by the committee states that “*The negative impact of pornography forms an integral and fundamental part of all discussions on and reforms of SPHE and RSE reinforcing positively framed sexual experiences.*” Recommendations for new RSE curriculum include “*contraceptive use, sexually transmitted infections, and information around abortion, sexual orientation, gender identity, pornography, consent, psycho-sexual issues and gender equality.*” (Houses of the Oireachtas, p. 21).

The recommendations expand on guidelines put in place by Social, Personal, and Health Education (SPHE) policy for post-primary schools, and acknowledges the role of pornography in young peoples’ lives. Academic scholars believe that increasing access to education for adolescents around the realities of sex, as well as increased information about pornography, will aid in the healthy sexual development of young people who may intentionally, or unintentionally engage with pornography online (Rothman, Adhia, Christensen, Paruk, Alder & Daley, 2018; Vandenbosch & van Oosten, 2017).

In addition to discussing pornography in schools as part of comprehensive sexuality education, parents can also support their children in navigating their online sexual lives. Many parents seek to prevent their child from accessing pornography by installing parental blocks (Family Online Safety Institute, 2014; Livingstone & Helsper, 2008). However, research shows that restricting access to pornography via parental blocks continuously fails to prevent youth exposure (Chakroff & Nathanson, 2008; Rasmussen et al., 2015). Implementing porn literacy as a core component to the Irish national strategy on sexual health could support parents and carers in talking

to young people about pornography (Comella & Tarrant, 2015). It has recently been documented that parent-child conversations about pornography during childhood can impact their child's attitudes towards using pornography, leading to reduced pornography use in early adulthood (Rasmussen, Ortiz & White, 2015; Rasmussen, Rhodes, Ortiz & White, 2016). Many parents are concerned about the impact of pornography on children (Byrne, Kardefelt-Winther, Livingstone & Stoilova, 2016; Livingstone & Haddon, 2009; Turow & Nir, 2000). However, few discuss pornography with their child (Rothman et al., 2017). Enabling parents and carers to access relevant information and facilitating the development of parent's skills needed in order to openly discuss pornography use with their children is essential to this process.

Section 2. Conceptualising Porn Literacy

Principles of Sexual health. Comprehensive conceptualisations regarding what it means to be sexually healthy were developed by the World Health Organisation in 2006, who defined sexual health as a "*State of physical, mental and social well-being in relation to sexuality. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence*" (World Health Organisation, 2006, p.1). More recently, a group of sexuality experts from a range of disciplines sought to provide further clarity to these aspirations. They presented a multidisciplinary framework outlining 15 domains crucial to healthy sexual development of young people (McKee, Albury, Dunne, Grieshaber, Hartley, Lumby & Mathews, 2010). This includes the "*Freedom from unwanted, aggressive, coercive or joyless activity, an understanding of consent, safety, and ethical conduct more generally, education about biological aspects of sexual pleasure, relationship and communication skills, agency, self-acceptance and resilience, awareness and acceptance that sex can be pleasurable, of one's own, as well as societal values and boundaries, and the role of media in shaping understandings of sexuality*"

(McKee et al., 2010, p. 17). Pornography use relates to these domains in a number of ways.

Freedom from unwanted, aggressive or coercive activity. Healthy sexual development can occur “In a context in which children are protected from unwanted sexual activity” and “understand the nature and complexity of consent—not just their own but also other people’s” (McKee et al., 2010, p. 16). One of the primary concerns related to pornography use in public consciousness, often contributing to moral panic, is that pornography will normalise sexual violence and lead to an increase in sexual violence perpetration and victimisation (Zillmann & Bryant, 1982; Dines, 2010). However, research to date has produced contradictory findings in this regard. Recent longitudinal research with adolescents points toward a link between violent pornography engagement and sexual aggression. However, these relationships are largely mediated by additional proclivities to non-sexual aggression and delinquent behaviour. In addition, these relationships are only evident among a small number of adolescents (Ybarra, Mitchell, Hamburger, Diener-West, & Leaf, 2011; Ybarra & Thompson, 2018).

Understanding biological aspects of sex. The multidisciplinary framework for healthy sexual development posits that young people should be provided with accurate information about how their bodies look and function (McKee et al., 2010). Sex education initiatives often fail to provide realistic illustrations of male and female genitalia, and rarely discuss pleasure related sexual functioning, such as arousal, orgasm and vaginal lubrication. A number of qualitative studies with adults highlight how pornography has been a valuable source of information regarding the acquisition of knowledge of genital and body aesthetic, as well as sexual functioning (Arrington-Sanders, 2015; Davis, Carrotte, Hellard, temple-Smith & Lim, 2017; McKee, 2010). Pornography provides detailed depictions of close-up footage to a variety of naked bodies and genitalia, providing information that many sex education programmes do not.

However, pornography has also been criticised for reinforcing a standard of attractiveness and a number of studies among adults have also shown pornography use was linked with lower body and genital self-esteem (Cranney, 2015; Morrison, Ellis, Morrison, Bearden & Harriman, 2006;

Tylka & Kroon van Diest, 2014). This link has been hypothesised to exist because popular pornography often features actors with a certain body type, larger than average penis size, and vulvas with non-protruding labia minora (Iglesia et al., 2013; McKee, Albury & Lumby, 2008; Yurteri-Kaplan et al., 2012). In contrast, others maintain that pornography content has become increasingly varied, representing a range of bodies, identities and preferences in a non-judgmental way (McKee, 2010).

Understanding relationship and communication skills. The framework maintains that adolescents need communication and assertiveness skills to adequately manage their sexual and non-sexual relationships (McKee et al., 2010). Pornography is a poor educator on relationship skills as a feature of much mainstream pornography is that sex often occurs outside the context of a relationship (McKee, 2010). Casual sex encounters are usually depicted and traits central to the development and maintenance of healthy relationships are not. Focusing specifically on romantically involved people, research offers mixed evidence on the role of pornography for different relationship outcomes (e.g., Wright, Steffen & Sun, 2019; Maddox, Rhoades, & Markman, 2011). When asked about the impact of pornography use on themselves and their relationship, users indicated both negative (e.g., decreased sexual interest) and positive (e.g., sexual experimentation) aspects (Hald & Malamuth, 2008; Kohut, Fisher, & Campbell, 2017).

An understanding of agency. Sexual agency involves the capacity to control one's own sexuality and the ability to make decisions about one's sexual life. Pornography is often criticised with regard to promoting sexual agency, by reinforcing social norms related to sexual behaviour, increasing pressure on young people to replicate behaviour seen in pornography and conform to traditional gender roles (Flood, 2009; Wright, Tokunaga & Kraus, 2016). In contrast, pornography provides important information that sex can be pleasurable (McKee, 2010) and is associated with individuals being more comfortable about sex and reassured of their sexual identity (McKee, Albury & Lumby, 2007; McKee, 2010).

An understanding of safety. Sexual safety regarding sexually transmitted infections, unwanted pregnancy, and physical pain is crucial to

healthy sexual development (Allen, 2005, p. 2). Indeed these topics are often at the forefront of sex education interventions for young people. Much mainstream pornography is a poor educator regarding sexual safety. Condoms and the use of lubricants are rarely depicted and behaviours which require attention to hygiene, are commonplace yet genital cleaning between behaviours is not depicted. More recently, pornography production companies have made increased efforts to increase the educational value of their content by providing greater discussions of safe sex. This includes the discussion of consent in pornography scenes, the use of safe words in BDSM practices, use of lubricants, and safety precautions for behaviours which involve an increased risk of physical pain or injury, including anal sex, electrolysis and rope work (Pink & White Productions, 2016). However, these sites require subscriptions. The majority of adolescents are unlikely to access such content as they often rely upon mainstream and freely accessible content (Smith, Attwood, Barker, 2017; Rothman et al., 2015). Therefore, there is a need to support young people in understanding the representation of sex in pornography and how they pertain to sexuality and sexual health.

Health literacy. The term “health literacy” was originally used in 1974 to describe patient knowledge about transmission and prevention of diseases, as well as appropriate care practices for physicians in treating their patients (Simonds, 1974). Early definitions of health literacy relied on a functionalist perspective of literacy meaning that the health care user had the capacity for reading, writing and communicating health information, as well as accessing healthcare. Contemporary understandings of health literacy have developed from this initial perspective to encompass knowledge and competencies required to make decisions to prevent ill-health, maintain health and to improve one’s quality of life, while continuing to emphasise the individual, social and cognitive skills necessary to understand and use health information (Nutbeam, 2000; Nutbeam, 2008; Peerson and Saunders, 2009; Ratzan and Parker, 2000; Sorensen, Van den Broucke, Fullam, Doyle, Pelikan, Slonska & Brand, 2012). These developments reflect the emergence of health literacy as a multidimensional

concept which has been defined in various ways by different disciplines (Sorensen et al., 2012). This presents the risk of lack of consensus about how it is defined and what it encompasses.

Nutbeam (2000) has influenced the field to the greatest extent through a model of health literacy that is comprised of three key components. First, functional literacy, which involves the basic reading and writing skills that enable an individual to understand health information. The second, interactive health literacy is the application of cognition and social skills to actively participate in understanding varying forms of communications and applying the new information to evolving situations; and the final component, critical literacy, which involves using critical appraisal skills to evaluate information supporting greater control over health-related decision making. Critical health literacy empowers individuals to act on the social, economic, and environmental determinants of health through individual and collective efforts. It involves the capacity to question and analyse information, to utilise valuable information or reject invaluable information in order to “*exert greater control over life events and situations*”. Thus, it aligns with contemporary understandings of health literacy with aspirations of empowerment (Nutbeam 2000, p. 264). In other words, current understandings of health literacy not only involves accessing and understanding information, but what it enables individuals to do, both individually and collectively (Nutbeam, 2000).

In the context of sexual health, literacy not only involves the capacity to read sexual health promotion information, but also encompasses the use of information, and development of sexual competency skills that enable people to make healthier sexual health decisions, becoming independent and autonomous sexual beings.

The concept of ‘sexual literacy’ was first addressed with regard to the lack of general sexual health knowledge in the general population in the US (Reinisch & Beasley, 1990). Although developments in our understanding of health literacy has evolved to reflect a skills and competency outlook, recent sexual literacy interventions continue to examine outcomes more strictly in terms of knowledge about sexual health. For example, in 2012 Guzzo and Hayford defined sexual literacy with

regard to having accurate information about the risk of pregnancy and contraceptive side effects. Similarly, in 2015, Graf and Patrick (2015) measured sexual literacy in the context of knowledge of sexual risk behaviours. However, there is a dearth of studies that explores if this knowledge leads to behavioural outcomes (Guse, Levine, Martins, Lira, Gaarde, Westmorland & Gilliam, 2012; Jones & Norton, 2007). In contrast, health literacy in other contexts has a more varied remit. For example, a recent review of mental health literacy interventions shows that intervention efforts regularly include the promotion of skills not only to understand “*how to obtain and maintain good mental health*”, but also to understand “*mental disorders and their treatments, decrease stigma against mental illness, and enhance help-seeking efficacy*” (Wei, McGrath, Hayden & Kutcher, 2015, p. 2). This reflects the potential to develop the sexual health literacy concept to reflect wider developments in the field. In addition, interventions often fail to effectively design and evaluate interventions with a critical literacy component (Livingstone, Papaioannou, Pérez & Wijnen, 2017).

The field of media literacy closely aligns with critical health literacy and has shown to be effective at facilitating the development of critical thinking skills (Chinn, 2011). Health literacy and media literacy can therefore, complement one another. However, the two are often studied separately. Current understandings of media literacy align with the key components of health literacy as media literacy requires knowledge to understand media and skills to critique media content, thus enabling people to make better health-related decisions (Jeong, Cho & Hwang, 2012; Livingstone et al., 2017;).

Consideration of the conceptualisation of health literacy is especially relevant in the study of pornography, because desired outcomes of interventions related to pornography can be framed within a public health perspective. Reducing sexual violence associated with pornography use is an example of this. Yet there is considerable controversy and nuance within the body of research that examines the impact of pornography on young people. It is not as clear-cut that pornography use is a public health threat or menace. Therefore the aims and objectives of a pornography intervention based on a health literacy model are potentially unclear. It is therefore

helpful to examine how a perspective on porn literacy informed by both health literacy, with its focus on clearly defined outcomes, processes and threats to wellbeing, can be combined with a media literacy model that focuses more on critical apprehension of media based on an assumption that such media is frequently going to be engaged with on an on-going basis. It is not that the goal is to avoid exposure to the media in question, namely an abstinence approach to porn literacy, but that the individual has clear knowledge, values and skills that enable them to engage with pornography in a safe way that is compatible with their needs.

Media literacy

Origins and meaning. Media literacy has a basis in the discipline of media and cultural studies. Originally media literacy focused on the interpretation of traditional print material, enabling a deeper understanding of the intention behind the media message, those who produced it and the audiences the messages were intended for. Subsequently, the concept has expanded to include the internet as well as other forms of digital media (Livingstone, 2004; Livingstone et al., 2017). Although there are a variety of definitions of media literacy in the literature, one which is widely adopted is media literacy “*is the ability of a citizen to access, analyze, and produce information.*” (Aufderheide, 1993, p. 6). Contemporary understanding of the core objectives for youth media literacy education therefore involve the development of critical thinking skills and a greater capacity to analyse and inquire about the media messages that young people engage with and create (Alliance for Media Literate America, 2007). This goal is desired so that “*people use their individual skills, beliefs and experiences to construct their own meanings from media messages*” (Alliance for Media Literate America, 2007, p. 3). The four components of “access, analyze, evaluate and create” show that media literacy aims to promote the development of skills, agency, autonomy and empowerment, rather than merely providing information and “*each component supports the others as a part of a nonlinear, dynamic learning process*” (Livingstone, 2004, p. 5).

Media literacy to help conceive of porn literacy is important as goals for pornography interventions typically include discussion of the use of

pornography, critical thinking about its content and its relationship to offline relationships and experiences. Yet a health literacy perspective brings with it the advantage of acknowledging there can be behavioural goals and desired outcomes associated with pornography-focused interventions. In this sense, it can be helpful to conceive of porn literacy as a hybrid of the critical media awareness associated with media literacy and the behavioural goal, skills development, and harm reduction focus of health literacy interventions.

Media literacy efficacy. A key benefit of media literacy training is that it has been shown to support adolescents to take an analytical approach to viewing media. According to tests of the Message Interpretation Process Model (Austin & Johnson, 1997; Austin & Knaus, 2000), skepticism toward media messages can help diminish the influence of message effect on young people's decisions (e.g., Austin et al., 2005; Pinkleton, Austin, Cohen, Chen & Fitzgerald, 2008). Media literacy interventions have been shown to be effective at challenging the influence of mass media. For example, meta-analyses of media literacy interventions have found them to be effective in reducing risky behaviours such as drug and alcohol consumption (Scull, Kupersmidt, Malik, & Keefe, 2018). Media literacy has been shown to help strengthen young peoples' message-interpretation processes and shape attitudes which may impact sexual health (Pinkleton, Austin, Chen, & Cohen, 2012).

Youth who participate in media literacy training have been shown to feel more confident in their ability to make decisions about their sex lives (Pinkleton, Austin, Chen, & Cohen, 2012). Media literacy interventions can also be effective in influencing youth sexual health. For instance, among American youth, interventions have increased participants' ability to delay sexual activity (Pinkleton et al., 2012), reduce sexual risk behaviours, and reduce participants' acceptance of rape myths (Scull, Kupersmidt, Malik, & Keefe, 2018). Media literacy interventions often focus on challenging the negative outcomes associated with media use, however, media literacy which facilitates the development of critical thinking skills can also support positive youth development (Burbach, Matkin, & Fritz, 2004; Fazey, 2010).

In terms of media perceptions, results of meta-analyses indicated that participants who engaged with a media literacy curriculum expressed greater awareness of the media's influence on adolescents' sexual behavior and had a greater understanding of the myths that media contain regarding sex and its consequences when compared to control group participants (Jeong, Cho & Hwang, 2012). In this sense, most media literacy interventions seek to influence attitudes and raise awareness of media impact. In contrast, health literacy goals are more action oriented with intentions to impact health behaviour change. Media literacy has been shown to reduce media influence on adolescents by improving awareness and understanding of the potential effects that the media can have on a sexual decision making, and increasing knowledge regarding the representation of fictional and glamorized media depictions as being unrealistic.

Media literacy interventions also facilitate the development of a more accurate understanding of normative sexual experiences among teenagers and greater belief in their ability to resist peer pressure (Jeong, Cho & Hwang, 2012). Participants in a number of studies also indicated that they had greater capacity to control how they behave sexually and exhibited what the authors described as more positive attitudes around abstinence and delaying first time sex, than those in a control group (Pinkleton, Austin, Cohen, Chen & Fitzgerald, 2008). Media literacy interventions have been found to be effective in promoting youth sexual health without reducing the desirability of the media in question (Pinkleton, Austin, Chen & Cohen, 2012; Pinkleton, Austin, Chen & Cohen, 2013).

However, media literacy interventions have also been criticised for failing to appropriately evaluate intervention outcomes in accordance with their aims. For instance, a goal of many media literacy programmes is to increase critical media literacy skills, however, interventions more often assess participants' beliefs about their critical media skills instead (Potter & Thai, 2019). In addition, those who participate in media literacy interventions are often persuaded to change their socially 'unacceptable' beliefs or attitudes to 'acceptable' ones, which coincide with intervention developers' beliefs (Potter & Thai, 2019). Thus, intervention characteristics

often fail to facilitate youth empowerment and agency through their strategies. This is particularly an issue with regard to more contentious topics like pornography.

Porn Literacy

Origins and meaning. The term “porn literacy” was first coined by sexuality scholar Shira Tarrant in 2010, who then advocated for increased facilitation of media-critique skills related to pornography “*that encourages an understanding of what constitutes mutually consensual sex in real life*” (Tarrant, 2010, p. 3). This call to action was based on the increased availability and accessibility of Internet pornography, and its potential implications (Tarrant, 2010). This definition is more consistent with the media literacy perspective of understanding attitudes, rather than the promotion of competencies or skills. Several scholars have adopted a broader understanding of the potential uses of porn literacy, beyond the promotion of understanding regarding consensual sexual relationships (Albury, 2014; Bengry-Howell, 2012; Haste, 2013; Hutchings, 2017). Contemporary understandings of porn literacy include the capacity to understand pornography production, challenge perceived pornography realism, ethically consume pornography, critically appraise pornography, challenge negative outcomes of pornography engagement, and facilitate positive sexual experiences with pornography use (Albury, 2014; Bengry-Howell, 2012; Haste, 2013; Rothman et al., 2018; Vandenbosch & vanOosten, 2017). Therefore, porn literacy may not only be conducive to supporting positive sexual health in terms of avoiding physical and emotional harm, but also in supporting a positive and respectful approaches to personal and interpersonal sexual relationships (WHO, 2006). However, there is still a lack of consensus regarding what porn literacy means, or what ‘best-practice’ looks like (Albury, 2014).

To date there are two empirically tested porn literacy interventions, one developed in the US, the other in the Netherlands (Rothman et al., 2018; Vandenbosch & vanOosten, 2017). A common feature of these interventions is to draw attention to the potential risks associated with replicating behaviours seen in pornography, thus aligning more with a media literacy perspective (Rothman et al., 2018; Vandenbosch & vanOosten, 2017).

Although less common in terms of intervention work, one feature of porn literacy pertains to the facilitation of critical thinking skills. Critical literacy is often discussed as a core feature of porn literacy. Critical literacy components in interventions, however, are relatively rare and many interventions simply provide information about pornography (sometimes from one particular, anti-porn perspective), rather than facilitating the development of critical engagement skills. This is also a criticism of many critical health literacy interventions (Chinn, 2011). It is well documented that young people experience a range of outcomes associated with viewing pornography, including both positive and negative outcomes (Owens, Behun Manning & Reid, 2012; Peter & Valkenburg, 2016). Taking the range of individual experiences into account, currently developed porn literacy interventions, which focus predominantly on the risks of pornography use, are unlikely to cater to the specific needs and experiences of young people.

It has been argued that interventions should aspire to combine the sharing of information, facilitate the development of critical engagement skills, increase skepticism about sexual portrayals in pornography, and also to increase young people's knowledge and confidence related to their personal and shared sexual experiences (Alliance for Media Literate America, 2007). However, a key issue within porn literacy research and intervention development is that there is little clarity on what pornography literacy interventions aim to achieve (Albury, 2014). Critical engagement with pornography is seen as an end goal for many porn literacy programmes; however interventions often fail to define these critical engagement skills or assess the skills effectively. Instead, pornography literacy intervention effectiveness is often based on the information learned about pornography, rather than the promotion of skills to think critically about it (Rothman et al., 2018; Vandebosch & vanOosten, 2017).

Pornography literacy and education to date. Sexual explicitness within mass media exists on a spectrum, ranging from non-explicit touch, which may be shown on children's TV shows, such as two cartoon characters holding hands, to more explicit; two teenagers kissing, to films which depict nudity, to mainstream pornography which features close up

footage of the genitals and of people engaging in a variety of sexual behaviours. Porn literacy therefore exists as part of a spectrum of media literacy, with general, non-sexual media literacy at one end and porn literacy at the other. Porn literacy is also on a spectrum of health literacy based on its relevance to the WHO definitions of sexual health and the concerns people raise on a public health basis about pornography engagement. Because of the degree of its explicitness, unlike other media literacy programmes, which often involve showing media content and engaging youth in producing their own media, porn literacy will differ as children and teenagers cannot be shown pornographic content nor should they be encouraged to produce or disseminate sexual imagery (Albury, 2014). Therefore, educators have had to come up with novel ways to appropriately address this topic with young people. Educational materials used in porn literacy interventions vary. Some have utilised humorous videos to prompt discussions on the differences between sex in pornography and sex in real life, while others discuss descriptions of pornographic content behaviours that might typically feature in pornography (Bewiser.ie, 2019; Haste, 2013; KN Creative Lab, 2013).

To date, several porn literacy and pornography education interventions and resources have been developed. Pornography education, as distinct from porn literacy, are educational interventions which aim to impart knowledge about pornography, rather than supporting critical thinking (Bewiser, 2018; B4U Decide, 2019). Pornography education resources for teachers have aimed to provide an overview of the research evidence concerning pornography and young people and provide information about the law surrounding pornography and provide prompts for discussion to challenge the perceived realness of pornography. (Owen & Gowen, 2014). Other resources have been developed which provide some basic information for parents around how to approach the topic of pornography with their children (e.g., *The Porn Conversation*, 2018). In contrast, porn literacy interventions are comprised of core features from other sexual media literacy interventions for youth; the promotion of knowledge and skills (Alliance for Media Literate America, 2007).

Interventions with critical literacy components, aim to provide information as well as facilitate critical literacy skills development. One example is “*Porn, Porn Everywhere*” (DeFur, 2014), which aims to help youth clarify their own values regarding pornography and to provide a space where young people can explore and consider their own, and other people’s, opinions about the behaviours and representations of people in pornography. This approach aims to support young people in making informed decisions about their intimate lives DeFur (2014). Similarly, resource packs such as “*Planet Porn*” (Hancock, 2019) promote the use of participatory and interactive group work activities that highlight the unrealistic aspects of pornography in relation to the lived experiences of first time sex for most young people. “*Planet Porn*” also provides guidance on how to best support young people in understanding the law around pornography.

Few evaluations of porn literacy interventions have been conducted, however, recent research has demonstrated that participating in porn literacy as part of a sex education intervention can increase knowledge about pornography and has demonstrated effectiveness at reducing sexist views towards women among 13-25 year old males and females (Vandenbosch & vanOosten, 2017). Evaluations of another intervention which aimed to support American youth aged 15-24 to be able to define pornography, identify their views about pornography, and societal attitudes about pornography, has demonstrated that porn literacy interventions can increase pornography-related knowledge and change an individual’s attitudes towards pornography, as well as their behavioural intentions related to sex (Rothman et al., 2018) in non-school contexts. Therefore, there is some evidence that porn literacy can also be conducive to supporting sexual health in terms increasing knowledge and reducing discrimination against women (Vandenbosch & vanOosten, 2017; Rothman et al., 2018). However, porn literacy may also achieve positive outcomes such as increasing self-esteem, confidence, agency, autonomy and empowerment, as well as increasing knowledge regarding sexual pleasure and supporting healthy relationships (Albury, 2014). Yet, evidence of the latter have not been explored in detail.

Gaps in the porn literacy literature. There remain several deficits with regard to the current understanding of porn literacy. First, there is little clarity regarding what the content of interventions should be or what they aim to achieve. Most porn literacy interventions say that they aim to promote critical thinking skills. Instead, evaluations indicate that interventions can increase knowledge and change young people's attitudes towards pornography, but they have not assessed young people's critical thinking skills. For example, Vandenbosch and vanOosten (2017) explored how porn literacy supported youth in learning about sexually explicit material. Rothman et al., (2018) aimed to explore if (1) their porn literacy curriculum was feasible to implement, (2), if participants' pornography knowledge increased, (3) and if participants' attitudes and behavioural intentions changed.

What makes the process of summarising evaluations even more difficult is that the aims of interventions vary. Unlike in the context of traditional health literacy interventions outcomes in porn literacy are less clearly defined and largely depend on the philosophical perspective of the intervention developer. For example, health literacy interventions may aspire to increase knowledge regarding sexually transmitted infections (STIs) in order to reduce rates of STI transmission. From an epidemiological perspective it is clear what the desired outcomes of these interventions should be - to reduce STIs in the general population. However, with regard to pornography, individuals or institutions with an 'anti-porn' or 'pro-porn' stance may shape the content and desired outcomes of their initiatives in accordance with their own views. Proponents of critical porn literacy interventions may seek to employ a skills based approach to pornography engagement, thus adopting a media literacy perspective. In comparison, critics of pornography may strive to reduce pornography engagement and see porn literacy as a means of harm reduction. This approach more closely aligns to traditional health literacy because there are specific health promoting outcomes envisaged. However, effective porn literacy may also be capable of enhancing youths understanding and exploration of their sexuality, as well as challenging potentially negative outcomes (Albury, 2014; Bengry-Howell, 2012; Haste, 2013). Porn literacy

may therefore crossover between the realms of traditional health literacy and media literacy.

In summation, porn literacy is a relatively new concept. To date, its methodology has tended to be more closely aligned with media literacy approaches. However, it can also benefit from health literacy approaches in certain respects. The concept of porn literacy therefore merits further development. In this context there is a need to identify the range of practical skills that may be supported in porn literacy interventions, from functional abilities to accessing pornography that is compatible with ones values and beliefs, as well as supporting the development of critical evaluation skills.

Section 3: Adolescent Pornography Research Findings

Pornography has been defined in several ways within the literature (Campbell & Kohut, 2017; Short, Black, Smith, Wetterneck & Wells, 2012). For the purpose of this study, pornography is defined as “*written, pictorial, or audio-visual representations depicting nudity or sexual behaviour*” based on Campbell and Kohut’s (2017) recommendations for utilising a definition of pornography that closely aligns with young peoples’ understanding of pornography. Adolescents all over the world engage with pornography on a regular basis (Mattebo, Tydén, Häggström-Nordin, Nilsson & Larsson, 2016; Peter & Valkenburg, 2016; Wright & Stulhofer, 2019). Apart from one study of 1,056 young people aged between 14 – 24, which found that 20% of the young people surveyed found pornography to be a useful source of sexual information (Youthwork Ireland, 2018), however, there is no information available regarding adolescent pornography engagement experiences in Ireland. Most pornography research comes from Scandinavia, Australia and the USA. Findings from these countries indicate that a majority of boys and girls living today will see pornography for the first time during early adolescence (Peter & Valkenburg, 2016; Svedin, Åkerman & Priebe, 2011; Tsitsika, Critselis, Kormas, Konstantoulaki, Constantopoulos & Kafetzis, 2009; Vandenbosch & Eggermont, 2013; Wright & Štulhofer, 2019; Ybarra & Mitchell, 2005). Adolescents report that they use pornography to learn about sex, particularly about sexual orientation, body aesthetic and new sexual techniques (Arrington-Sanders, 2015; Ashton, McDonald & Kirkman, 2018; Rothman

et al., 2015; Smith, 2013; Trostle, 2003). Although boys and girls differ in their age of first pornography use and the frequency of their engagement, most young people report seeing pornography at a stage in their lives when they are still learning about sex and sexual matters. Exposure to pornography thus has the potential to impact on what they learn and understand (Arnett, 2007; Wright, 2011). As a result, researchers have begun to focus on the implications of such pornography use on youth sexual health and development.

Most adolescent pornography research is based on cross-sectional, quantitative data and can largely be summarized into four groups: 1) early sexual debut, 2) casual sexual behaviour, 3) sexual risk taking, and 4) sexual victimisation and perpetration of sexual violence.

Early sexual debut. Both cross-sectional and longitudinal evidence indicates that more frequent pornography engagement is associated with earlier sexual initiation (Atwood et al., 2012; Bogale & Seme, 2014; Brown & L'Engle, 2009; Manaf et al., 2014). This is argued to occur as pornography engagement leads to more sexually liberal or permissive attitudes. For instance, adolescents often report conservative attitudes towards sex in general and early sexual debut. Yet, studies indicate that those who engage more regularly with pornography have more liberal sexual attitudes (Lo & Wei, 2005; Peter & Valkenburg, 2006, 2008; To, Iu Kan & Ngai, 2015). Longitudinal research has also shown pornography use to be predictive of sexually permissive attitudes (Peter & Valkenburg, 2010). However, the causal relationship between such variables is unclear and findings in this area have yielded small effect sizes (for review see: Peter & Valkenburg, 2016). Frequent engagement with sexual media more generally, such as popular movies and television has been found to predict earlier sexual debut as well as non-coital sexual activities (Ashby, Arcari, & Edmonson, 2006; Collins et al., 2004; O'Hara, Gibbons, Gerrard, Li & Sargent, 2012).

Casual sex. There is a relative dearth of research on the link between pornography and casual sex. However, some studies have found that those who watched pornography were also more likely to engage in casual sex (Cheng et al., 2014; Mattebo, Tydén, Häggström-Nordin,

Nilsson, & Larsson, 2016; for a review, see Peter & Valkenburg, 2016). Among a sample of Swedish adolescent girls, pornography engagement was associated with a significant increase in reporting casual sexual experiences in comparison to girls who did not engage with pornography (Mattebo et al., 2016). Further, findings from a three-wave longitudinal study with a large sample of Dutch adolescents (N = 1079), demonstrated that watching pornography predicted casual sex. This study found that engaging with pornography predicted adolescents' perceptions of pornography realism. Such perceptions predicted stronger views about sex as a means of sexual gratification, which in turn, predicted casual sex across all time points (Vandenbosch & Van Oosten, 2018).

Sexual risk taking. Contradictory findings have been reported on the relationship between pornography and sexual risk taking (Landripet, Tomić, Burić & Štulhofer, 2016; Koletić, Mehulić & Štulhofer, 2019). Risky sexual practices include early sexual debut, having multiple sexual partners, having unprotected sex. There has been much focus on the link between pornography and unprotected sex among adolescents, because of the potential risk of unwanted pregnancy or contraction of sexually transmitted infections. One study with African American girls aged 14-18 found that pornography use was associated with reduced likelihood of using a condom during most recent sexual intercourse (Wingood, DiClemente, Harrington, Davies & Hook, 2001). Luder et al (2011) found more frequent pornography use to be associated with reduced likelihood of having used a condom in their most recent sexual encounter for teenage boys, but not for girls. More recently, Koletic and colleagues (2019) in their 5-wave longitudinal study of Croatian adolescents reported that frequent pornography use was not associated with having sex without a condom. This there is not, as yet, clarity on these issues.

Sexual violence. One of the primary concerns related to youth pornography engagement is the normalisation of sexual violence, primarily against women and the application of these learned scripts in youth real life relationships. Regarding sexual victimisation, studies show that age of first engagement with pornography is associated with behavioural correlates including women's sexually submissive behaviour. Sun, Wright and Steffen

(2017) found that women's submissive partnered sexual behaviour was strongest amongst those who engaged with pornography at an early age, in comparison to those who first saw pornography in later life. Regarding the perpetration of sexual violence, longitudinal studies have demonstrated that earlier engagement is indeed associated with more frequent pornography use among adolescents (Wright & Stulhofer, 2019). However, a preference for violent content has not been identified.

Recent findings from their longitudinal study of Croatian adolescent males by Landripet, Busko, & Stulhofer (2019) shows the preference for violent and coercive content decreased over time throughout middle to late adolescence. However, among the small number of individuals who report a preference for violent pornography, some recent studies have shown a small, yet significant effect of the predictive relationship of violent pornography on adolescent sexual aggression. For example, Ybarra and Thompson (2018) found that adolescent engagement with violent pornography, which was defined as depicting "*one person physically hurting another person while doing something sexual*" (Ybarra & Thompson, 2018) significantly predicted sexual assault perpetration in a sample of American youth. Similarly, Ybarra, Mitchell, Hamburger, Diener-West, & Leaf, (2011) found, that after controlling for additional factors like non-sexual aggression, alcohol consumption, violent home environment, engaging with violent pornography was associated with increased likelihood of sexual aggression.

A number of additional variables influence the direction and strength of these associations, including a person's gender, perceived pornography realism, and the level of sexual experience that an adolescent has (Hald, 2007; Peter & Valkenburg, 2016; Stulhofer, Busko & Schmidt, 2012; Svedin & Priebe, 2004; Wright, Sun, Steffen, 2018, Wright & Stulhofer, 2019).

Gender differences. Gender differences have been highlighted with regard to adolescents' experiences with pornography. Several qualitative studies highlight gender differences between boys and girls in the perceived acceptability of pornography. These studies have consistently found that although adolescent girls report sexual arousal responses to pornography

they are more critical about pornography than their male counterparts (Berg, 2000; Löfgren-Mårtenson & Månsson, 2010). These findings have been supported by other quantitative studies (Hald, 2007; Svedin & Priebe, 2004). Additionally, Berg (2000) found that young women felt that talking about pornography, was not socially acceptable, and this may be reflected in the type of answers young women volunteer in pornography studies. Adolescent girls are also more critical about the representations of physical appearance ideals in pornography and believe that representations of slim women, surgically enhanced breasts, and pubic hair removal affect how young people feel about themselves and their bodies. However, adolescent boys more often discuss feeling pressured by representations of sexual performances by male pornography actors (Häggström-Nordin, Hanson & Tydén, 2005; Löfgren-Mårtenson & Månsson, 2010).

Perceived pornography realism. First, increasing amounts of studies have shown those who rate the function of pornography as an informal sexual educator, mediates the effects of these relationships. Perceived pornography realism is important in this context. Adolescents, who rate perceived pornography realism more highly, value pornography as an educator. Research shows that young people are more likely to replicate pornography behaviour, such as reduced condom use; the more they believe that pornography's portrayal of sex is a reliable source of sexual information (Wright, Sun, Steffen, 2018). The perceived realism of pornography also plays a role in the shaping of adolescents sexually liberal attitudes (Baams et al., 2015) and attitudes towards recreational sex (Stulhofer, Busko & Schmidt, 2012). Adolescents are less likely to be influenced by pornography if they believe the content to be unrealistic with regard to real life sexual experiences (Wright, 2014). Overall research has shown perceived realism of pornography to be an important moderating variable between pornography engagement and its effects (Wright, 2013; Wright & Arroyo, 2013).

Perceived pornography realism peaks in early adolescence, particularly among males (Wright & Stulhofer, 2019). A number of factors have been hypothesised to increase the likelihood that an adolescents will consider pornography to be a realistic portrayal of sex. Scholars speculate

that more frequent pornography use and earlier pornography use, coupled with a lack of sexual experience, may reinforce adolescent perceptions about the realism of pornography (Peter and Valkenburg, 2010). Greater perceptions of the perceived realism of pornography is more often seen among younger and less sexually experienced people, than with older adults (Wright & Stulhofer, 2019). This is hypothesised to occur because their lack of experience makes them unlikely to have the necessary information to contextualise the portrayal of sex in pornography (Koletic, 2017; Peter & Valkenburg, 2006; Wright & Stulhofer, 2019). Recent research indicates that beliefs about pornography realism may also be perpetuated by specific motivations to engage with pornography. Vandenbosch, van Oosten and Peter (2018) found that those who enjoy watching pornography and who believe it to be informative regarding the acquisition of sexual knowledge may be more likely to replicate behaviours that they see online. It is argued that this could contribute to a cycle whereby adolescents replicate pornography-like sex, and in turn increase reliability on pornography as a source of information about sex (Wright, 2013; Wright & Arroyo, 2013; Wright & Stulhofer, 2019).

Sexual experience. Research shows that pornography realism decreases over time (Wright & Stulhofer, 2019). One potential reason for this is that people become more sexually experienced as they age, therefore reducing the utility of pornography as an information resource. Obtaining sexual experience may decrease the perceived realism of pornography in a number of ways. First, individuals may replicate pornography behaviours with their partners and receive negative feedback (Sun, Ezzell & Kendal, 2017), therefore reducing the social utility and perceived reliability of pornography for information. Additionally, individuals may not find behaviours seen in pornography pleasurable to engage in, therefore challenging pornography's messaging that appears to show all actors enjoying the behaviours they engage in (Doornwaard et al., 2017). Wright and Stulhofer (2019) found that although pornography realism declined over time, this effect is developmentally specific and that an individual's degree of sexual experience is unlikely to linearly contribute to the reduction in pornography realism. A number of additional factors are necessary for the

application of sexual scripts to occur. Several individual social, biological and psychological factors affect the relationship between pornography use and behavioural and attitudinal outcomes for adolescents. The strength of these associations are a result of interrelations between these factors. Much of the theoretical work in this area stems from the media effects, sociology and psychology literatures. The theoretical frameworks that underpin this thesis will be discussed in detail in Section 4 below.

Section 4: Theoretical Perspectives on Pornography Effects

Conceptualisations of porn literacy to date have focused on challenging perceived pornography realism as well as the promotion of critical pornography engagement skills. Currently, there is a dearth of information regarding the appropriate theoretical grounding for the development of porn literacy interventions to achieve these aims. A strong theoretical basis is crucial in order to understand the factors which contribute to the replication of pornography behaviours, key constructs of focus for intervention development, as well as the measuring outcomes and the efficacy of porn literacy interventions. In this thesis the ₃AM, proposed by Wright (2011), underpinned by Sexual Script Theory (Gagnon & Simon, 1973), is discussed as a potential theoretical vehicle for which to understand these processes. The ₃AM combines several existing theoretical perspectives to propose a framework from which we can understand the process of scripting in the context of sexually explicit media content, and therefore the factors of focus for porn literacy intervention development. The use of the ₃AM in the construction of a conceptual model for porn literacy will help to clarify which theoretical components may be most useful regarding the development and potential efficacy of porn literacy interventions.

Much of the early media effects research draws on Cultivation Theory (Gerbner, Gross, Morgan & Signorielli, 1986) and Social Learning Theory (Bandura, 1977) for theoretical bases. Cultivation theory positions media audiences as passive consumers, whose behaviour, attitudes and beliefs are easily influenced by media exposure. However, understandings of media effects have evolved over time and it is now widely acknowledged that a complex interaction between a number of personal and social factors

contributes to the likelihood that an individual will engage with and replicate behaviours seen in pornography.

Sexual Script Theory. Much of the pornography research literature draws in some form from Sexual Script Theory, devised by Gagnon and Simon (1973), which states that human sexual encounters are learned interactions that follow certain sequences or ‘scripts’ (Frith & Kitzinger, 2001). Simon and Gagnon, in 1973, were the first to formulate the scripting perspective on sexual conduct (Simon & Gagnon, 1973). They hypothesised that a social learning approach to sexuality was based on a complex interplay between three distinct factors: Cultural scenarios, interpersonal scripts and intra-psychic scripts (Simon & Gagnon, 1984, p. 53).

The first factor, ‘Cultural scenarios’ present the context for roles that exist at the level of everyday life. The mass media, cultural institutions such as government, education, law and religion are important means in which cultural norms and values are conveyed and experienced (Gagnon, 1990). These norms form general contexts for sexual activity, for example, some sexual acts, such as rape and sexual assault are illegal and therefore warned against and punished, whereas others are encouraged and sometimes envied (e.g., having an orgasm) (Wiederman, 2015). In essence, cultural scenarios set boundaries that differentiate between socially constructed appropriate and inappropriate behaviour. However, cultural scripts are not always predictive of sexual behaviours (Wiederman, 2015). In order for a cultural script to be applied individual beliefs need to align with them.

Interpersonal scripts involve altering the details of each scenario, while relying on the learned experiences from his/her/their cultural scenarios. In other words, the interpersonal script allows for the specifics of the cultural script to be adapted, depending on the details of each situation (Wiederman, 2015). For each individual the specifics of each encounter may differ, resulting in improvisation and alteration of formerly constructed scripts. The intra-psychic level is the individual’s experience of a script. Intra-psychic scripts can encompass plans or procedures one puts in place to carry out interpersonal scripts (Simon & Gagnon, 2003). These scripts often include a person’s fantasies, memories and mental rehearsals. “*Within the intra-psychic scripts, individuals work out the difficulties involved in*

enacting interpersonal scripts within the general context of cultural scenarios” (Wiederman, 2015, p.8). With regard to pornography number of variables have been found to be of importance regarding the application of pornography scripts.

3AM. Wright (2011) drew on works by Huesmann (1986; 1988) and Gagnon and Simon (1973) in the development of the 3AM model of sexual script ‘Acquisition, Activation, Application’ as a framework to describe the variety of components which influence mass media-based learned behaviour. According to the 3AM, pornography can provide viewers with sexual scripts they “*were unaware of (acquisition), prime sexual scripts they were already aware of (activation), and encourage the utilization of sexual scripts (application) by portraying them as normative, acceptable, and rewarding*” (Wright, Bae & Funk, p. 1133). These components can be categorised under the following headings: content factors, audience factors, message accessibility and situational factors. A number of content, audience and accessibility factors are of particular importance to the current study, because they play are hypothesised to play a crucial role in the acquisition and the activation of pornography scripts among young people. Content factors including arousal value, salience, functional value, plausibility and pornography viewing prevalence play a part in acquiring such scripts. These factors are important for holding the attention of a viewer (Bandura, 2001; Huesmann, 1986). Certain people are more likely to replicate pornography scripts. Audience factors of particular importance include a person’s gender, their motivation for pornography engagement, and their age of first pornography use. Another domain of importance includes individual access to pornography; this includes general frequency of engagement and the duration at which an individual spends watching pornography. Last, situational factors including script-situation correspondence and sexual arousal also influence this process. Factors of particular relevance to the current research are discussed below.

Acquisition & Activation. Scripts must hold the attention of the viewer or prime existing scripts in order to have an effect on behaviour (Wright, 2011). Bandura (2001) and Huesmann (1986) argued that in order to obtain a script, the content of media must “*catch and maintain the*

attention of receivers” (Wright, 2011, p.349). In this context, pornography scenes or behaviours that do not attract the attention of a viewer are less likely to be remembered, accessed in memory, and therefore used. Through this process, existing schemas may also be ‘activated’ or primed, for example, seeing a script that reinforces a pre-existing belief. The following variables are considered to be of primary importance regarding the acquisition and activation of scripts by pornography audiences.

Functional value. The functional value of pornography content is important to the acquisition and activation of scripts. Script acquisition and activation is more likely to occur among those who more heavily rely on pornography content to achieve outcomes such as arousal, or new information. Because watching pornography can be associated with acquiring sexual information, pornography content is likely to have functional value for youth, beyond that of achieving sexual arousal (Arrington-Sanders et al., 2015; Tanton et al., 2015; Wright, 2011).

Plausibility. Pornography provides sexually inexperienced people with easily accessible information about sex and what it might be like. People process media-based messages, such as the imagery seen in pornography at low levels of criticality and generally do not label the media as false or unrealistic at the time of viewing (Wright, 2011). Sexual acts that are portrayed in a realistic manner are more likely to become encoded. In other words, what an individual believes to be realistic in terms of pornography may be more influential in shaping their individual sexual script.

Audience factors. Several individual factors or “audience factors” are important moderators of the acquisition and activation of media-learned sexual scripts.

Gender. Gender has been shown to consistently predict the amount of pornography a person engages with, age of first pornography engagement, and motivations for pornography use (Pater & Valkenburg, 2016). Boys and girls are also socialised differently in relation to sexuality, with males being encouraged to adopt more sexually dominant roles, in comparison to females (Hoffman, 1977; Arnett, 2007). From an evolutionary perspective, it has been argued that males are more likely than

females to adopt short-term mating strategies (Malamuth, 1996), therefore pay greater attention to portrayals of casual sex, which is often depicted in mainstream pornography. However, this position has been challenged in a number of studies (Aubrey, Harrison, Kramer & Yellin, 2003). Research shows that both males and females embrace a variety of sexual strategies, driven by individualised behavioural inclinations. As such, females are also likely to be influenced by short-term sexual scripts portrayed in media (Aubrey et al., 2003).

Motivation. Motivation is a key factor in a person's decision to engage with media (Rubin, 2002; 2009). Although masturbation is the most commonly reported motivator for pornography engagement, individuals also use pornography to fulfill diverse needs, including arousal achievement and maintenance, use as a source of sexual information, as means to alleviate stress or boredom, group bonding, and entertainment (Smith, Attwood & Barker, 2015; Perse & Rubin, 1990; Paul & Shim, 2008; Reid, Gilliland, Stein, & Fong, 2011). Pornography is frequently sought out as a source of sexual education, a key area of interest for this study (Hald & Malamuth, 2008; McKenna, Green & Smith, 2001). Women report that pornography provides them with an outlet to safely explore their sexual desire and to receive sexual pleasure without the emotional and physical risks associated with 'hooking-up' (Attwood, 2005).

More recent findings highlight that some young men and women use pornography to add to their sexual experiences with a partner by introducing new behaviours and increasing their partner's sexual arousal (Smith, Barker & Attwood, 2015). Others use pornography to relieve boredom and stress (Attwood, Smith & Barker, 2018; Smith, Barker & Attwood, 2015). Young LGBT+ people regularly report being presented with heteronormative sex education that has little relevance to their experiences. LGBT+ report a desire to learn more about the "how-to" of different sexual behaviours, particularly anal sex (Arrington-Sanders et al., 2015; Kubicek, beyer, Weiss, Iverson & Kipke, 2010; Smith, Barker & Attwood, 2015). Pornography can provide detail depictions of different sexual practices and has been reportedly used by many LGBT+ youth to explore their sexual orientation (Arrington-Sanders et al., 2015). Young people regularly report using

additional internet-based resources to find out information about sex that was omitted from sex education in schools, however youth also recognise that some of this information may not be entirely reliable (Pingel, Thomas et al., 2013).

Development. Media is an important factor in youth sexual socialisation as it provides depictions of sexual relationships and behaviours that people can emulate or reject in the construction of their own identities (Arnett, 2014; Štulhofer, Buško & Landripet, 2010). Although adults also engage with media on a regular basis, youth are argued to be particularly susceptible to acquiring media-derived sexual scripts. From a developmental perspective adolescence is an important time regarding sexual learning and therefore the application of learned sexual scripts. Adolescence is characterised by identity formation, including the development of values, beliefs and attitudes related to sex and sexuality that last into adulthood. Early research by Arnett (1996) and Eggermont (2006) shows that many adolescents use media to learn certain sexual scripts related to intimate and romantic relationships and that media plays an important part in the development of adolescent gender role identities (Arnett, 2014). During adolescence, parental influence also diminishes and the role of peers and the media increases (Arnett, 2014; Kantrowitz & Wingert, 1999).

Accessibility factors. Wright (2011) discusses factors of importance regarding script acquisition. However, message repetition and duration of exposure are thought to be two of the most influential among adolescents as it is common for adolescents to report regular and frequent pornography engagement (Owens, Behun, Manning & Reid, 2012; Peter & Valkenburg, 2016).

Frequency and duration. In order for a person's behaviour to be influenced, a script must be active in their memory (Wright, 2011). Repeated exposure simplifies meanings and enables attention to be drawn to the particular act, through an increased understanding. The more prevalent a behaviour is, the more likely it is that an individual will remember it. People who engage with specific sexual content frequently, may also become more likely to associate such an act with sexual arousal and enjoyment. Mainstream pornography features similar behaviours occurring in different

contexts. For instance, content analyses of popular pornography show that most scenes feature oral sex, vaginal sex and/or anal sex (Vannier, Currie & O'Sullivan, 2014). Repeated exposure to such behaviours can therefore contribute to an increased level of understanding regarding how to conduct such behaviours. It increases the likelihood that that message will be accessible in long-term memory which, in turn, will make the script more accessible (Roskos-Ewoldsen et al., 2009; Wright, 2011).

Application. The activation of a sexual script increases the likelihood of re-enactment by an individual, but it does not guarantee it, as individuals do not perform everything they learn (Bandura, 2001). The third stage, 'application', occurs when a person performs a learned action. Various factors will influence whether or not an individual performs a learned script. Content factors, including whether or not the behaviour was rewarded or punished, audience factors, including self-efficacy, moral standards, media dependency and forethought are of key importance regarding the replication of pornography learned scripts. (Wright, 2011)

Content factors

Rewards and punishments. The value of a behaviour is important to its enactment; this rests on its ability to reward or punish the performer. For example, aggressive acts within pornography that are responded to negatively are less likely to be replicated by an individual who is not aroused by sexual acts that incite pain or harm to a person. However, aggressive acts may be understood as enjoyable and justified if responded to positively and are more likely to be replicated if there is a positive response to the act (Wright, 2011).

Audience factors

Media dependency. Rubin (2009) posited that when an individual exhibits an increased reliance on the media this "*results from an environment that rejects the availability of functional alternatives*" (p. 536). Parents, educators and health professionals are frequently positioned as ideal educators of youth regarding sexuality and sexual health, however, studies consistently show that parents are reluctant to talk about sex (Flores & Barroso, 2017; Hyde, Carney, Drennan, Butler, Lohan & Howlett, 2009). In the absence of alternative scripts it is argued that pornography may

become a primary sexual educator of some youth, as it provides detailed information about a variety of sexual factors of interest to young people. (Arrington-Sanders et al., 2015; McKee, 2010).

Systematic processing. Automatic processing of a script occurs when alternative scripts are unavailable. Acting on these scripts depends on an individual's capacity to regulate their behaviour and the degree to which they consider the implications of their behaviour (Huesmann, 1998; Roskos-Ewoldsen et al., 2009; Wright, 2011). Systematic processing, involving forethought and self-regulation is "*inhibited when people lack the ability or motivation to engage in systematic behavioural analysis*" (Wright, 2011, p. 358). Bandura (2001) argues that individuals who are unable to conduct systematic processing of their behaviour lack forethought and self-regulatory skills.

Wright (2014) argues that the aforementioned factors may be modifiable by intervention efforts for children and adolescents. Indeed, there is some evidence to support this claim (Rothman et al., 2018; Vandebosch & van Oosten, 2017). The ₃AM explains the link between pornography engagement and replication of behaviours seen in pornography through exploring important moderating variables. For example, the ₃AM posits that pornography effects are less likely when pornography audiences perceive pornography scripts as having less functional value, and therefore rely on it less for sexual information, when sex in pornography is perceived as being unrealistic in the context of 'real world' sexual relationships, and are incompatible with ones existing sexual scripts or values. In addition, the ₃AM also identifies that having critical media engagement skills and the capacity to identify dissimilarities between oneself and media portrayals are important in this context. In terms of evidence the links between adolescent pornography use and these factors are supported by multiple studies (Kohut & Štulhofer, 2018; Landripet, Busko, & Stuhlhofer, 2019; Štulhofer, Tafro & Kohut, 2019; Milas; Wright, Sun, Steffen, 2018; Wright & Štulhofer, 2019). Several general media literacy interventions support the reliability of these claims in the context of intervention efficacy, however, regarding more explicit media interventions, such as porn literacy, the model has not yet been utilised.

Study rationale

Just as the experiences of pornography use among Irish young people is unknown, so too are the approaches to support young people in understanding and navigating pornography. The personal, relational and social ramifications of this are significant. Youth who are unable to distinguish pornography content realism from real life may put themselves and/or their partners under pressure to perform certain behaviours (Koletić et al., 2019; Landripet et al., 2016; Wright, Miezan, Sun & Steffen, 2018). Youth who possess critical engagement skills and knowledge regarding pornography can feel empowered to make decisions about their sexual lives which coincide with their own sexual values (Pinkleton, Austin, Cohen, Chen & Fitzgerald, 2008).

Currently, there is no information available in Ireland related to the pornography usage patterns of young adults. Understanding the experiences of pornography use among Irish youth, and exploring their retrospective accounts of first pornography engagement, and their motivations for use is an essential first step to understanding the prevalence and relevance of pornography in young people's lives. This first aim will be achieved by using a cross-sectional, quantitative survey of Irish University students. The second aim of this study is to explore the link between frequent pornography engagement and individual pornography content choices. Specifically, this research will assess whether more frequent pornography engagement is associated with greater reported comfort with non-consensual pornography vignettes.

The use of pornography as an educational resource has been tentatively raised within the literature. However, quantitative studies of this kind have largely focused on asking whether or not an individual uses pornography for information (Wright et al., 2018; Wright et al., 2019). Beyond that, some qualitative studies indicate that pornography can provide information regarding several sexual aspects of sexuality (Arrington-Sanders et al., 2015; Ashton et al., 2018). Detailed learning experiences are yet to be quantitatively explored. Quantitative methodologies provide information around the extent of an experience in a given population.

Knowing what young people learn from engaging with pornography is crucial to our understanding of the influence of pornography on young people and its potential societal impact. To investigate such learning experiences, the third aim of this study is to develop a psychometric scale which will assess what young people learn about sex from watching pornography.

The pornography research literature highlights a range of positive, negative and neutral outcomes associated with pornography use for young people. However, the detrimental impact of pornography is often the main message of any discussion of pornography in many sex education programmes (Houses of the Oireachtas, 2019). In order to support positive sexual development among all young people, the range of pornography viewing experiences must be taken into account. Therefore, the fourth aim of this study is to engage youth in the development of a youth-centred model of porn literacy.

Parent and educators often worry about the effects of pornography use but also report feeling ill-equipped to discuss sensitive issues like pornography with their children. Supports which facilitate conversations about pornography among parents with a range of diverse needs are needed. Furthermore, parents are often excluded from the development of sexual health interventions and resources, including parents in this process will provide important insights into ways of improving parent's knowledge and confidence regarding discussing pornography with their children and ultimately improve parent-child communication. Therefore the fifth aim of this study is to explore parents' perceptions about the effects of pornography on their children, and the 6th aim is to explore their recommendations for how parents can be supported in talking to their children about pornography.

This research uses multiple methodologies to facilitate the exploration of these gaps in the pornography research literature by quantitatively (1) exploring pornography use experiences, motivations and (2) content preferences (3) and sexual learning from pornography; (4) using participatory and group discussion methodology to develop an evidence-

based model for porn literacy interventions; and (5) qualitatively investigating parents recommended supports for parent-child conversations about pornography. A combination of research methods can support a more nuanced understanding of a particular concept (Johnson & Onwuegbuzie, 2004). This is particularly important in a new area of research. Each methodological component addresses a significant gap in the pornography research literature.

Overall Aim

The overall aim of this research was to examine the pornography viewing experiences of young people and to develop parent and youth recommendations for porn literacy intervention development in order to conceptualise an ecological model of porn literacy and provide an in-depth understanding of the core constructs related to porn literacy intervention development. The research questions and associated publications that arose for each of the six studies conducted in this research are outlined below.

Research Questions and Thesis Outline

Study 1. What are the pornography viewing experiences among young adults in Ireland? (Paper 1)

Dawson, K., Nic Gabhainn, S., & MacNeela, P. (2018).

Dissatisfaction with school sex education is not associated with using pornography for sexual information. *Porn Studies*, 1-13.

<https://doi.org/10.1080/23268743.2018.1525307>

Study 2. Is more frequent pornography use associated with a preference for non-consensual pornographic content? (Paper 2)

Dawson, K., Noone, C., Nic Gabhainn, S., & MacNeela, P. (2019).

Read all about it: Using a vignette methodology to study comfort with consensual and non-consensual depictions of pornography content. *Psychology & Sexuality* (Invitation to revise and resubmit)

Study 3. What do young people learn about sex from engaging with pornography? (Paper 3)

Dawson, K., Nic Gabhainn, S., & MacNeela, P. (2019). Development of a new measure to assess young adults' learning about sex from pornography. *Journal of Sex Research* (Under review)

Study 4. What are young adult's recommendations for teenage pornography literacy interventions? (Paper 4)

Dawson, K., Nic Gabhainn, S., & MacNeela, P. (2019). Toward a Model of Porn Literacy: Core Concepts, Rationales, and Approaches. *Journal of Sex Research*, 1-15.
<https://doi.org/10.1080/00224499.2018.1556238>

Study 5. What are parent's beliefs about the effects of pornography on teenagers and porn literacy education? (Paper 5)

Dawson, K., Nic Gabhainn, S., & MacNeela, P. (2018). A Qualitative Exploration of Parents' Beliefs about the Effects of Pornography on Pre-teens and Teenagers. *Sex Education* (Preparing to submit)

Study 6. How can parents be supported in talking to their child about pornography? (Paper 6)

Dawson, K., Nic Gabhainn, S., & MacNeela, P. (2019). Strategies to support parents in talking about pornography with their children. *Health Education* (Preparing to submit)

The methodologies used in each of these studies are outlined in detail in the next chapter. A discussion of the research findings of the six studies, the study limitations, and recommendations for future research and practice are presented in the final chapter of this thesis.

Methodology

Chapter Overview

This chapter describes the methodologies employed in the six research studies. The aim, overview of methodology, rationale, and ethical implication for each study is provided here. Methodological details can be found in the study chapters.

Aims and objectives of this research

The primary aim of this research was to develop an evidence base that can be used in the development of porn literacy interventions. A secondary aim was to explore the pornography use experiences of Irish youth. To achieve these aims, quantitative and qualitative methods were used to explore pornography use patterns and comfort with different types of pornography among young adults, explore the educational value of pornography, and qualitatively explore youth recommendations for adolescent pornography use, as well as parents' beliefs about the effects of pornography on young people, and their recommendations regarding parent-child communication about pornography.

Approach to this research

Six studies were conducted in this thesis. Study 1, Study 2, and Study 3 employed cross-sectional, quantitative methods. Study 4, Study 5, and Study 6 involved the use of qualitative methods, including participatory research strategies, Delphi methodology, group discussions and one-to-one interviews. Both qualitative and quantitative methods are often used in conducting health research (Tashakkori & Creswell, 2007; Yardley & Bishop, 2015). The use of both quantitative and qualitative methods has several advantages, particularly when studying a new area of research. First, exploring one topic through various methods, across different samples allows for the presentation of diverse views. This is particularly relevant to the current research, as research shows that individuals demonstrate a wide variety of views regarding pornography use. Exploring individual and collective opinions about pornography through the use of anonymous surveys and group discussions facilitates the development of a more comprehensive understanding of the research area. Finally, the use of quantitative followed by qualitative methods provides opportunities to gain a more detailed and nuanced understanding of quantitative findings.

Qualitative and quantitative methods have been traditionally presented as opposing paradigms (Creswell & Plano Clark, 2007). The positivist approach, which underpins much quantitative work, seeks to uncover a single truth through objective inquiry (Burke Johnson & Onwuegbuzie, 2004). Constructivism underpins much qualitative research, and represents the existence of multiple experiences. Advocates of mixed methods research see value in both epistemologies and seek to integrate different research strategies in order to obtain a broader understanding of a research topic. A number of frameworks have been used by mixed methods researchers. However, the philosophy of pragmatism was considered the most appropriate for this research. Pragmatism is characterised by the selection of a research methodology that is practically relevant to answering the questions at hand. By approaching the research in this way we can ensure the quality of the research and reliability of the research findings (Morse, 2003).

Drawing from the epistemology of pragmatism, the current study involved the use of different methods to address several limitations of the pornography research literature, particularly the lack of a youth-centred approach to porn literacy intervention development and the involvement of parents to support continued porn literacy efforts at home. There were four rounds of data collection. Data for Study 1 and Study 2 were collected in the same survey. These studies used quantitative cross-sectional survey methodology. The findings are presented as two separate peer-reviewed manuscripts. The first (Study 1) examines the prevalence of pornography use, age of first engagement with pornography, and motivations for pornography use among young adults. Study 2 used these methods to explore comfort with pornography content among the same sample. Study 3 involved the use of quantitative cross-sectional methods to develop a psychometric scale to assess what young adults report learning about sex from pornography. Study 4 used qualitative participatory research strategies and group discussions to engage young adults in the development of a model for teenage porn literacy education. The fourth round of data

collection, for Study 5 and Study 6, employed qualitative, one-to-one interview methods to explore parent's beliefs about pornography and their recommendations for youth porn literacy education.

Study 1. What are the pornography viewing experiences among young adults in Ireland?

Aims and objective of study 1. The aim of Study 1 was to quantify the prevalence of pornography use in Ireland with regard to age of first pornography engagement, frequency of pornography use, and motivations for pornography use. Within the pornography research literature it is often argued that individuals engage with pornography in order to learn about sex, in the absence of good quality sex education. Therefore a secondary aim of Study 1 was to explore the correlation between use of pornography as a source of sexual information and the self-reported experience of quality sex education, specifically investigating whether those who report greater dissatisfaction with their school-based sex education were more likely to report using pornography as a source of information about sex.

Approach to study 1. This study had a cross-sectional, quantitative design to explore pornography usage experiences of young adult university students in Ireland, and to explore the relationship between past experiences of school-based sex education and self-reported use of pornography as a source of sexual information.

Hypotheses for study 1. Studies regularly show that young adults frequently report that pornography has educational aspects, particularly with regard to learning information about sexual behaviours, body aesthetic and same-sex sexual practices (Davis, Carrotte, Hellard, Temple-Smith & Lim, 2017; McKee, 2010; Arrington-Sanders, Harper, Morgan, Ogunbajo, Trent & Fortenberry, 2015). It has been argued that this happens because school based-sex education does not provide individuals with relevant information about real-world sexual experiences. This is particularly the case for young LGBT+ people, who are reported to receive even less relevant information than their heterosexual peers. The current study examined four hypotheses to explore such relationships.

Hypotheses 1 (H1a): Dissatisfaction with sex education in school will be associated with pornography use as a source of information about sex.

Hypothesis 2 (H1b): Use of pornography as a source of sexual information will predict greater satisfaction with present self-reported levels of sexual knowledge and lower aspirations for greater sexual knowledge.

Hypothesis 3 (H2a): Homosexual and bisexual participants will report less satisfaction with their school-based sex education than heterosexual participants.

Hypothesis 4 (H2b): Sexual orientation will moderate the relationship between (i) satisfaction with sex education in school and (ii) previous use of pornography as a source of information about sex.

Measures. Participants in this study provided their responses to questions using the following measures.

Satisfaction with School-Based Sex Education. An adapted version of the General Satisfaction with Sexual Health Education scale (Meaney, Rye, Wood & Solovieva, 2009) was used to assess participant's experiences of formal sex education. Three individual items related to experiences of sex education were statistically combined to create a single measure. Satisfaction with current sexual knowledge was assessed using single item responses. All responses to this measure were rated on a five-point Likert scale ranging from 'strongly disagree' to 'strongly agree' and demonstrated good internal consistency ($\alpha = .78$).

Pornography for sexual information. This item was created for the purpose of this study to explore the motivations for pornography use. Pornography for sexual information was assessed by asking respondents to provide their answers to the following question: 'Please select the reasons below that you have watched porn' and provided the following response

options: For masturbation; for information about sex; for entertainment; out of curiosity, and with a sexual partner. For the purpose of analysis, those who had reported that they used pornography for information about sex were compared to those who did not report that they had used pornography for this reason.

Data screening

Outliers and normality. Data were screened for univariate and multivariate outliers. No extreme univariate outliers were observed. Multivariate normality was assessed using Mahalanobis distance D^2 (Field, 2009). Using the cumulative distribution for chi-square function in SPSS, D^2 probability results were compared using a threshold of .001 (Field, 2009). Values which were below .001 were recognized as outliers and removed from the dataset.

Missing data (Double check). Some missing data among the sample of 1,377 participants were observed. Little's MCAR (Missing Completely at Random) (Little, 1988) test was conducted on the study 1 variables to determine if the missing data was missing completely at random. Data were found to not be missing completely at random ($p < .001$). Post hoc tests indicated that there was no relationship between the missing data, and that data was largely missing due to participant attrition on the latter pages of the survey. In addition, the percentage of missing data ranged from 6% to 13%. Expectation Maximisation was deemed an appropriate imputation method because of the percentage of missing data was less than 30% (Schlomer, Bauman & Card, 2010) and because data was deemed Missing at Random (MAR). Data were imputed using Expectation Maximisation.

Statistical analysis. Logistic regression was deemed the most appropriate to test hypotheses H1a, H1b and H2a. Binary logistic regression was used to test hypothesis H1a. The dependent variable (Pornography as a source of sexual information) was represented as a binary variable – those who have and those who have not. The Independent variable for the analysis consisted of a combined three-item variable on satisfaction with sex education in school. A cumulative odds ordinal logistic regression was used to test hypotheses H1b and H2a as the dependent variables were rated on a five-point likert-type scale. Prior to analysis the relevant assumptions for

conducting logistic regression were tested. As previously determined, the sample size, given the number of independent variables included in the model, was excellent (Field, 2009). Tests for multicollinearity were not relevant as each model contained one individual predictor variable. And, as previously determined, outliers were eliminated from the dataset prior to analysis. Moderation analysis was conducted using PROCESS model 1 to test H2b. The dependent variable (Pornography as a source of sexual information) was represented by a binary variable, the independent variable was the collapsed three-item variable on satisfaction with sex education in school and the moderation variable was represented by a binary sexual orientation variable.

Study 2. Is more frequent pornography use associated with a preference for non-consensual pornographic content?

Aims and objectives for study 2. This study aimed to assess the relationship between frequency of pornography engagement and self-reported comfort with short, written pornography scene vignettes. Specifically, this study sought to explore whether more frequent pornography use was associated with being more comfortable with non-consensual pornography scenarios.

Approach to study 2. This study employed a cross-sectional, quantitative design, which was comprised of the following three stages: (1) The development of a series of pornography scene vignettes using a Delphi expert panel, (2) an examination of the factor structure of the newly devised vignettes using exploratory and confirmatory factor analyses, and (3) to test the hypothesised model using structural equation modeling (SEM) techniques. SEM was used to test the model which was comprised of a series of hypothesised relationships. SEM was determined to be an appropriate methodology for this study as it enables testing for multiple hypotheses in a single occasion using a number of latent constructs. The use of latent variables allows for a more robust analysis of an overarching construct, using a group of items related to one manifest variable (Byrne, 2016). A series of latent variables were used in this study to examine

participant comfort with consensual and non-consensual scenes (represented by two separate latent variables) and individual attitudes towards establishing sexual content (represented by three separate latent variables). SEM is also suitable for testing the factor structure of a latent variable, a task necessary in the current study that seeks to explore the validity of the newly developed pornography scene vignettes.

Phase 1: Delphi Component

Aims and objectives for study. The aim of this study was to design a series of short, written pornography scene vignettes in order to test individual comfort with consensual and non-consensual pornography scenes. Specifically, we aimed to assess whether participant gender and frequency of pornography use was associated with being comfortable with the non-consensual scenes.

Study design. A Delphi approach (Linstone & Turoff, 1975) was chosen for this study because of the capacity of this method to facilitate consensus development of experts in a particular field. This process involved the collection of quantitative and qualitative data from a sexual consent expert group. Their task was to categorise a series of short, written pornography scene vignettes.

Inclusion criteria. The expert panel were selected, based on the following inclusion criteria: (1) At least three years of work practice experience working with adolescents and/or young adults around sexual consent, (2) involvement in professional decision-making processes regarding sexual consent services (e.g., as manager of a relevant service), (3) at least one publication on young people's attitudes/behaviours/beliefs in relation to sexual consent or (4) at least one national presentation on sexual consent-related issues. To obtain a range of perspectives, participation was sought from sex educators, legal professionals, and academic researchers, support workers in the area of rape and sexual assault, and police officers.

Delphi rounds. There were three rounds of the Delphi study in total. After every round the responses were summarised for participants in the form of a report, then the amended questionnaire with additional clarifications was redistributed to participating experts for the next round. An a priori decision was made to categorise a vignette once two thirds (66%) or more of the 12

panel members reached consensus on which category a vignette belonged to (consensual, unclear, and non-consensual). In total 16 experts were invited to participate in the Delphi process, and 11 participants completed all three rounds.

Phase 2: Testing the structural model

Study 2 hypotheses. The aim of study 2 was to develop a new measure to assess self-reported comfort with a series of consensual and non-consensual pornography scene vignettes in order to further explore several factors that are hypothesized to be associated with non-consensual pornography engagement. It was hypothesised that frequency of pornography engagement, gender, and attitudes towards sexual consent would be associated with a person's comfort with the non-consensual pornography scene vignettes. Specifically, it was hypothesised that having less positive attitudes towards establishing sexual consent would be significantly associated with being more comfortable with the non-consensual pornography vignettes.

Hypotheses

Hypothesis 1. Men will report greater comfort with the non-consensual scenes than women.

Hypothesis 2. More frequent pornography engagement will be associated with greater reported comfort with the non-consensual scenes.

Hypothesis 3. Having less positive attitudes towards consent will be associated with greater comfort with the non-consensual scenes.

Hypothesis 4. Having an indirect behavioural approach to consent will be associated with greater comfort with the non-consensual scenes.

Sample size. Sample size was determined based on a priori calculations using Soper's (2014) SEM calculator. Results suggested a sample of 848 to yield adequate power to reliably detect the appropriate

model fit and to detect medium effect sizes. These calculations were based on the proposed model which included 5 latent variables, and 3 observed variables, which were represented by individual items.

Handling missing data. An *a priori* decision was made to exclude participants from the analysis who had not provided their responses to the key variables of interest. In total, 1,240 participants began the questionnaire, providing data on demographic characteristics, however did not provide any information on their comfort with the consent scenarios nor on their attitudes towards establishing sexual consent. Those who did not provide data on the key variables were omitted from analysis. Through analysing the pattern of missing data using Little's MCAR test on the remaining participants, we observed that the data were not missing at random, however, the large sample size and distribution of data facilitated the use of EM to replace missing values. In addition, because the study concerned those who engaged with pornography, participants who reported that they never watched pornography were omitted from analysis. The final sample consisted of 1,121 participants.

Statistical analysis. Structural equation modeling (SEM) is a multivariate statistical analysis technique. It incorporates the use of factor analysis and multiple regression. As this study was concerned with the development of a new tool, and the assessment of measured variables to their latent construct, SEM was deemed appropriate for the current analysis. Prior to analysis the assumptions necessary to conduct multiple regression and factor analysis were examined. The sample size for this study was 1,121, sufficient for an analysis to yield medium effect sizes. No strong relationships were observed among independent variables in the model; tolerance and variance values were within an acceptable range. Assumptions of normality, linearity and homoscedasticity were also met (Hair et al., 2010; Field, 2013).

Study 3. What do young people learn about sex from engaging with pornography?

Aims and Objectives. The primary aim of Study 3 was to explore what young adults report learning about sex from mainstream pornography.

Approach to Study 3. This study involved three phases: The first phase involved the generation of scale items. The second phase used a cross-sectional quantitative design of the initial pool items to examine the reliability and factor structure within the data. The final phase involved data analysis to explore gender differences related to the constructs identified.

1. Scale items were developed over four phases: Analysis of data from six group discussions with 54 young adult university students.
2. Development of items by the authors and a review of the items by pornography experts for item list expansion and relevance.
3. Review of item list by a student sample to ensure item clarity.
4. Administration of the items to a sample of students for assessment of scale validity.

Handling missing data. As this study was concerned with exploring the factor structure of a newly developed measure an *a priori* decision was made to exclude participants from the analysis who had not provided their responses to all items. The final sample consisted of 717 participants.

Statistical analysis. Principal components analysis (PCA) was deemed an appropriate analysis technique. PCA is a dimensionality-reduction method that is most appropriate for use on large data sets (Byrne, 2016; Jolliffe, 2011). Prior to analysis the assumptions necessary to conduct factor analysis were examined. Osborne and Costello (2004) recommends a participant to item ratio of at least 10:1. Sample size for this study was 717 which was deemed very good to excellent (Osborne & Costello, 2004).

Study 4. What are young adults' recommendations for teenage pornography literacy interventions?

Aims and objectives for study. The aim of this study was to engage young adults to explore their beliefs about pornography and their recommendations for adolescent pornography literacy education.

Study design. This study involved the use of mixed methods to engage stakeholders. The first phase of the research involved the use of a

participatory activity using flexible brainstorming methods. This was followed by a facilitated group discussion that was prompted by the findings in the first phase of the research. These methods were chosen based on the youth intervention development literature which states that in order for successful intervention development, youth must play an active role in the empirical research which underpins programme development (Eglinton, 2008; O'Higgins & Nic Gabhainn, 2010).

Participatory component. Participatory strategies can be beneficial both to the participant and to the research on sensitive topics (O'Higgins & Nic Gabhainn, 2010; Winton, 2007). Participatory methodologies are supported by principles of youth advocacy, engagement and empowerment, and facilitate active engagement, while helping to reduce discomfort around sensitive or sometimes embarrassing issues. Previous research with Irish young people have shown participatory methods to be successful in facilitating youth participation in research on sensitive topics around sexual health (O'Higgins & Nic Gabhainn, 2010). This approach, which involved the use of an individual level of data collection, provides increased anonymity to each participant, while also ensuring that every participant has the opportunity to contribute, a key challenge of focus groups discussions.

Group discussion. Group discussions are helpful when exploring a topic that is under researched (Betrand, Brown & Ward, 1992). The format of a group discussion allows for greater flexibility and therefore focus on topics which may have not been identified prior to the study. In addition, small groups of individuals have been documented to reduce participant discomfort, as many do when discussing sexuality-related topics (Frith, 2000). It also allows for individuals to participate to their own level of comfort and reduce participant discomfort.

Data analysis. Analysis involved two phases, student data generation and subsequent analysis of group discussion data. The first phase of the research involved individual level data generation where students provided their answers to the following question "What should teenagers learn about pornography as part of pornography education workshops?", student individual responses were collated by the researcher, mixed and presented back to the students who worked in groups of four to thematically

analyse the individual data responses. Participants were asked to provide headings to each of the themes and to report the overarching theme headings back to the group. The themes generated were then used to prompt a discussion which was facilitated by two researchers. Phase two involved thematic analysis of the group discussion transcripts by the researcher. However, this method differed from that of a traditional approach to thematic analysis where the researcher identifies themes within the data, as the themes had already been identified by the participants during the participatory phase.

Methodology for Study 5 and Study 6 (Articles 5 & 6)

Study 5. What are parents' beliefs about the effects of pornography on teenagers?

Study 6. How can parents be supported in talking to their child about pornography?

Aims and objectives of study. The aim of study 5 was to qualitatively explore parent's suggestions for youth porn literacy, including their recommendations for how best to support parents in talking to their children about pornography.

Study design. This study had a qualitative design, which used face-to-face, one-to-one semi-structured interviews. Although there has been some research exploring parents' approaches to discussing pornography with their children (Rothman et al., 2018; Gesser-Edelsburg & Elhadi Arabia, 2018), no study has explored how parents can be supported in having these important conversations with their children.

Sample size. The sample size for this study was determined based on data saturation (Mason, 2010 2015). Therefore, the sample size could not be determined prior to the study. Data sampling continued until saturation was achieved, in other words, no new data lead to the identification of new concepts or themes (Morse, 2000). The final sample consisted of 14 participants.

Rationale for semi-structured interviews. A series of semi-structured interviews were conducted. The aim of this study was to explore parents' perspectives related to youth pornography education, a topic that

has been under researched to date. The semi-structured approach was chosen because it allows for core questions to be explored but also allows for flexibility depending on the new information provided by the participants (Holloway & Fulbrook, 2001), and further exploration of these ideas, a characteristic that would not be facilitated by a more structured interview approach. In addition, an unstructured approach may not facilitate the exploration of the research question in depth and may lead to the discussion of inappropriate, personal or sensitive topics, particularly in the context of this research topic. Focus groups or group discussions were also deemed inappropriate (Farquhar & Das, 1999; Morgan & Krueger, 1993), as parents may be less forthcoming about their child's experience with pornography, or their personal beliefs about pornography in a group setting.

Data analysis. Thematic analysis was chosen as an appropriate method of analysis, in comparison to Grounded Theory. Grounded Theory (Straus & Corbin, 1994) requires the use of a method where the researcher simultaneously analyses and codes the data, with the overall intention of producing theory that is grounded in the data. Grounded Theory attempts to develop a theory based from the data. This would require recruiting a large sample of participants, which was beyond the remit of the study (Pidgeon & Henwood, 1997). Grounded theory was deemed unsuitable for this reason as a core feature of this thesis involved the exploration of themes generated by our participants during participatory sessions. Thematic analysis was chosen as an appropriate method of analysis as it allowed for deeper exploration of the themes generated in the participatory component of study 4, while maintaining the student-generated themes direct data coding and subsequent analysis. Thematic analysis was chosen as an appropriate method for Study 5 and Study 6 as it was important to utilise the same methods across each qualitative study to see if similar themes were identified among different samples of participants. Therefore, for purposes of comparison Thematic Analysis was chosen for all three qualitative studies. Parents beliefs related to teenage pornography use is an understudied area of research. Therefore, the six-steps, identified by Braun and Clarke (2006) were adopted for thematic analysis of the data. This method allows for exploration of the data from the bottom-up (Braun & Clarke, 2006) and aligns with the paradigm of

pragmatism in this context as it allows for detailed exploration of a new topic.

Phase 1. The first phase of analysis involved data familiarization. Each audio file was listened to in full and then data transcription to provide a full verbatim account of the data was executed. Once transcription was complete, each transcript was read through twice. Each individual audio file was listened to to account for punctuation. At this initial stage notes were taken on what initial themes would be.

Phase 2. Data driven codes were first identified and recorded using N Vivo software (Castleberry, 2014). Throughout this process reoccurring patterns in the data were identified and coded sections of text that related to a particular topic, example of initial codes include 'pleasure' or 'body comparison'.

Phase 3. Overarching themes were identified through the use of mind-maps.

Phase 4. Themes were refined by reviewing each theme and looking out for theme characteristics which overlapped with other themes, reading quotes within each to theme to ensure their relevance to the theme, and ensuring that each theme adequately represents the data within. Some quotes were removed from each theme and set aside for further review.

Phase 5. Phase 5 involved reviewing and refining each theme and the identification of subthemes. Subthemes were summarised by a sentence of text. Data that did not correspond to the data summary were excluded from the current analysis.

Phase 6. Phase 6 involved the presentation of results and drafting of two research articles to address the two research questions.

Reflexivity in qualitative research. Acknowledging the role of the researcher is important in qualitative research as the researcher's beliefs and values greatly impact the research questions as well as how the researcher might influence the participants and what they say (Malterud, 2001).

Pornography is a contentious issue and often is discussed in a negative sense in public domains. Therefore, reflexivity was considered important for this study as it was crucial that participants felt the researcher held an objective,

non-biased stance on pornography in order to gain insight into their true experiences and beliefs.

The researcher had a background working in sex education, however, she had not been exposed to pornography during adolescence, and therefore would not have the same insight or experiences as the young adult participants in the group discussions. Similarly she is not a parent and thus participants in the interviews may not have identified her as a peer. The researcher's role as a sex educator may have impacted upon what participants chose to share throughout the qualitative research process. It is recommended that those who research sensitive topics related to sexuality have experience in discussing the topic as researcher discomfort may become clear to participants and influence their own comfort in the research setting. The researcher had six years' experience working in sexual health and was comfortable discussing sexuality. The researcher's age may also have influenced participant openness. First, the researcher was 27 at the time of the research. The age difference may have influenced young adults or parents' discussions with the researcher.

The participatory methods used in Study 4 enhanced the subsequent analysis by the researcher as it ensured that the core themes presented in the findings were analysed and presented by the participants, therefore reflecting their true findings. Reflexivity was enhanced by reviewing the data on a number of occasions by the research supervisor.

Ethical Considerations

A number of ethical considerations were involved in the development and conduct of the various methodologies employed throughout the research, particularly because of the sensitive subject matter. Ethical considerations were guided by the following; ethical implications of conducting online research on sensitive topics (one-to-one interviews on sensitive topics, researcher and participant safety and reducing participant distress) (Binik, Mah & Kiesler, 1999; Cowles, 1988; Lee-Treweek & Linkogle, 2000; Orb, Eisenhauer & Wynaden, 2001). Ethical approval was sought on four separate applications and given from the NUI Galway Research Ethics Committee. The following sections address how these ethical considerations were approached.

Distress. All participants were informed of the topics of each study prior to participation, and again at the beginning of each study, and were invited to email the researcher to acquire additional information. However, participant distress was a key concern for study 2, which involved questions about sexual consent as well as the reading of short pornography scenarios that featured non-consensual content. Participants were reminded about the nature of these questions at the beginning of the survey and right before the survey questions arose. In addition, support service information was provided in the study information sheet, at the beginning of the survey and again at the end of the survey. This was done to ensure that every individual who engaged, even to a small extent, with the research had been fully informed and had access to appropriate supports.

To minimise potential distress in Study 4 an overview of the interview schedule was read aloud by the researcher at the beginning of each workshop. Similarly, participants of Study 5 were handed a copy of the semi-structured interview transcript to read before the interview began. The researcher has six years' of experience working in sex education, has up to date disclosure training and has experience dealing with child, adolescent and adult disclosures of sexual abuse, as well as the necessary reporting guidelines to TUSLA and an Garda Síochana.

Confidentiality. Confidentiality was ensured for Studies 4 and 5 by storing the participant information and transcripts in a secure location.

Anonymity. Individuals who participated in the online surveys were assured of their anonymity. No identifying information, including names, student numbers, and email addresses or IP addresses were collected in any surveys. Qualitative studies which involved face-to-face discussion with the researcher, both one-on-one and within group setting were managed by the researcher by providing pseudonyms for all participants both in the written data transcripts and in the writing of the final reports. In addition, those who participated in a group discussion first constructed a group contract to ensure anonymity. Although, this could not fully guarantee that a participant may discuss the details of the discussion outside of the group, all participants were informed of this risk in advance.

Informed Consent. All studies involved sensitive subject matter. It was therefore crucial that all individuals who agreed to participate in the research gave their consent to participation upon being fully informed about the research. When recruiting for each study, potential participants were informed of the aims of the study, methods, risks and benefits to participation, and of the approximate duration and location of the research, where necessary. Participants were also informed that their participation was completely voluntary and that they could withdraw at any time. Participants who were recruited to participate in online surveys were given a window of two weeks to participate in the study, therefore allowing for individuals to fully consider whether or not they wanted to participate.

Study 1. Dissatisfaction with school sex education is not associated with using pornography for sexual information

Abstract

This study explored the frequently held belief that pornography use for sexual information occurs in the absence of good sex education and examined whether such a relationship was moderated by a person's sexual orientation. A more general goal for the study was to explore pornography viewing habits of Irish university students. Cross-sectional quantitative data were collected from a convenience sample of Irish university students, aged 18–24 years (n = 1380). Findings show that homosexual and bisexual participants reported less satisfaction with their sex education, a majority had used pornography for sexual information, but being dissatisfied with school-based sex education did not predict pornography use for sexual information. Neither did using pornography for sexual information predict greater satisfaction with current sexual knowledge, but it was associated with greater aspirations to know more about sexuality and sexual health. Individuals may use pornography for information regardless of their sex education in school.

Introduction

One of the continuing trends in pornography research is the focus of researchers on the effects of pornography engagement, while there has been much less attention on the motivations for use. Contradictions within the

pornography literature are common; for example, evidence from longitudinal research has suggested that more frequent engagement is associated with less progressive notions about women (Peter & Valkenburg 2007) while a more recent study found that pornography users hold more gender egalitarian views than non-users (Kohut, Baer & Watts 2016). What has largely remained consistent across international research are the personal and emotional motivations with which people engage with pornography (Boies 2002; Burns, 2001; Paul & Shim 2008; Smith, Barker & Attwood 2015). Research suggests that individuals engage with pornography to fulfil specific needs (Paul & Shim, 2008). In addition to the obvious uses for sexual arousal (Boies, 2002; Paul & Shim, 2008; Smith, Barker & Attwood, 2015), studies continue to show that young men and women use pornography as a source of sexual information (Albury, 2014; Kubicek et al., 2010; Tanton et al., 2015). This is often discussed as being in the absence of good quality sex education (Arrington-Sanders et al., 2015; Kubicek et al., 2010). However, this association has not yet been quantitatively explored in the research literature.

A dissonance exists between the ways in which sex education programmes are delivered and the sex educational needs of young people (Langille et al., 2001). Many young people want to have positive sexual experiences (Allen, 2001), yet young people regularly express that the sex education they have received in the school system failed to meet their psychological (Litras, Latreille & Temple-Smith, 2015) and practical sexual information needs (Arrington-Sanders et al., 2015). The most common critiques of school-based sex education are that it largely focuses on the risks of sexual intimacies, begins too late, is overly technical and has little emphasis on pleasure and emotion (Schools Health Education Unit, 2011; Youthwork Ireland, 2018). A preference for the biomedical perspective and discussion of 'appropriate' behaviour in sex education means that the omission of the 'discourse of erotics' (Allen, 2007) persists in much current sex education (Pound, Langford & Campbell, 2016).

Gendered inequalities are often reinforced in sex education, where young women are told that their sexual desires are less intense in

comparison to young men (Di Censo et al., 2001) and homosexual sex is rendered invisible by largely focusing on heterosexual sexual practices (Allen, 2001; Estes, 2016). A second issue pertains to how sex education is implemented. Studies have found that methods used in delivery are not sufficiently inclusive to support expression and as such many struggle to actively engage with or participate in classroom discussions (Limmer, 2010). This is often underpinned by specific gender components. Studies show that as well as feeling uncomfortable or embarrassed, some young men feel they cannot ask for information as it would reveal their lack of knowledge and challenge perceptions of their masculinity (Limmer, 2010). Young women also report feeling uncomfortable, as they believe that they cannot discuss their level of knowledge in mix-gendered groups for fear that they will receive demeaning comments from their classmates (Measor, Tiffin & Miller, 2000).

In recent years pornography has become an important source of information for young people (Smith, Barker & Attwood, 2015; Tanton et al., 2015). Pornography is designed to aid masturbation or to enhance sexual pleasure, but also provides an anonymous space to explore one's sexuality and can therefore provide some information about sex that is not facilitated in school-based sex education (Newman, 1997). Research continues to show that pornography is sought out as a source of additional information about sex (Tanton et al., 2015; Arrington-Sanders et al., 2015) and has been found to have a positive effect on young adults' sexual knowledge acquisition (Hald & Malamuth, 2008), particularly regarding new sexual practices (Lavoie, Robitaille & Hébert, 2000), sexual positions and techniques (Arrington-Sanders et al., 2015) and increasing understanding of queer sexuality (Dawson, Cooper & Moore, 2018).

It has been documented that pornography facilitates sexual identity exploration and can also provide practical information about sex acts for young men who have sex with men (MSM) (Kubicek et al., 2010). Others have found that although many young men in particular use pornography for information, they often perceive it to be an unreliable information source (Litras, Latreille & Temple-Smith, 2015). Research findings highlight

specific issues for LGBT+ youth in generic sex education programmes. The focus on cisgender, heterosexual and dyadic sexual relationships within sex education in many western countries not only excludes sexual minorities but does not include important information regarding LGBT+ sexual realities. As a result, a growing body of research suggests that homosexual and bisexual individuals increasingly compensate for a lack of meaningful sex education by accessing information via pornography (Kubicek et al., 2010; Mutchler, Ayala & Neith, 2005).

Sexual orientation also appears to play an important role in frequency of pornography engagement. Homosexual male adolescents have been found to use internet pornography more often than heterosexual male adolescents (Luder et al., 2011). For homosexual and bisexual people, pornography can be a substantial source of sexual exploration, information or arousal (Arrington-Sanders et al., 2015; Kubicek et al., 2011). Mutchler, Ayala, and Neith (2005) found that young MSM obtained most of their sexual information from internet pornography. For some this helped to confirm their sexual interests in other males and provided a first exposure to gay culture and subcultures (Kubicek et al., 2011).

A particular exploratory element of this study pertains to pornography engagement in the Irish context, specifically motivations for use, consumption frequency and age of first engagement. As no research has been collected to date on young adults' experiences of pornography in Ireland, this is an important area of exploration. Data on pornography experiences within a population provide important information for policy development and the development of sex education initiatives. A growing body of literature suggests that a majority start watching pornography during adolescence (Sabina, Wolak & Finkelhor, 2008; Hald & Mulya, 2014; Davis et al., 2018). Cross-sectional research suggests that the median age of first intentional exposure to pornography is 13 years among males and 16 years among females (Harper & Hodgins, 2016; Davis et al., 2018). The rate of first engagement appears to differ between countries, with 14.4% of American boys in a 2008 study reporting intentional first exposure under 13 years old (Sabina, Wolak & Finkelhor 2008), compared to 59% of 10–

12-year-old Taiwanese children reporting intentional use in the previous year (Chen, Leung, Chen & Yang, 2013).

Prevalence rates for pornography engagement vary from country to country and between genders. A recent study found 40% of male and 5% of female college students in the United States reported weekly consumption (Cooper & Klein 2017). Similar frequencies have been observed elsewhere, with 49.5% of males and 6.6% of female Indonesian university students reporting pornography use (Hald & Mulya, 2014). More frequent viewing patterns have been found among 15–29-year-old Australians, with weekly viewing reported by 81% of young men and 23% of young women (Lim, Agius, Carrotte, Vella & Hellard, 2017).

Based on our review of the literature, our first goal was to explore the pornography engagement experiences of Irish university students. The second aim of our study was to explore whether past experiences of school-based sex education were associated with use of pornography for sexual information and whether that relationship was dependent on a person's sexual orientation. Based on these aims the following were hypothesized:

H1a: Dissatisfaction with sex education in school will predict pornography use as a source of information about sex.

H1b: Use of pornography as a source of sexual information will predict greater satisfaction with present self-reported levels of sexual knowledge and lower aspirations for greater sexual knowledge.

H2a: Homosexual and bisexual participants will report less satisfaction with their school-based sex education than heterosexual participants.

H2b: Sexual orientation will moderate the relationship between (i) satisfaction with sex education in school and (ii) previous use of pornography as a source of information about sex.

Methodology

Study design. This study had a cross-sectional, quantitative research design. It was nested within a larger cross-sectional survey with Irish university students; with a convenience sample which consisted primarily of Irish university students.

Participants. The online survey was completed by 1,929 respondents (1038 females, 861 males, 15 gender queer or non-binary, 8 transgender and 7 who identified as ‘other’ identity). A total of 1,377 participants who were aged 18–24 years at the time of the study were included in the analysis (775 females, 586 males, 11 gender queer or non-binary persons and 5 transgender persons). The socio-demographic characteristics assessed included sexual orientation, education level and relationship status. Participants were also asked the number of their lifetime sexual partners and a range of questions related to their pornography viewing experiences. A breakdown of socio-demographic responses is presented in Table 1.1.

Table 1.1. *Socio-demographic characteristics by gender*

	Female n (%)	Male n (%)	Queer n (%)	Trans n (%)	Total n (%)
Education level					
Year 1	295 (38.1)	202 (34.5)	4 (25.0)	3 (60.0)	504 (36.5)
Year 2	144 (18.6)	116 (19.8)	3 (18.8)		263 (19)
Year 3	146 (18.8)	108 (18.1)	4 (25.0)	1 (20.0)	259 (18.7)
Year 4	100 (12.9)	106 (18.1)	3 (18.8)		209 (15.1)
Postgraduate level	90 (11.6)	54 (9.2)	2 (12.5)	1 (20.0)	147 (10.6)
	775	586	16	5	1382
Relationship status					
No relationship	281 (36.3)	259 (44.2)	6 (37.5)	2 (40.0)	548 (39.7)
Casual dating	102 (13.2)	86 (14.7)			188 (13.6)
Single	19 (2.5)	19 (3.2)	1 (6.3)	1 (20.0)	40 (2.9)
Open relationship	20 (2.6)	13 (2.2)	2 (12.5)	1 (20.0)	36 (2.6)
Relationship < 6 months	86 (11.1)	45 (7.7)			131 (9.5)

Relationship > 6 months	266 (34.4)	164 (28)	7 (43.8)	1 (20.0)	438 (31.7)
	774	586	16	5	1381
Sexual Orientation					
Homosexual	23 (3.0)	40 (6.8)	1 (6.7)	1 (20.0)	65 (4.7)
Heterosexual	623 (80.4)	512 (87.4)	7 (46.7)		1142 (82.7)
Bisexual	105 (13.5)	27 (4.6)	2 (13.3)	3 (60.0)	137 (9.9)
Asexual	7 (0.9)	1 (0.2)	1 (6.7)		9 (0.7)
Pansexual	13 (1.7)	3 (0.5)	4 (26.7)	1 (20.0)	21 (1.5)
Other	4 (0.5)	3 (0.5)			7 (0.5)
	775	586	15	5	1381
Number of sexual partners					
0	88 (11.4)	92 (15.8)	3 (18.8)	2 (40.0)	185 (13.4)
1-2	265 (34.2)	177 (30.5)	4 (25.0)		446 (32.4)
3-5	189 (24.4)	124 (21.3)	4 (25.0)		317 (23)
6-10	127 (16.4)	86 (14.8)	3 (18.8)		216 (15.7)
11-15	56 (7.2)	35 (6.0)			91 (6.6)
16-20	19 (2.5)	24 (4.1)	1 (6.3)		44 (3.2)
21+	30 (3.9)	43 (7.4)	1 (6.3)	3 (60.0)	77 (5.6)
	774	581	16	5	1376

Measures

Demographic information. Education level was assessed by university year (enrolled in first, second, third or fourth year of undergraduate degree, or in postgraduate education). Participants were also asked to report which relationship status best reflected their situation at the time of study (not in a relationship, casual dating, single and not looking for relationship, in an open relationship, in relationship of less than six months, in relationship of more than six months) and the number of lifetime sexual partners. Sexual identity response options were: homosexual (gay/lesbian), heterosexual (straight), bisexual, asexual, pansexual and other (which consisted largely of participants who reported their orientation as ‘queer’ in an open text response box).

Pornography use. Respondents were asked whether they had ever seen internet pornography, which was defined as ‘websites that have descriptions, pictures, movies, or audio of people having sex or engaging in other sexual behaviours’, either accidentally or on purpose, age of first accidental or intentional engagement with pornography, age of first masturbation to pornography, how often they watch internet pornography and their motivations for use (for masturbation, for information about sex, for entertainment, out of curiosity, with a partner for arousal, with a partner for new sexual ideas).

Sex education. Experience with school-based sexual health education was assessed by combining the following three items: ‘My sexual health education classes left out a lot of crucial and important information’- this item was reverse coded, ‘The sexual health education I have received in school has covered the topics that I am most interested in’ and ‘I learned most of what I know about sexual health from my high school sexual health education’. The combined variable demonstrated satisfactory internal consistency ($\alpha = .78$). Satisfaction with current sexual knowledge was assessed with the item ‘I am satisfied with the way(s) in which I found out most of what I know about things having to do with sex’, and aspirations to know more about sex as follows: ‘I wish I knew more about sexuality and sexual health’ (Meaney et al., 2009). All of these items were presented with response options ranging from ‘strongly disagree’ to ‘strongly agree’, on a five-point Likert scale.

Responses relating to engaging with pornography for sexual information were dichotomized for analysis. The derived binary variable consisted of those who had never used pornography for sexual information (never) and those who had used pornography as a source of information about sex (a little, somewhat, quite a bit or a great deal). These four levels were collapsed to create the measure of those who had ever used pornography as a source of sex information. Three items which reflected experience of sex education in school were combined: ‘The sexual health education I have received in school has covered the topics that I am most interested in’, ‘My sexual health education classes left out a lot of crucial

and important information’ (this item was reverse coded) and ‘I learned most of what I know about sexual health from my high school sexual health education’.

Recruitment. Participants were invited to participate in the study in December 2017 via an online anonymous survey which was sent out through the internal student email system at a university located in the West of Ireland. Participants were sent an email invitation which contained a brief overview of the aims of the study and a link to participate. The first page of the survey contained detailed information about the study. Information on free counselling services was provided to all participants. Once participants had read the study information and informed consent pages, they were invited to tick a box to indicate their willingness to participate in the study. Ethical approval for this study was granted by the Research Ethics Committee of the National University of Ireland, Galway.

Analysis strategy. Pornography engagement experiences of the sample are presented in Table 2. Binary logistic regressions were used to test our hypotheses that (H1a) those who reported less satisfaction with their sexual health education in school would be more likely to use pornography for information about sex and (H2a) that homosexual and bisexual participants would report less satisfaction with their school-based sex education. Two separate ordinal regression analyses were used to test hypothesis (H1b) that pornography use for information, would predict (i) greater sexual knowledge satisfaction and (ii) aspiration to know more about sexuality and sexual health. Finally, moderation analyses were used to investigate whether the relationship between satisfaction with school-based sex education and use of pornography as a source of information about sex are conditional on a person’s sexual orientation (H2b).

Results

Satisfaction with school-based sexual health education was not associated with using pornography as a source of sexual information (see Table 1.3).

Using porn as a source of sexual information was associated with having greater aspirations to know more about sex and sexuality (see Table 1.4).

Bisexual and homosexual participants reported being less satisfied with their school-based sex education than heterosexual participants (see Table 1.5).

Sexual orientation did not influence the relationship between satisfaction with school-based sex education and use of pornography for sexual information (see Table 1.6).

Table 1.2. *Pornography engagement history by gender*

	Female	Male	Queer	Trans	Total
Ever seen porn					
Yes	694 (89.7)	577 (98.6)	15 (93.8)	4 (80.0)	1290 (93.5)
No	61 (7.9)	2 (0.3)	0	1 (20.0)	64 (4.6)
Unsure	19 (2.5)	6 (1.0)	1 (6.3)	0	26 (1.9)
Total	774	585	16	5	1380
Frequency of engagement					
A few times per day	0	11 (1.9)	1 (6.3)	1 (25.0)	13 (1)
Daily	11 (1.5)	156 (26.8)	1 (6.3)	0	168 (12.8)
1-2 times per week	97 (13.6)	280 (48.0)	2 (12.5)	1 (25.0)	380 (28.9)
A few times per month	181 (25.4)	99 (17.0)	5 (31.3)	2 (50.0)	287 (21.8)
A few times per year	248 (34.7)	31 (5.3)	3 (18.8)	0	282 (21.4)
Never	177 (24.8)	6 (1.0)	4 (25.0)	0	187 (14.2)
Total	714	583	16	4	1317 (100)
Age of first porn engagement					
5 years old or under	2 (0.3)	3 (0.5)	1 (6.7)	0	6 (0.5)
6-9	23 (3.3)	27 (4.6)	0	2 (50.0)	52 (4.0)
10-13	187 (26.6)	351 (60.4)	6 (40.0)	0	544 (41.8)
14-17	401 (57.1)	194 (33.4)	7 (46.7)	2 (50.0)	604 (46.4)
18-21	86 (12.3)	6 (1.0)	1 (6.7)	0	93 (7.1)
22+	3 (0.4)	0	0	0	3 (0.2)
Total	702	581	15	4	1,302

**Age of first
masturbation to
porn**

Never masturbated to porn	184 (26.3)	6 (1.0)	5 (33.3)	0	195 (15.0)
9 years old or less	3 (0.4)	7 (1.2)	1 (6.7)	1 (25.0)	12 (0.9)
10-13	59 (8.4)	291 (50.1)	3 (20.0)	1 (25.0)	354 (27.2)
14-17	314 (44.9)	270 (46.5)	5 (33.3)	1 (25.0)	590 (45.4)
18-21	131 (18.7)	7 (1.2)	1 (6.7)	1 (25.0)	140 (10.8)
22+	9 (1.3)				9 (0.7)
Total	700	581	15	4	1300 (100)

For masturbation

Not at all	175 (25.3)	8 (1.4)	5 (33.3)	1 (25.0)	189 (14.7)
A little	140 (20.3)	15 (2.6)	2 (13.3)	1 (25.0)	158 (12.2)
Somewhat	98 (14.2)	54 (9.3)	3 (20.0)	1 (25.0)	156 (12.2)
Quite a bit	159 (23.0)	174 (30.0)	4 (26.7)	0	337 (26.1)
A great deal	119 (17.2)	329 (56.7)	1 (6.7)	1	450
Total	691	580	15	4	1290 (100)

**For information
about sex**

Not at all	327 (47.5)	253 (44.0)	9 (60.0)	2 (50.0)	591 (46.1)
A little	177 (25.7)	180 (31.3)	1 (6.7)	0	358 (27.9)
Somewhat	114 (16.5)	103 (17.9)	3 (20.0)	1 (25.0)	221 (17.2)
Quite a bit	51 (7.4)	28 (4.9)	2 (13.3)	0	81 (6.3)
A great deal	20 (2.9)	11 (1.9)	0	1 (25.0)	32 (2.5)
Total	689	575	15	4	1283 (100)

Out of curiosity

Not at all	105 (15.1)	156 (27.2)	5 (33.3)	0	266 (20.7)
A little	223 (32.0)	185 (32.3)	5 (33.3)	0	413 (32.1)
Somewhat	183 (26.3)	144 (25.1)	4 (26.7)	1 (25.0)	332 (25.8)
Quite a bit	142 (20.4)	60 (10.5)	1 (6.7)	3 (75.0)	206 (16.0)
A great deal	43 (6.2)	28 (4.9)	0	0	71 (5.5)
Total	696	573	15	4	1288 (100)

**With partner for
arousal**

Not at all	517 (74.7)	460 (80)	11 (73.3)	3 (75.0)	991 (77.1)
A little	85 (12.3)	66 (11.5)	2 (13.3)	0	153 (11.9)
Somewhat	55 (7.9)	37 (6.4)	1 (6.7)	0	93 (7.2)
Quite a bit	27 (3.9)	6 (1.0)	0	0	33 (2.6)
A great deal	8 (1.2)	6 (1.0)	1 (6.7)	1 (25.0)	16 (1.2)

	692	575	15	4	1286 (100)
With partner for ideas					
Not at all	544 (78.8)	455 (79.1)	8 (53.3)	3 (75.0)	1010 (78.7)
A little	74 (10.7)	58 (10.1)	3 (20.0)	0	135 (10.5)
Somewhat	42 (6.1)	40 (7.0)	2 (13.3)	0	84 (6.5)
Quite a bit	22 (3.2)	12 (2.1)	1 (6.7)	0	35 (2.7)
A great deal	8 (1.2)	10 (1.7)	1 (6.7)	1 (25.0)	20 (1.6)
	690	575	15	4	1284 (100)

Table 1.3. *I am satisfied with the way(s) in which I found out most of what I know about things having to do with sex.*

	B	S.E	Wald	df	Sig	Exp (B)	CI Lower	CI Upper
Never used porn for information	.196	.102	3.666	1	.056	1.216	.995	1.485
Have used porn for information was held constant								

Table 1.4. *I wish I knew more about sexuality and sexual health.*

	B	S.E	Wald	df	Sig	Exp (B)	CI Lower	CI Upper
Never used porn for information	-.367	.102	13.008	1	.000	.693	.568	.846
Have used porn for information was held constant								

Table 1.5. *Satisfied with sexual health education in school*

	B	S.E	Wald	df	Sig.	Exp (B)	CI Lower	CIUpper
Bi & Homosexual	-.968	.2264	18.259	1	.000	.380	.244	.592
'Heterosexual' was held constant								

Table 1.6. *Experience of sex education by sexual orientation by pornography use for information*

	B	SE	t	p	95% CI	
					LL	UL
Constant	.1714	.0574	2.9867	.0028	.0589	.2838
Sexuality	-.0705	.1617	-.4360	.6628	-.3875	.2465
Experience of sex education	-.0272	.0210	-1.2989	.1940	-.0683	.0139
Sexuality*experience of sex education	-.0938	.0592	-1.5833	.1133	-.2098	.0223

Discussion

Our findings indicate that Irish young adults engage with pornography more frequently than in many other countries, have a range of motivations for pornography engagement and engage with pornography for the first time at an early age. In total, 90% of females, 98.6% of males, 94% of non-binary participants and 80% of transgender participants reported that they had seen pornography; however, the total number of non-binary participants and transgender participants in our sample was small. A large proportion of the sample reported first engagement under 13 years of age, with 65.5% of males and 30% of females reporting this. Age of first pornography use for masturbation purposes varied, with 45% of the sample first using pornography for these reasons between 14 and 17 years of age; 52% of males and 9% of females first used pornography to masturbate under 13 years of age. A majority of males reported more frequent engagement (77%), in comparison to 15% of females. These findings are similar to those of Lim et al. (2017).

Media dependency theory posits that media use is planned (Ball-Rokeach & DeFleur, 1976) and that motivation is a key factor regarding a person's media engagement (Rubin, 2002). Based on this one would assume that males have greater motivations for pornography use because studies have shown that young men masturbate more often than young women (Pinkerton, Bogart, Cecil & Abramson, 2003). Although a large proportion of our sample reported using pornography for masturbation (85%), males were more likely to use it for masturbation than females, while females were more likely to report using pornography out of curiosity; approximately 54% reported having used pornography as a source of sexual information and 79% reported using it out of curiosity. Smaller frequencies were reported for interpersonal use; only 23% had used pornography with their partner for arousal purposes and 21% with their partner for new sexual ideas.

Approximately 70% of participants reported that their sex education in school was inadequate. The current guidelines for relationships and

sexuality education in Ireland are out of date (RSE Policy Guidelines, 1997) and do not mention important topics like sexual consent, LGBT+ issues or pornography. However, satisfaction with school-based sex education was not associated with using pornography as a source of information. Bisexual and homosexual participants were significantly more likely to report that they were dissatisfied with the sex education they received in school. These results highlight the need for significant improvement in sex education programmes in Ireland but also for greater inclusion of topics pertaining to LGBT+ sexual health. However, sexual orientation did not act as a moderating variable between having a poor experience of sex education and using pornography for information.

Comprehensive sex education programmes are only available in some schools across Ireland (Bewiser.ie 2018), and findings continuously show many young people in Ireland are not satisfied with the information they receive from school-based sex education about healthy sexual relationships (Youthwork Ireland, 2018). These findings have been echoed in other countries (Schools Health Education Unit, 2011). Our findings showed that 54% have used pornography for information about sex, an activity that has previously been attributed to the absence of quality sexuality education. Our findings show that participants' perception of satisfaction with their sexual health education in school was not associated with using pornography for sexual information.

Although other studies have found pornography to be a positive influence on sexual knowledge acquisition (Hald & Malamuth, 2008), our results show that having used pornography as a source of sexual information was not associated with satisfaction with the ways in which participants found out about sex but was correlated with the desire to know more about sexuality and sexual health. This could indicate that those who have used pornography for information may exhibit greater information-seeking behaviours and/or have greater sensation-seeking impulses. Sensation-seeking has been defined as a personality trait which involves “*the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of*

such experience” (Zuckerman, 2008, p. 27) and has been found to be an additive risk factor for sexual risk-taking (Sinković, Štulhofer & Božić, 2013). However, this only explained a small proportion of the variance and it is therefore probable that there are other factors at play.

Although pornography facilitates a range of positive outcomes for people, many important aspects of sexual relationships, such as sexual communication, are not usually adequately addressed, if at all. Putting these findings into context, although Irish children and adolescents are frequently engaging with pornography they may not receive quality sex education in the school setting. The way in which these young people’s sexual socialization is unfolding is therefore a matter of interest, as they do not have the opportunity to develop skills to facilitate critical engagement of pornography. Our findings highlight the importance of pornography literacy education (Albury, 2014).

Some young people may continue to use pornography for sexual information regardless of the quality of sex education that they receive. Therefore, it is important that young people receive information regarding aspects of sexual consent and the emotional elements of sex that are not evident in most mainstream pornography (Willis, Canan, Jozkowski & Bridges, 2018). Pornography provides young people with many examples of the nuances of sexual intimacies which can be utilized for discussion, from understanding the differences between non-consensual and consensual practices to sexual communication and enhancement of sexual pleasure. Porn literacy which promotes critical engagement with all sexual media and provides opportunities for young people to discuss the nuances of sexuality is crucial so that young people can make their own minds up about the sexual realities that they desire for their own lives.

Limitations

This study was based on cross-sectional data from a convenience sample of university students – education level, number of sexual partners, experience of sex education in school and ages of participants – and voluntary participation means that the findings cannot be considered

representative of the general population. Second, responses regarding experience of sex education in school rely on retrospection; participants' beliefs about the quality of their sex education may have changed over time. We cannot validate this information with an objective measure of the quality of sex education that participants received. This study was conducted in Ireland, a country which is considered quite sexually conservative in comparison to other European countries. Patterns in relationships between sex education and pornography use from students of similar demographics in other countries may not reflect ours.

We also do not know whether all students were educated in Irish schools; those who have grown up in other countries may have experienced sex education differently. Comparatively, we had a small percentage of non-binary and transgender participants and have not been able to highlight issues that are specific to those groups. Future studies should endeavour to replicate this study with a larger group of gender queer participants. Finally, our questions were specific to school-based sex education; additional sources of information are also being used by young people, including online websites and conversations with friends and parents (Tanton et al., 2015). Future studies should endeavour to explore a broader range of contexts in which young people acquire information about sex and sexuality in order to investigate how they relate to pornography engagement.

Conclusion

Results indicate that being dissatisfied with school-based sex education is not associated with the use of pornography as a source of information about sex; instead, it seems that a large proportion of young adults may use pornography to learn about sex regardless of the sex education they receive in schools. Our findings highlight the importance of pornography literacy education for adolescents and young adults. Young people must be helped to develop critical thinking skills so that they can navigate the content they engage with and create sexual realities that coincide with their values.

Study 2. Read all about it: Using a vignette methodology to study comfort with consensual and non-consensual depictions of pornography content.

Abstract

Spanking, whipping and choking are examples of aggressive behaviours, which are often performed in consensual sexual encounters. However, within the pornography research literature, such behaviours are often perceived as being non-consensual, categorized as ‘violent’ and argued to predict sexual aggression. Viewing non-consensual scenes may be associated with negative attitudes towards consent, however consensual scenes, featuring typically violent behavior may not. This study sought to more clearly distinguish between consensual and non-consensual pornography vignettes, in order to examine individuals consent attitudes in relation to these pornographic vignettes and to assess the hypothesis that more frequent pornography engagement will be associated with greater comfort with the non-consensual scenes. A series of pornography scene vignettes were developed by the researchers and categorized by a group of sexual consent experts, as ‘consensual’ or ‘non-consensual’ scenes, during a 3 round Delphi study. The finalized scenes were administered to a convenience sample of Irish university students ($n = 1,121$), who also answered questions regarding their attitudes toward consent and frequency of pornography engagement. More frequent pornography engagement was not associated with greater comfort with the non-consensual scenes. Greater comfort with the non-consensual pornography scenes was negatively associated with attitudes toward establishing consent and consent-related behavioural intentions.

Introduction

In the pornography literature frequency of pornography engagement is the most commonly used method of assessing the link between pornography and sexual violence. Much of literature in this area points toward a link between frequent pornography use and sexual coercion and aggression (Vega & Malamuth, 2007; Hald, Malamuth & Yuen, 2010; Allen D'alessio & Brezgel, 1995, Wright, Tokunaga & Kraus, 2015). A growing body of research indicates that engagement with pornography depicting non-consensual activities is strongly correlated with committing acts of sexual aggression (Hald, Malamuth & Yuen, 2010). However, research also shows that engagement with pornography depicting consensual depictions also predicts sexual aggression. For example, one recent longitudinal study by Tomaszewska and Krahe (2018) found that frequent pornography engagement featuring consensual sex was associated with attitudes towards sexual coercion and was linked to future sexual violence perpetration.

One issue which may explain such confusion among findings relates to the items used to measure pornography content choices. There is considerable overlap in the definitions used to define violent and non-violent, as well as consensual and non-consensual depicting pornography. There is a need for more reliable measures to more clearly distinguish between different types of pornography that an individual chooses to engage with in order to obtain a clearer picture of the relationship between pornography content choices and sexual aggression.

Literature review

Meta-analysis showed that engagement with violent pornography has been shown to be a significant predictor of sexual aggression in cross-sectional and longitudinal studies (Hald, Malamuth & Yuen, 2010). However, in their meta-analysis of cross-sectional and longitudinal research by Wright, Tokunaga and Kraus (2015) found that although pornography consumption was associated with actual acts of sexual aggression, the difference between viewing violent and non-violent pornography on acts of sexual aggression were non-significant. Therefore, despite the growing body of research, there is little clarity regarding which type of pornography is

associated with violence. There are two key issues that could explain such confusion in research findings.

First, the differences between “violent” and “non-consensual” pornography have seldom been defined (Brown & L’Engle, 2009; Ybarra & Thompson, 2018; Ybarra, Mitchell, Hamburger, Diener-West & Leaf, 2011). Research which has established links between aggressive behaviour and pornography has focused largely on broad categories such as “violent/non-violent” pornography (Bauserman, 1996; Ybarra & Thompson, 2018). This is frequently described in terms of any sexual interaction which involves the use of force or coercion. For example, whipping, choking and slapping are typically classified as violent behaviours within pornography research (Bridges, Wosnitzer, Scharrer, Sun & Liberman, 2010). However, this means of categorisation may be problematic, as ‘whipping’, for example is often part of consensual sexual intimacies within bondage, dominance, sadism and masochism (BDSM) sexual scripts. The context within which these behaviours occur is rarely elaborated upon, in other words, studies rarely distinguish consensual from non-consensual acts. This is crucial to the valid assessment of pornography content choices and its outcomes.

The second issue is that, although some studies have provided definitions that distinguish between consensual and non-consensual portrayals in pornography, individuals may not be able to identify non-consensual pornography content. In recent years researchers have begun to measure exposure to content that features non-consensual or coercive sex (Landripet, Busko, & Stuhlhofer, 2019; Davis et al., 2018). For example, Davis et al (2018) asked participants whether they saw pornography content which featured “violence or aggression toward a man that appears to be consensual (i.e., he appears to enjoy it or want it)” and “Violence or aggression toward a man that appears to be non-consensual (i.e., he does not appear to enjoy it or want it)” (p. 314). These definitions help to provide greater clarity regarding pornography content engagement, however, they also rely on participants’ subjective interpretation of consensual and non-consensual content.

Consent scenarios are often interpreted differently by men and women (MacNeela, Breen, Byrnes, O'Higgins, Seery & Silke, 2017), with young men more likely to believe that consent was present than their female peers. Previous research has shown that men and women differ in their interpretation of, preference for and communication of consent, and that women are more upset by non-consensual depictions than men (Malamuth, Heim & Feshbach, 1980). Women and men report different consent strategies. Women utilise passive consent strategies, a greater need for sexual consent, are more likely to view consent as ongoing process, and desire that consent be clarified early during intimacy (Humphreys & Herold, 2007). In comparison, men are more likely to initiate sex, to view consent as a single event and to assume that their partner has consented (Humphreys & Herold, 2007; Jozkowski, Sanders, Peterson, Dennis, & Reece, 2014). Such differences may help to explain why young women report seeing non-consensual pornography more often than young men (Davis et al., 2018), and might result in people reporting that they have not watched non-consensual content, when they have, but have interpreted it as consensual.

The role of arousal while viewing pornography may also be important in this context. Early experimental work by Malamuth, Heim, Feshbach (1980) found that lay people are more often aroused by depictions of consenting sex than of sexual assault. However, in a second experiment, depictions of a rape victim experiencing orgasm resulted in comparable arousal scores to that of the consensual depictions. Those who are aroused at the time of viewing may be less likely to recognise the non-consensual nature of its content. In addition, social desirability may influence participants in answering truthfully about engaging with non-consensual pornography, for example responding to a statement like “non-consensual pornography use is unacceptable” may prompt a socially desirable response. But reading and responding to a scenario featuring non-consensual content may be less likely to prompt such a response and so provide a more authentic depiction of acceptability. Because of the potential ambiguity and possible misinterpretations that arise, there is a need for more objective assessment of non-consensual pornography. In this context the use of vignettes have been shown to have a number of specific advantages when

conducting such sensitive research and may be particularly useful in the context of pornography use.

Sexual consent research

Individual attitudes towards consent are important in the context of committing acts of sexual aggression and may be a more reliable predictor of a person's likelihood to engage with non-consensual pornography content. Attitudes towards consent are correlated with actual acts of sexual aggression (Tomaszewska & Krahe, 2018). Humphreys and Brousseau (2010) argue that key attitudes about consent consist of: "the importance of negotiating consent verbally, how often consent needs to be discussed during a single encounter, whether consent can be assumed, and whether consent is important for all sexual activities or select activities, such as intercourse" (page 422). Perceived sexual consent norms are also important predictors of behaviour. For example, several studies support a positive relationship between perceived sexual attitudes and behaviours of one's peers and sexual behaviour (Boone & Lefkowitz, 2004; Buunk, Van Deneijnden, & Siero, 2002; L'Engle & Jackson, 2008; Wallace, Miller, & Forehand, 2008). In this context pornography use is associated with setting and reinforcing certain norms, including perceptions regarding sexual behaviour and treatment of women (Koletic et al., 2019; Wright & Stulhofer, 2019).

Sexual consent is a multi-faceted construct that can be conceptualized as either an internal feeling of willingness, an external verbal or behavioural act, or a behaviour that is interpreted as willingness (Muehlenhard, Humphreys, Jozkowski & Peterson, 2016). Consent can be communicated by verbal and nonverbal means, using direct, indirect or even passive signals (Hickman & Muehlenhard, 1999). Although verbal communication of consent may be the clearest form of communicating consent, research shows that individuals prefer to use of indirect behavioural cues (Hickman & Muehlenhard, 1999; Humphreys, 2004; Jozkowski & Wiersma, 2015). Men and women use indirect cues to passively indicate their consent by not resisting their partner's advances (Humphreys & Brousseau, 2010). A preference for such communication techniques may be associated with a person's pornography content choices.

Furthermore, consent communication can become influenced by various social, contextual factors including a person's gender (Johnson & Hoover, 2015), and the type of sexual behaviour involved (Jozkowski & Peterson, 2013). Humphreys (2004) found that penetrative behaviours required more explicit communication of consent than less intimate behaviours such as kissing. Pornography frequently portrays manual and penile penetrative oral, vaginal and anal sexual behaviours. Understanding a person's attitudes towards sexual consent representation in pornography with regard to these behaviours may be an important predictor of their actual approach to sexual consent in their real life relationships.

Theoretical foundation

A number of theories have been presented in the debate on pornography and sexual violence. Some argue that there is little to no effect on aggression because so few people engage with non-consensual and violent pornography and that positive societal influences, which penalize acts of aggression, act to deter the application of sexually aggressive scripts (Diamond, Jozifova & Weiss, 2011; Ferguson & Hartley, 2009; Fisher & Grenier, 1994). Others suggest that pornography poses a risk to those who consume it (Malamuth & Marshall, 2009; Dabreu & Krahe, 2014), by contributing to a culture of sexual callousness (Zillmann & Bryant, 1982), particularly regarding increased personal tolerance of violence against women (Zillmann & Bryant, 1982). This link is hypothesized to exist through the normalization of sexual violence following frequent exposure to media that includes violence or degradation (Krafka, Linz, Donnerstein & Pernod, 1997), resulting in desensitization over time and leading individuals to seek out more degrading and demeaning content. Paul (2010) argued that this leads to users needing to consume greater amounts of pornography and more extreme content in order to become aroused thus increasing demand for aggressive and non-consensual content (Sun, 2011). These hypotheses are based on script theory (Bandura, 1986; Gagnon & Simon, 1973). In this context sexual scripts are acquired through watching pornography, which provides a framework from which individuals learn how to behave.

Cognitive scripts enable us to process knowledge and understand social situations. They serve as a guideline for what we believe to be

appropriate behavior (Schank & Abelson, 2013) and contain normative expectations about situational outcomes and the behavior of others (Krahé, Bieneck & Scheinberger-Olwig, 2007). A script refers to a routine (i.e., a specialised form of cognitive schema), and are learned from watching others and modeling their behaviour (Bandura, 1986). Sexual scripts are representations of such scripts in sexual interactions (Gagnon & Simon, 1973). The endorsement of aggressive sexual scripts play an important part in the perpetration of sexual coercion and assault (Bay-Cheng & Eliseo-Arras, 2008). Contemporary models, such as the 3AM model (Wright, 2011) have been utilised to explain the application of media-learned scripts. Wright (2011) proposes that a number of media content factors and audience factors influence whether a script is acquired (acquisition phase), reinforced (activation phase), or enacted in real life (application phase). Audience factors, including a person's gender or existing sexual scripts, and accessibility factors, such as frequency of engagement are argued to influence this process (Wright, 2013; Wright & Tokunaga, 2016).

Using a method which distinguishes between depictions of consensual and non-consensual content will help to further understand the relationship between frequent pornography engagement and person's content choices. Some argue that those who use pornography overtime become desensitised to it and watch more violent content as a result (Dines, 2010). If this is the case we should expect to see differences between individuals who report higher rates of pornography consumption will also report greater perceived comfort associated with non-consensual sexual vignettes.

Gender is a second variable of interest. On average, men engage with pornography more often than women, and are more accepting of it. Men have been consistently found to report significantly higher endorsements of rape myths compared to women (Suarez & Gadalla, 2010; Hayes, Abbott & Cook, 2016), and are also more likely to be perpetrators of sexual violence (Muehlenhard, Peterson, Humphreys, & Jozkowski, 2017). A combination of these factors could mean that men are generally more comfortable with a wider variety of pornography and less sensitive to

portrayals of sexual violence. We may therefore predict that males will more likely report greater comfort with the non-consensual vignettes than females.

In addition, a person's attitudes to sexual consent or non-consent are also likely to influence whether or not they engage with non-consensual pornography content. There is a dearth of research in this area, however, there are studies which show that a person's attitudes towards sexual consent are associated with their consent-related behaviours (Gidycz & Warkentin, 2007; Zinzow & Thompson, 2015). Although we cannot examine the direction of the relationships between comfort with non-consensual pornography vignettes and a person's attitudes towards sexual consent in the present study, the use of consensual and non-consensual pornography scenarios allows us to explore which of these factors are important in determining whether or not an individual may be likely to engage with pornography depicting non-consensual content.

The current research

This study aimed to test a new approach to measure a person's comfort with consensual and non-consensual pornography, in order to further understand what factors are associated with watching non-consensual pornography. We hypothesized that frequency of pornography engagement, gender, and attitudes towards sexual consent would be associated with comfort with watching non-consensual pornography. Specifically we hypothesized that having less positive attitudes towards sexual consent would predict comfort with the non-consensual vignettes, and having more positive attitudes towards consent would predict comfort with the consensual vignettes.

Hypotheses

1. Men will report greater comfort with the non-consensual scenes than women.
2. More frequent pornography engagement will be associated with greater reported comfort with the non-consensual scenes.
3. Having less positive attitudes towards consent will be associated with greater comfort with the non-consensual scenes.

4. Having an indirect behavioural approach to consent will be associated with greater comfort with the non-consensual scenes.
5. Believing in sexual consent norms that do not require verbal consent will be associated with greater comfort with the non-consensual scenes.

Method

Study design

This study had a cross-sectional, quantitative design. The approach comprised three stages. The first stage involved the construction of 12 pornography scene vignettes to represent consensual and non-consensual scenes. The second phase was to establish the most valid measurement model using a combination of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The third stage was to test the overall model using structural equation modeling (SEM).

Recruitment

An email invitation was sent to all students via the internal student emailing system at a public Irish university, which contained information about the aim of the study, the nature of the questions, approximate completion time, and a link to the online survey. A detailed study information sheet was embedded in the first page of the survey. This included the aims of the study, an overview of the study questions, information regarding confidentiality and assured anonymity, and the risks and benefits regarding participation. Information on free counselling services was provided to all study participants. Participants gave their informed consent by clicking ‘Yes, I consent to participating in this study. I understand that I can participate to my own level of comfort, can stop at any time I want, and that all the information I provide will be anonymous’. Every participant read all of the scenarios and order of presentation was randomised for each participant. The study received approval from the Research Ethics Committee of the university.

Participants. A young or “emerging adult” (Arnett, 2007) student population was selected as previous research had found that many individuals experience unwanted sexual contact during their time at university (Muehlenhard et al., 2016). Additionally, gender was relevant to

the research enquiry and number of non-binary or transgender identifying participants were too small in number for inclusion in the analysis. The final sample for this study consisted of 1,121 students. Overall, 533 identified as men and 588 as women. Of the total sample, the majority were Irish (81%) and identified as heterosexual (82%). A significant proportion were single (38%), and had 1-2 sexual partners in their lifetime (31%). Participants were asked to select the response that best reflected their experience. For more information on the demographic characteristics of our sample see Table 2.1.

Missing data. A number of items had more than 5% missing values (Schafer, 1999). Tabachnick & Fidell (2007) posit that the pattern of missing data significantly impact the imputation of missing values with values of below 5% inconsequential to data imputation. Through analyzing the pattern of missing data we also found that the items were not missing at random, with the largest percentages of missing data from the last page of the online survey, with missing values increasing from 6% on the second last page of the survey to 13% of missing values on the last page. The largest percentage of missing data were on the questions about attitudes towards sexual consent. Therefore, a total of 606 cases which had a significant amount of missing data were omitted resulting in a dataset of 1,332 participants with a maximum of 5% of missing data per item. The missing data in the new dataset were imputed using the Expectation Maximisation method. Additionally, as we were interested in the experiences of young people who engage with pornography, this inclusion criteria meant that participants who responded that they “never” watch pornography were omitted from the current analysis. The final dataset consisted of 1,121 complete responses.

Table 2.1. *Socio-demographic characteristics of sample by gender and overall n (%)*

	Women	Men	Total
	n (%)	n (%)	n (%)

<i>Sexual Orientation</i>			
Homosexual	18 (3)	39 (7)	57 (5)
Heterosexual	456 (78)	463 (87)	919 (82)
Bisexual	94 (16)	25 (5)	119 (11)
Asexual	3 (0.5)	1 (0.2)	4 (0.4)
Pansexual	11 (2)	2 (0.4)	13 (1.2)
Other	6 (1)	3 (0.6)	9 (0.8)
<i>Nationality</i>			
Irish	465 (79)	443 (83)	908 (81)
Non-Irish	122 (21)	90 (17)	212 (19)
<i>Education</i>			
Undergraduate education	495 (84)	458 (86)	953 (85)
Postgraduate education	93 (16)	75 (14)	168 (15)
<i>Relationship status</i>			
Not in a relationship	195 (33)	225 (42)	420 (38)
Casual dating	88 (15)	83 (16)	171 (15)
Single and not looking for a partner	17 (3)	18 (3)	35 (3)
In an open relationship	19 (3)	10 (2)	29 (3)
In a relationship < 6 months	63 (11)	38 (7)	101 (9)
In a relationship > 6 months	206 (35)	159 (30)	365 (33)
<i>Lifetime number of sexual partners</i>			
0	62 (10.50)	78 (15)	140 (13)
1-2	187 (32)	159 (30)	346 (31)
3-5	136 (23)	118 (22)	254 (23)
6-10	106 (18)	81 (15)	187 (17)
11-15	50 (8.50)	36 (7)	86 (8)
16-20	18 (3)	22 (4)	40 (4)
21+	29 (5)	39 (7)	68 (6)
Total	588 (100)	533 (100)	1121 (100)

Measures

Pornography engagement. Pornography engagement was assessed by asking participants how often they watch internet pornography, which was defined as follows “Websites that have descriptions, pictures, movies, or audio of people having sex or engaging in other sexual behaviours”. Response options were on a six-point Likert scale, ranging from (1) Never, (2) A few times per year, (3) A few times per month, (4) Once-twice per week, (5) Daily and (6) A few times per day. Across the entire sample, response option ‘a few times per month’ was reported most often (27%) as presented in Table 3.

Rational for vignettes

Gould (1996) found evidence for the reduced impact of social desirability on participants’ responses to vignette questions. It has been argued that the non-personal and hypothetical nature of a vignette is less threatening to the reader (Wilks, 2004), and issue which is likely to impact responses. This may be particularly the case when asking pornography viewers about their engagement with non-consensual pornography. Gould (1996) argues that providing hypothetical situations, rather than relying on individuals to provide information about their own experiences, may allow participants greater freedom in their responses. Although the use of hypothetical scenarios does not determine whether an individual has engaged in a behaviour, it provides information about their attitudes, which has been shown to predict non-consensual sexual behaviour (Gidycz & Warkentin, 2007; Zinzow & Thompson, 2015; Tomaszewska & Krahé, 2018). Using vignettes, researchers have the potential to gather data on sensitive topics from larger samples, with minimal risk of distress to participants (Wilks, 2004).

The use of a vignette-based methodology is exploratory in the sense of investigating whether written vignettes describing pornography scenes have the potential to be used as a proxy for how video-based pornography might be interpreted. The validity of vignettes, with respect to being consensual or non-consensual, can be maximised if the appropriate stakeholders (who have in-depth knowledge of sexual consent) are involved in the construction of the vignettes (Aguinis & Bradley, 2014). Therefore, the current study aims to develop an alternative method to explore

consensual and non-consensual pornography engagement. There is a dearth of evidence linking existing sexual consent attitude measures to applied implications, like specific types of pornographic content. Our aim is to use vignettes to investigate the relationship between attitudes towards sexual consent and decisions that pertain to real world choices.

Comfort with pornography scene vignettes. It has been suggested that individuals may be repulsed by pornography that does not reflect their own desires (Parvez, 2006). In this study we used the term “comfort” to assess an individual’s likelihood of engaging with the scenes described. Although this does not provide information about the past behaviour, it is indicative of current attitudes and the type of pornographic content that they would be likely to engage with. Participants were asked to read each vignette sequentially and report how comfortable they would feel in watching the porn scene described. All porn scene vignette questions had five response options (Very uncomfortable; uncomfortable; neither comfortable nor uncomfortable; comfortable; very comfortable).

Attitudes towards sexual consent. Attitudes towards sexual consent were measured using three subscales of the revised version of the sexual consent scale (Humphreys & Brousseau, 2010), which assessed (1) positive attitudes towards establishing sexual consent, which included items like “I feel that sexual consent should always be obtained before the start of any sexual activity”, (2) indirect behavioural approaches to consent, for example “typically I communicate sexual consent to my partner using nonverbal signals and body language”, and (3) sexual consent norms, for example “I believe it is enough to ask for sexual consent at the beginning of a sexual encounter”. All items were measured using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale has previously been shown to be reliable and valid among a sample of 372 undergraduate students (Humphreys & Brousseau, 2010).

Procedure

The questionnaire was piloted with ten university students in order to identify ambiguities, difficult questions, and to ensure question and instruction clarity. Completion time of approximately 15 minutes was recorded and was used as an approximate time completion guideline for

subsequent participants. A total of 1,938 students completed the survey which was administered via the internal university student email system. Participant information can be seen in Table 1.

Vignette development. The Delphi method is a research method used to establish consensus among experts in a certain field (Hsu & Sandford, 2010). In this study the method was used to establish consensus on the status of short written vignettes as representing consensual or non-consensual sexual activity among adults. Hughes and Huby (2004) highlighted the potential of short written vignette scenarios as a potentially effective strategy for engaging participants. Short vignettes are valuable in maximizing response rates (Lawrie, Martin, McNeill, Drife, Chrystie, Reid et al., 1998) and reduce participant burden. Although brief vignettes may not capture the complexity of video, they allow for the depiction of salient consensual and non-consensual behaviours, while also protecting our participants from potential distress. We endeavored to develop a set of vignettes to maximise participant engagement, including behavioural routines and scripts that reflect mainstream internet pornography scenes. The construct validity of vignettes is categorised by the extent to which it captures the topic under investigation (Gould, 1996). In this case, the Delphi method was used in order to maximise construct validity.

A Delphi study aims to develop consensus among experts, through iterative data collection which involves each expert providing feedback in each round. In this study individuals who had over two years' experience working in the area of sexual consent were invited to participate as 'experts'. Twelve of the 16 experts initially invited completed the first two rounds and eleven completed all three rounds of data collection via internet survey (two academics who research sexual consent, three sex educators who deliver sexual consent education programmes, three legal professionals, and three psychotherapists or support workers who provide counseling to victims of sexual violence).

During each round expert participants were asked to rate each of 12 pornography scene vignettes on whether or not they believed sexual consent was portrayed in each scene. A consensual scenario was defined as "a pornography scene in which both actors appear to be consenting to every

sexual behaviour described in the scene”. An unclear scenario was defined as a “pornography scene in which it is not clearly evident that consent was expressed by both actors for every sexual behaviour.” A non-consensual scenario was defined as “a pornography scene in which consent was not expressed, by at least one actor, for at least one of the sexual behaviours described in the scene”.

After every round the responses were summarised for participants in the form of a report, then the amended questionnaire with additional clarifications was redistributed to participating experts for the next round. There were approximately five weeks between each round. An a priori decision was made to categorise a vignette once two thirds (66%) or more of the 12 panel members reached consensus on which category a vignette belonged to (consensual, unclear, and non-consensual). As only 11 participants completed all three rounds we then decided to reduce the percentage needed to 64%, which was 7 out of the final 11 experts. After the 3 rounds, the 12 scenes were categorized as representing a (1) consensual, (2) unclear, or (3) non-consensual scenario, with two vignettes failing to reach consensus or were categorized as “unclear”. As our research question involved the comparison of the consensual and non-consensual vignettes, the two vignettes which were categorised as “unclear” by the expert participants were not included in the current analysis. The final vignette scores and categorization are depicted in Table 2.2.

Table 2.2. *Final Categorisations of vignettes and percentage agreements*

	Non- consensual (%)	Unclear (%)	Consensual (%)
Sam and Dan			100
Daniel and Abby			100
Rebecca and Jack			100
Jessica and Tom	100		
Dee and Jack	73	27	
Beth and Sandra	91	9	
Kelly and Matt	100		
Matt and Sarah	100		
Chris and Sarah	73	27	
Maria and Tom	18	36	46
Nick and Alex	64	36	
Max and Meghan	36	64	

Note - Numbers in bold were assigned to corresponding category.

Measure validation. Exploratory factor analyses (n = 542) were conducted using the 10 scenes (3 consensual and 7 non-consensual scenes) developed in the Delphi phase in order to assess the reliability of the non-consensual and consensual latent constructs. In addition, confirmatory factor analyses of the Sexual Consent Scale - Revised (Humphreys & Brousseau, 2010) were used to assess the reliability of responses for use in subsequent analyses.

Based on the measurement models constructed the next set of analyses involved using structural equation modelling to evaluate the relationships between the pornography scene vignettes, attitudes toward sexual consent, frequency of engagement with pornography, and attitudes towards pornography. This was an appropriate method for analysis because we had multiple indicators for each of the latent constructs which were based on theoretical considerations. Descriptive statistics, correlation analyses, reliability tests, and exploratory factor analysis were carried out

using IBM SPSS Statistics 22 (2013). CFA and SEM (n = 578) were carried out in AMOS Version 24 (Arbuckle, 2016), using maximum likelihood estimation. The expectation maximization function was used to impute missing data.

Results

Table 2.3. *Pornography engagement by gender and overall n (%)*

	Women n (%)	Men n (%)	Total n (%)	X ₂ (Cramers V)
Frequency of pornography use				411.94 (.60) **
A few times per year	262 (45)	34 (6)	296 (26)	
A few times per month	220 (37)	96 (18)	316 (28)	
Once-twice per week	94 (16)	257 (48)	351 (31)	
Daily	11 (2)	137 (26)	148 (13)	
Few times per day	1 (.2)	9 (2)	10 (1)	
Total	588	533	1121	

**p <.01

Exploratory factor analysis

We began by randomizing the dataset (n = 1,121) by using the random number generator function in SPSS and allocating a 1 or 2 to each participant. Analyses of the training dataset (n = 542) data began by conducting an exploratory factor analysis (EFA) of the self-reported comfort items in response to the consensual, unclear and non-consensual pornography vignettes using IBM SPSS Statistics 23 (IBM Corp, 2013). Under the central limit theorem normality was assumed, and results from a Kaiser-Meyer-Olkin test of sampling adequacy (KMO) indicated that the sample size was sufficiently large (KMO = .870) with a ratio of 54 participants to each item (Costello & Osborne, 2005), confirming that the data were appropriate for the application of EFA (Tabachnick & Fidell, 2007). EFA was used to examine whether the categories developed with the consent experts were validated by the student sample. Maximum likelihood (ML) was used for data extraction. Correlations between factors were assumed and therefore an oblique promax rotation with Kaiser normalisation was used, which is also appropriate for use on large datasets (Byrne, 2016). Anti-image covariance matrices showed that partial

correlations between the variables were small, with diagonals ranging between .373 and .584. Theory, scree plot illustrations, and eigenvalues were used to determine the number of factors to be retained. Scree plot illustrations, with samples larger than 200, provide reliable criterion for factor selection (Stevens, 1992). Factors with eigenvalues larger than 1 were retained (Hair, Anderson & Tatham, 1987). This resulted in two factors, which explained 64.24% of the variance; Factor 1 explaining 45.43% and Factor 2 explaining 18.81%. An *a priori* decision was made to retain item loadings above .30 (Costello & Osborne, 2005). All of the scenes categorised as non-consensual during the Delphi process loaded on to Factor 1, while the consensual scenes identified in the Delphi process loaded on to Factor 2, with high factor loadings overall (see Table 3). These two factors represent the latent constructs used in the development of the model. Cronbach's Alpha test results indicated high internal consistency within the consensual (.843) and non-consensual scenes (.882). For full information on the contents of the vignettes please see the appendix.

Table 2.4. *Promax rotated factor loadings for 2 factor solution ML of porn scene vignettes*

Vignettes (category)	Mean	SD	F1	F2
Jess and Tom (NC)	2.54	1.08	.776	-.005
Matt and Sarah (NC)	2.18	1.11	.741	-.031
Nick and Alex (NC)	2.68	1.15	.773	.007
Beth and Sandra (NC)	2.56	1.22	.735	-.023
Kelly and Matt (NC)	2.36	1.20	.681	-.047
Dee and Jack (NC)	2.69	1.09	.686	.064
Chris and Sarah (NC)	2.77	1.05	.636	.074
Sam and Dan (C)	4.15	.90	-.063	.886
Rebecca and Jack (C)	4.07	.90	-.010	.886
Dan and Abby (C)	3.92	.94	.106	.633

C = consensual scene; NC = non-consensual scene

Confirmatory factor analysis

In the construction of our model we first conducted confirmatory factor analysis (CFA) of the two factors generated during EFA on our confirmatory dataset ($n = 578$) using AMOS 24 (Arbuckle, 2016). An *a priori* decision was made to retain any items with loadings greater than 0.30. Regarding the model fit, we chose *a priori* to interpret the comparative fit index (CFI), which should be greater than .90, the root mean square error of approximation (RMSEA), less than .06, and the Tucker-Lewis index (TLI) and incremental fit index (IFI), both of which should be above .90. The model indicated good fit with an IFI value of .93, TLI of .91, CFI of .93 and RMSEA of .09. We then conducted CFA of 3 subscales of the three subscales from the Sexual Consent Scale - Revised (Humphreys & Brousseau, 2010). We hypothesised a three-factor model to be confirmed in the measurement proportion of the model, reflecting the three subscales. Initial CFA on the scale items resulted in a poor model fit with a CFI of .76, TLI of .73, IFI of .76 and RMSEA of .10. After considering the theoretical justification for covarying the residual errors of some items (MacCallum & Austin, 2000), minor alterations were made to the model, which improved its overall fit, with a CFI of .85 TLI of .82, IFI of .85 and RMSEA of .08.

Structural model

The data for our hypothesised model came from assessments of self-reported comfort with the 10 scenes discussed above. Comfort perceptions were measured on a 5-point Likert scale. These data loaded on two latent variables respectively corresponding to the nature of the scene. A total of 24 questions from three subscales of the revised version of the Sexual Consent Scale - Revised (Humphreys & Brousseau, 2010) made up three latent variables: “Positive attitudes towards establishing consent”, “indirect behavioural approach to consent” and “sexual consent norms”. Gender and a single item indicator representing frequency of pornography engagement were also included in the model. Our hypothesised model is illustrated in Figure 1. Circles represent latent variables and rectangles represent measurement variables. We used maximum likelihood parameter estimation because of our large sample size and reliable indicators for each latent construct (Wen, Marsh & Hau, 2010). For the predicted paths we report

standardized coefficients (β), standard errors (SE), confidence intervals at 95% (BC 95% CI) and significance of the standard coefficients. After performing Bootstrapping procedures the hypothesised model was a good fit of the data, with CFI .87, TLI .857, IFI, .87, RMSEA, .07 95% CI [.06, .07], $p = .000$). We did not employ any more model specification procedures.

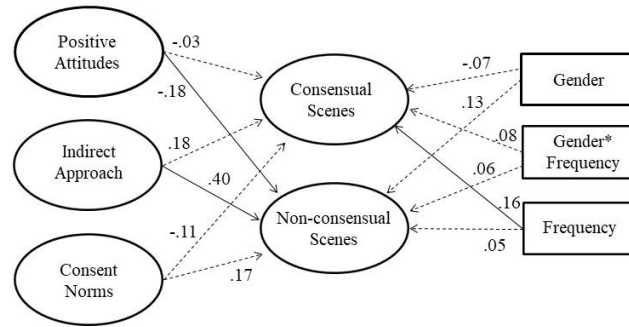


Figure 1. *Illustration of Structural model*

Self-reported comfort with vignettes

Although gender differences were evident in reported comfort with each of the vignettes, larger gender differences were observed on three non-consensual vignettes, “Nick and Alex”, a vignette featuring non-consensual vaginal sex, “Jess and Tom”, which featured non-consensual manual sex against the male character, and “Beth and Sandra”, a non-consensual oral sex vignette that featured two women. See Table 4 for detail on these gender differences. The response categories “very uncomfortable” and “uncomfortable” have been combined in Table 5, and the categories “comfortable” and “very comfortable” combined for a clearer presentation of results.

Table 2.5. *Self-reported comfort with vignettes, by gender (1 & 2 = uncomfortable, 3, neither, 4 = comfortable)*

Vignette	Uncomfortable		Neither		Comfortable		X ₂ (Cramers V)
	n (%)		n (%)		n (%)		
	Men	Women	Men	Women	Men	Women	
Dan & Abby (C)	23 (4)	65 (11)	66 (12)	111 (19)	444 (83)	412 (70)	30.06** (.16)
Matt & Sarah (NC)	319 (60)	455 (77)	91 (17)	61 (10)	123 (23)	72 (12)	40.55** (.19)
Chris & Sarah (NC)	222 (42)	276 (47)	156 (29)	169 (29)	155 (29)	143 (24)	4.17 (.06)
Nick & Alex (NC)	172 (32)	390 (66)	141 (27)	117 (20)	218 (41)	80 (14)	148.26** (.36)
Sam & Dan (C)	21 (4)	34 (6)	65 (11)	128 (17)	442 (84)	487 (83)	2.05 (.04)
Rebecca & Jack (C)	18 (3)	36 (6)	68 (12)	86 (15)	445 (85)	464 (79)	6.73* (.07)
Jess & Tom (NC)	193 (37)	424 (73)	151 (29)	106 (18)	181 (34.5)	54 (9)	160.31** (.38)
Dee & Jack (NC)	215 (41)	323 (55)	142 (27)	143 (24)	170 (32)	119 (20)	27.73** (.15)
Beth & Sandra (NC)	204 (39)	420 (72)	122 (23)	81 (14)	200 (38)	84 (14)	127.66** (.34)
Kelly & Matt (NC)	263 (50)	425 (72)	106 (20)	81 (14)	154 (29)	79 (13.5)	62.35** (.24)

**p <.01 *p <.05

(C) represents a consensual scene (NC) represents a non-consensual scene

Table 2.6. *Self-reported comfort with vignettes. Mean and Standard Deviation*

Vignette	Mean	Std. Deviation
Dan and Abby (C)	3.92	.93
Matt and Sarah (NC)	2.17	1.11
Chris and Sarah (NC)	2.77	1.05
Nick and Alex (NC)	2.68	1.15
Sam and Dan (C)	4.15	.85
Rebecca and Jack (C)	4.08	.89
Jess and Tom (NC)	2.54	1.08
Dee and Jack (NC)	2.69	1.08
Beth and Sandra (NC)	2.56	1.21
Kelly and Matt (NC)	2.36	1.20

(C) represents a consensual scene

(NC) represents a non-consensual scene

Table 2.7. *Unstandardised direct effects for full path model, with standard errors (SE), beta coefficients (β), 95% confidence intervals (CI) and significance values (p)*

Direct effect	SE	β	BC 95% CI	p
Frequency → Comfort with consensual scenes**	.045	.155	[.08, .26]	.002
Frequency → Comfort with non-consensual scenes	.039	.045	[-.02, .13]	.200
Gender → Consensual scenes	.145	-.066	[-.33, .24]	.701
Gender → Non-consensual scenes	.096	.131	[-.04, .33]	.093
Gender*Frequency → Comfort with consensual scenes	.153	.077	[-.22, .37]	.612
Gender*Frequency → Comfort with non-consensual scenes	.110	.055	[-.18, .26]	.684
Sexual consent norms → Comfort with consensual scenes	.134	-.109	[-.36, .14]	.502
Indirect behavioural approach to consent → Comfort with consensual scenes	.213	.183	[-.22, .63]	.377
Positive attitudes to consent → Comfort with consensual scenes	.068	-.031	[-.16, .11]	.676
Sexual consent norms → Comfort with non-consensual scenes	.118	.170	[-.03, .44]	.089
Indirect behavioural approach to consent → Comfort with non-consensual scenes*	.185	.403	[.04, .80]	.034
Positive attitudes to consent → Comfort with non-consensual scenes**	.054	-.179	[-.31, -.09]	.004

** p < .01 *p < .05

Table 2.8. *Standardised direct effects for full path model, with standard errors (SE), beta coefficients (β), 95% confidence intervals (CI) and significance values (p)*

Direct effect	SE	β	BC 95% CI	p
Frequency → Comfort with consensual scenes**	.065	.228	[.11, .37]	.002
Frequency → Comfort with non-consensual scenes	.061	.069	[-.03, .21]	.200
Gender → Consensual scenes	.212	-.097	[-.49, .35]	.709
Gender → Non-consensual scenes	.148	.204	[-.06, .52]	.096
Gender*Frequency → Comfort with consensual scenes	.223	.113	[-.32, .55]	.612
Gender*Frequency → Comfort with non-consensual scenes	.170	.085	[-.28, .39]	.737
Sexual consent norms → Comfort with consensual scenes	.105	-.085	[-.29, .11]	.495
Indirect behavioural approach to consent → Comfort with consensual scenes	.104	.090	[-.10, .31]	.340
Positive attitudes to consent → Comfort with consensual scenes	.064	-.030	[-.14, .10]	.668
Sexual consent norms → Comfort with non-consensual scenes	.094	.141	[-.03, .35]	.083
Indirect behavioural approach to consent → Comfort with non-consensual scenes**	.089	.210	[.01, .38]	.039
Positive attitudes to consent → Comfort with non-consensual scenes**	.047	-.189	[-.29, -.10]	.004

Comfort with consensual versus non-consensual scenes. A minority of participants reported that they would be comfortable watching the non-consensual scenes (between 12% and 41%)

Gender. Gender was not associated with comfort with the consensual scenes ($\beta = -.066$, $p = .701$) or with the non-consensual scenes ($\beta = .131$, $p = .093$).

Frequency of pornography engagement. Results show that frequency of pornography engagement was significantly associated with being comfortable with the consensual ($\beta = .155$, $p = .002$), but not the non-consensual scenes ($\beta = .045$, $p = .200$).

Gender by frequency of pornography engagement. There was no significant interaction effect between gender and frequency of pornography engagement with regard to comfort with the consensual ($\beta = .077$, $p = .612$) or non-consensual scenes ($\beta = .055$, $p = .684$)

Indirect behavioural approach to consent. Scores on the indirect behavioural approach to sexual consent subscale were significantly associated with being comfortable with the non-consensual scenes ($\beta = .403$, $p = .034$), but not with the consensual scenes ($\beta = .183$, $p = .377$).

Positive attitude towards establishing consent. Comfort with the non-consensual scenes was negatively associated with having positive attitudes towards sexual consent ($\beta = -.179$, $p = .004$), but not associated with the consensual scenes ($\beta = -.031$, $p = .676$).

Sexual consent norms. Level of endorsement of sexual consent norms was not associated with comfort with non-consensual scenes ($\beta = .170$, $p = .089$) nor with consensual scenes ($\beta = -.109$, $p = .502$).

Unstandardised and standardised direct effects are presented in tables 2.5 and 2.6.

Discussion

Based on previous research we hypothesized that gender, frequency of pornography engagement, and attitudes towards sexual consent would predict participants' comfort with the pornography scene vignettes.

Hypothesis 1 was rejected; men did not report greater comfort with the consensual or non-consensual scenes than women. Hypothesis 2 was not supported; more frequent engagement was associated with greater comfort with the consensual scenes, however, it was not associated with the non-consensual scenes. Hypothesis 3 was supported; Those who report less positive attitudes towards establishing sexual consent were more likely to report being comfortable with the non-consensual scenes. Hypothesis 4 was supported; having an indirect behavioural approach to sexual consent was significantly associated with reporting comfort with the non-consensual scenes. Hypothesis 5 was rejected; sexual consent norms were not associated with comfort with the non-consensual scenes.

In support of the 3AM model, our findings indicate that underlying these associations are schemas and scripts into which the interpretation of non-consensual and consensual scenes fall. How likely a person is to engage with non-consensual pornography may depend on how closely the observed scenarios matches their existing understanding of normal behaviour. Less positive attitudes towards establishing verbal consent were associated with greater comfort with the non-consensual scenes. Our findings support others (Romito & Beltramini, 2015) who have found that non-consensual pornography engagement is associated with negative consent attitudes; however, because of the cross-sectional nature of the data, the causal direction of such associations is beyond the scope of this study.

There were no differences between men and women on their comfort with the consensual and non-consensual scenes. However, engagement rates differed greatly between men and women in that men were more likely to report regular engagement with pornography. These findings are consistent with others (Lim et al., 2017). This indicates that although men and women may experience different drives to engage with pornography, they may not differ greatly in their interpretation or acceptance with pornographic content. Additionally, only 18% of women reported weekly pornography use. Other studies show that approximately 30% of young women in Australia watch pornography at least weekly (Lim et al., 2017). Alexander and Fisher (2003) argue that “If women are expected to be relationship oriented, they may also be expected to disapprove of and avoid sexual

behaviors that are perceived as being threatening to relationships or self-serving, such as casual sex, masturbation, and use of hardcore or softcore erotica” (p. 27). This may be specific to Ireland, where historically women’s sexuality has been largely repressed (Inglis, 2005). We also found no evidence of an interaction effect between gender and frequency of engagement on a person’s comfort with the non-consensual or consensual scenes.

A minority of participants overall reported that they would be comfortable watching the non-consensual scenes, for men rising to 41% for one non-consensual scene. Such findings support those of Shor & Seida (2018) who found that engaging with non-consensual pornography, which involved “explicit verbal requests to stop or avoid a certain act, nonverbal signs of resistance (e.g., pushing away), attempts to avoid the act, and/or evident unhappiness at being in the situation or performing a certain act, which were nevertheless ignored by the sexual partner” (p. 6), has not increased over time and in fact was found to be unpopular, with only 1.4% of the most viewed videos on PornHub to feature non-consensual content. These findings contradict those who argue that pornography is contributing to a culture of callousness (Zillmann & Bryant, 1982) whereby individuals are increasingly demanding non-consensual or aggressive content. What is often at the centre of this argument is that more frequent engagement results in individuals becoming desensitized to aggressive content and in turn prefer it (Dines, 2010). Following this logic, we would expect to find aggressive or non-consensual content to be more popular (Shor & Seida, 2018) or for frequent pornography engagement to be associated with greater comfort with the non-consensual scenes in comparison to the consensual scenes.

We found evidence that more frequent engagement was associated with being comfortable with the consensual scenes but not the non-consensual scenes. This indicates that there is a difference in terms of comfort associated with increased frequency for consensual and non-consensual scenes. In other words, the more you watch the more accepting you may be with consensual pornography, but this may not be the case with pornography that features non-consensual content. This could reflect the

speed and extent of a desensitising effect to different types of content, and might suggest that comfort only increases with certain types of content that does not challenge a person's existing beliefs about appropriate behaviour.

We found that pre-existing attitudes to consent, for example agreeing with the statement "Typically I communicate sexual consent to my partner using nonverbal signals and body language", was associated with comfort with the non-consensual scenes. Specifically, having an indirect behavioural approach to sexual consent was positively associated with such comfort. Those who have a more indirect or implicit approach to consent may be more comfortable with or tolerant of the non-consensual scenes as it may more closely coincide with their existing attitudes, in comparison to those whose existing sexual scripts include explicit verbal communication of consent. Additionally, pornography typically may not feature ongoing consent, as this is something that is established by actors beforehand or may be dictated by directors and is omitted from view. Some participants may have acquired beliefs about sexual consent from watching pornography which in turn could have influenced their sexual scripts and beliefs around acceptable sexual behaviour, however, the causal direction cannot be inferred by our data. In contrast, some people enjoy rape fantasies (Bivona, Critelli & Clark, 2012), however, this may not reflect their desires for real life experiences or influence their behaviour; what an individual feels comfortable in watching may also not reflect their desired behaviours in their own relationships.

Having positive attitudes to establishing consent was inversely correlated with non-consensual porn scene comfort. In other words, those with higher positive attitude scores were less tolerant of the non-consensual scenes. It could be that those with particularly positive attitudes see explicit or verbal communication as part of their existing script and may therefore be more likely to want to see explicit consent in the pornography that they would engage with. On the other hand those who engage with non-consensual content may develop or reinforce previously held beliefs around the acceptability of non-consensual sex. Because explicit verbal consent is uncommon in mainstream pornography (Murray, Willis, Canan, Jozkowski, Bridges, 2018), it may also be that those who are comfortable with non-

consensual pornography may not realize the importance of consent in sexual activity. Similarly, those who have more positive attitudes towards consent may have received more information about sexual consent or attended sexual consent workshops and have a more critical understanding regarding the interpretation of consent in different scenarios. Although critical improvements have been made within the literature, simply providing participants with definitions regarding non-consensual pornography (Davis et al., 2018) may not be sufficient, and indeed may not reflect the true nature of the content that people engage with. Nonetheless vignettes developed demonstrated reliability and provide greater objectivity regarding the exploration of the types of pornography that people may engage with.

Limitations and recommendations

This study has a number of limitations that warrant discussion. First, it was based on cross-sectional data from a convenience sample of young adult university students; the demographic characteristics, including low numbers of sexual partners mean that our findings may apply specifically to the models that young adults apply in their first time sexual encounters. People with more sexual partners and greater sexual experience may have different beliefs about consent-related norms and approaches to sex. Therefore the findings cannot be considered as representative of the general population. However, the findings may be applied to the specific types of scripts that young adults have during their early sexual careers. In addition, university students may have more experience with pornography than other adults and have grown up in an age where pornography engagement is becoming increasingly normalized (Carroll, Padilla-Walker, Nelson, Olson & Madsen, 2008). The sexual socialisation of this cohort may therefore differ compared with adults in older generations, which again limits its potential for generalizability. Nevertheless it provides interesting insight into the experiences of one of the first cohorts of young people to have gone through adolescence living in an environment where pornography is accessible and frequently used by young people.

Second, the external validity of the written scenes as an alternative to viewing a pornography video is unknown. Although participants reported that they would feel comfortable watching the scenes described, we do not

know if those who were comfortable with the non-consensual scenes have watched non-consensual pornography in the past or indeed if it was their preferred type of pornography to watch. We also do not know how the participants interpreted the vignettes with regard to sexual consent. Some participants may see the non-consensual nature of the scenes and still report being comfortable watching them. Others may interpret the scenes as depictions of encounters which are entirely consensual. If this is the case, there may be important differences between these two groups with regard to the attitudinal variables measured in this study.

Further validation, comparing responses to vignettes and video content would be valuable. Subtle cues that are exchanged between two people when being sexually intimate are not described with the written narratives. More detailed descriptions may have provided clearer indications of the context of each of the vignettes. In addition, depictions of non-consensual manual or digital sex scenes had higher scores on self-reported comfort than vaginal and anal sex scenes. It may be that apparently non-consensual behaviours that are considered less severe may be more acceptable to some participants than more intimate behaviours like vaginal or anal sex. Additionally, it may be that some participants are more comfortable with these particular scenes because of the behaviours portrayed. In other words, some people might only feel comfortable watching manual sex scenes.

Third, cognitive scripting theorists argue that the non-consensual scripts that are more likely to be learned and applied by individuals are those which feature non-consensual behaviour being rewarded. We urge future researchers to use vignettes that describe non-consensual behaviours being rewarded or punished in order to get a clearer understanding of the acceptability of non-consensual content and how they might be related to sexual consent attitudes. The use of the term “comfort” to establish a participant’s likelihood to engage with the content provided speaks to attitudinal, and less so behavioural intentions. Some people may be aroused by, and therefore engage with, content that may make them uncomfortable, such as erotic humiliation or masochism. Future research should replicate this study by asking participants whether or not the scene described

resembles the type of content that a person normally engages with. Finally, porn literacy interventions for youth (Dawson, Nic Gabhainn & MacNeela, 2019), which aim to challenge representations of violent sex in pornography, should promote critical awareness of the differences between aggressive and non-consensual and aggressive and consensual pornography.

Conclusion

Previous research has relied on broad categories or individual beliefs about whether or not they had watched non-consensual pornography, which may have provided unreliable information about the type of content that people engage with. This study provides a more objective measure for assessing people's comfort with non-consensual pornography. Findings suggest that a person's existing attitudes to sexual consent may be a more reliable indicator for the type of content that people engage with than frequency of pornography engagement alone.

Study 3: What do young people learn about sex from watching pornography?

Abstract

The Sexual Information from Porn Scale (SIPS) measures what people learn about sex as a result of viewing pornography. Scale items were generated from an extensive literature review, six qualitative focus group sessions with young adults (N = 56) aged 18-30 which explored how pornography could be used as a source of sex education. Thematic analysis of the data revealed nine broad themes. The final 143 items produced were reviewed and categorized by a sample of young adults (n = 9), and finally reviewed for item and construct relevance by a panel of pornography, sex education and scale development experts (n = 6). Scale items were administered to a sample of young adult university students (n = 618). Exploratory factor analysis yielded nine factors: 1) Sexual behaviour, 2) emotional and physical safety, 3) sexual exploration, 4) transgender and 5) intersex-related sexual questions, 6) anal sex, 7) body aesthetic, 8) same sex behaviours and 9) female sexual pleasure. Results show that pornography provides information about a range of sex-related questions, providing most information about how to do different sexual behaviours, facilitating sexual exploration and fantasy and learning about genital and body aesthetic. Participants reported learning the least about emotional and physical safety and LGBT+ related issues from watching pornography. The SIPS can be useful for examining a variety of questions regarding the use of pornography as an informal source of sexual information.

Introduction

Pornography has become an important factor in youth sexual socialisation (Štulhofer, Buško & Landripet, 2010; Wright, 2014). Watching pornography can serve many functions, such as arousal, entertainment, curiosity, sexual exploration and self-education (Smith, Barker & Attwood, 2015; Dawson, Nic Gabhainn & MacNeela, 2018). In terms of the latter function, it is recognised that many people feel motivated to engage with pornography to acquire information about sex (Burns, 2001; McKenna, Green & Smith, 2001; Hald & Malamuth, 2008; Dawson et al., 2019). However, there is a dearth of information regarding the functional value of pornography as an educator, specifically, what are individual perceptions about the educational value of pornography. Some qualitative research indicates that pornography may be considered a valuable source of information about sex because of its capacity to facilitate sexual experimentation, provide practical information about sexual acts and information regarding body function and genital aesthetic, sexual identity exploration and understanding of queer sexuality (Kubicek, Beyer, Weiss, Iverson & Kipke, 2010; Davis, Carrotte, Hellard, Temple-Smith, & Lim, 2017; Smith, Barker & Attwood, 2015; Dawson, Moore & Cooper, 2017). Yet, to date, no study has quantitatively explored the variety of information that a person learns from watching pornography nor the extent to which pornography contributes to their understanding about a particular sexual concept. This study aims to develop a measure to quantitatively assess young adults' learning about sex from pornography.

Pornography content. What a person learns about sex from watching pornography is influenced by the content that they see. The content of pornography varies greatly; one popular pornography content provider alone uploaded 4.8 million videos in 2018 (PornHub Insights, 2018). Content analyses of popular pornography have found that pornography portrays a number of common sexual behaviours; vaginal sex and fellatio are frequently depicted (Vannier, Currie & O'Sullivan, 2014). Content analysis of 302 gay male adult Internet pornography videos found that masturbation was depicted in 78% of scenes, anal sex in 70%, with

approximately half of anal sex scenes depicting condomless anal sex (Downing, Schrimshaw, Antebi, Siegel, 2014). Oral sex was depicted in 66% of scenes, 95% of which were unprotected. Other common behaviours included kissing, nipple stimulation, and manual anal penetration (Downing et al., 2014). A recent study by Davis, Carrotte, Hellard & Lim (2018) highlights how young heterosexual adults differ in the frequency with which they see a variety of behaviours in mainstream pornography. While both men and women report regularly seeing depictions of male dominance and pleasure, women were more likely to report seeing violence against women than men, and men reported seeing more anal sex than women. The impact of such engagement on personal sexual scripts is influenced by a number of additional factors.

What do people learn about sex from watching pornography?

Wright's 3AM model (2011) posits that a number of audience and content factors play a role in the impact of pornography on personal sexual learning. Audience factors, such as an individual's motivation for use and content factors, including the perceived utility of pornography are important in this context. Studies have shown that those who rate pornography as their primary educator about sex are less likely to use condoms (Wright, Sun, Miezán, 2019; Wright Sun & Steffe, 2018). Some youth report using pornography to learn about sex in the absence of good quality sex education (Arrington-Sanders et al., 2015). However, one recent study also found no significant difference between those who were satisfied with the school-based sex education and those who were not, on their use of pornography as an informal source of sex education (Dawson, Nic Gabhainn & Mac Neela, 2018). This may indicate that young people will use pornography to learn about sex regardless of the quality of sex education that they receive. However, there is little consensus among scholars and educators what pornography teaches its consumers (Albury, 2014).

Although mainstream pornography is not designed to act as an educational resource, some pornography includes educational elements which focus on enhancing sexual pleasure and facilitating safer sex

practices. Early examples of this include Nina Hartley's guide to better cunnilingus which provides practical steps for couples to improve or enhance female sexual pleasure through oral sex (Hartley, 1995). More recently, 'CrashPad series' (2016) by Pink and White Productions have produced content which portrays sexual negotiation strategies and use of safe words as part of Bondage, Dominance and Sadomasochism (BDSM) practices (Pink & White Productions, 2016). It is argued that individuals implicitly exercise the same motive in looking at mainstream internet pornography, in other words, even though mainstream pornography was not intended to act as an educator, for some, it has become one.

Mainstream Internet pornography has been documented to be a valuable source of information for some queer youth in exploring their sexuality and increasing sexual confidence among same-sex people (Arrington-Sanders, Harper, Morgan, Ogunbajo, Trent & Fortenberry, 2015), while others have challenged the representation of LGBT people in pornography for portraying negative stereotypes (Dawson et al., 2019). Pornography has also been found to contribute to a broader understanding of queer sexuality (Dawson, Cooper & Moore, 2018). Pornographic imagery has been found to be effective at promoting safer sex among young men who have sex with men (Leonard, 2012). Recent findings show that pornography also provides learning opportunities for young women. Davis and colleagues (2017) found that for some individuals, the opportunity to explore genital aesthetics by watching pornography was a liberating experience, while others reported a negative impact with regard to their own and their partner's sexual expectations for genital function and aesthetic (Davis et al., 2017). Although young men report using pornography for information more often than young women (Tanton et al., 2015), a dearth of research highlights what information young men learn about sex from pornography.

The current study

While some have found that individuals actively use pornography in order to learn about sex, learning may also occur without having actively engaged with pornography for the purpose of learning (Tanton, Jones, Macdowall, Clifton, Mitchell, Datta & Wellings, 2015; Wright, Sun, Miezán, 2019; Wright Sun & Steffe, 2018). In addition no study has explored the amount that pornography contributes to a person's acquired information about a range of sexual topics. Understanding what young people learn about sex from watching pornography is therefore important in order to understand the implications of such use on a person's sexual health and wellbeing (Wright, 2011). This study aims to devise a new measure to assess what young adults report learning about sex from pornography. Further, this study seeks to explore gender differences in this context.

Method

Study design

This Sexual Information from Porn Scale (SIPS) was developed over 4 phases:

1. Analysis of data from six group discussions on the topic of pornography and sex education for further development of the item list and review of the pornography research literature for item development.
2. Development of items by the authors and a review of the items by pornography experts for item list expansion and relevance.
3. Review of the developed item list by a student sample to ensure item clarity.
4. Administration of the items to a sample of students for assessment of scale validity.

Recruitment

Data were collected at two third level education institutions in Ireland; a university and technical institute. A mixed-gender, convenience sample of registered students aged 18+ were invited to take part in the research via an anonymous online survey. Email invitations were delivered

to students via each institution's internal student e-mail system. Data were collected in September 2018. In total we received 618 complete responses which were used in the current analysis. The majority of participants were Irish (76%), identified as heterosexual (74%) and were 18-21 years of age (61.5%). For detailed participant information, see Table 3.1.

Inclusion criteria. Participants were informed of the explicit nature of the questions and were provided with a detailed study overview prior to participating. Those who gave their informed consent and were over the age of 18 were invited to participate. A mix-gender sample of 18-29 year olds were chosen for a number of reasons. Research suggests some gender and sexual orientation-specific differences in the use of pornography for sexual information. For example, women have been reported to learn about female genital aesthetic from pornography (Davis et al., 2017), and same sex attracted youth often report using pornography as a means to explore their sexual orientation (Arrington-Sanders et al., 2015). Therefore we sought to recruit a large and varied sample which would allow us to explore the factor structure with different groups.

Measures

Defining pornography. We defined Internet pornography as “*Website content that has descriptions, pictures, movies, or audio of people having sex or engaging in other sexual behaviours*”, based on recommendations by Kohut (2014) about young people's definitions of internet pornography.

Sexual Information from Pornography Scale (SIPS). Participants were asked to read the following question: “Please indicate the degree to which you have learned something about the following items from watching porn”. Responses were rated on a 5 point Likert-style scale (1. Nothing, 2. A little, 3. Some, 4. A lot, 5. Everything). Scale items were randomised for each participant.

Procedure

The study received full approval from the Research Ethics Committee at the National University of Ireland, Galway.

Phase 1: Group discussion qualitative analysis & Literature review

Group discussions were initially used to generate relevant themes which were then used as a basis for an extensive review of the pornography research literature in accordance with the themes identified. There were 54 participants in total. Participants' ages ranged from 18 to 29. The group discussions sought to explore (1) the beliefs that young adults had around the messages that pornography promoted, (2) what young people learn about sex from watching pornography, and (3) the core messages that should be included in pornography education for young people. The descriptive themes from the group discussion data were subsequently used in the development of the survey items. Full information regarding the development of themes can be found in (Dawson, Nic Gabhainn & MacNeela, 2019). Themes were translated into several Likert-type questions which represented core aspects of that theme. For example, one recurring theme related to the belief that pornography promoted unattainable body image standards for men and women, and the theme of body image was elaborated upon to develop neutral items such as "what naked bodies look like", "what breasts look like", and "what male genitals look like". A total of 160 items were generated in total from this phase. For detailed information on participants and on theme development please see Study 4.

Phase 2: Item revision, expansion and amendment

The initial item pool was then given to a small panel of young adults ($n = 9$), who had attended the aforementioned group discussion; two participants from each group discussion were invited to attend a second meeting. Participants were asked to categorise the items, to generate new items and to remove confusing items. Participants were asked to review the groups of items and their corresponding themes and to work in small groups of three people to:

1. Identify overlapping questions; in doing this participants were asked to keep the item which best conveyed the item at hand, and to discard the others. If a pre-existing item was deemed unclear participants were asked to re-write the question using language that was most accessible to them.
2. Expand on the items to provide more detailed items that related to a broader theme, for example, participants included the item “About squirting/vaginal ejaculation”, as they believed that the item related to learning about female genital functioning was too broad.
3. Review the items for clarity and to rephrase where appropriate,
4. Recommend items which, through group consensus, emerged to be unnecessary or irrelevant.
5. Include new items which they believed would provide important additional information to the scale. Twenty items, which pertained to watching pornography to learn about other people’s perceptions, were removed, leaving 143 items.

Face validity

A total of six experts in the area of pornography research, sex education, and scale development were invited to rate the items on their clarity, relevance to the research and comprehensiveness. Experts were asked to (1) rate how relevant they think each item is to what we are measuring using a 4 point scale (1= not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant), (2) to generate new items if they found some aspect missing, (3) to improve items to better capture the concept, (4) to provide comment on item clarity and conciseness, and (5) to provide a rationale if they thought that an item should be discarded entirely.

Phase 3: Pilot testing to ensure item clarity and meaningfulness

The final stage in the development of the item list involved administering the 140 item SIPS measure to a sample of 14 university students to assess for suitable readability. All items were rated as clear. Some participants reported that a number of items overlapped, i.e the items

explored the same concept, for example “About sexual behaviours heterosexual people engage in” and ‘About heterosexual sexual behaviours”. Therefore, participants were asked to report which overlapping items provided the clearest description and were most relevant to the scale in order to reduce the number of items to a more meaningful set. The additional items were not included in the analysis.

Phase 4: Data analysis

Exploratory factor analysis. Principal Axis Factoring using a Promax rotation and maximum likelihood as a method of extraction was conducted on the Pornography as Sexual Information Scale dataset to explore item groupings and to produce a more meaningful set of items to retain in the final scale. Decisions regarding factor retention were made based on the variance explained and eigenvalues above 1, scree plot illustrations, as well as conceptual considerations for item relevance to each factor (Osborne & Costello, 2004; Worthington & Whittaker, 2006). A label was assigned to each factor which reflects what each factor represented. SPSS version 22 was used for analysis. Reliability analysis of the full scale and each subscale were assessed using Cronbach’s alpha coefficients.

Table 3.1. *Demographic characteristics of total sample*

Characteristic	Total %
<i>N</i>	618
Gender	
Female	57.4
Male	40.4
Gender queer or non-binary	1.1
Transgender	1.1
Age	
18-21	61.5
22-25	25.7
26-29	12.8
Sexual Orientation	
Homosexual (gay/lesbian)	6.0
Heterosexual (straight)	74.1
Bisexual	15.0
Asexual	.8
Pansexual	3.1
Other (please specify)	1.0
Education level	
Currently enrolled in undergraduate degree	72.2
Enrolled in postgraduate 3rd level education	21.6
Completed 3rd level postgraduate education	6.3
Relationship status	
Not in a relationship	46.3
Casual dating	10.0
Dating a partner and others	1.5
In a relationship but not living with partner	30.9
In a relationship and living with partner	11.3
Nationality	
Ireland	75.7
UK	1.9
Continental Europe	11.8
USA	4.5
South America	.6
African continent	.3
Asia	4.9
Australia/New Zealand	.2

Table 3.2. *How Often do you Watch Pornography By Gender and Overall n (%)*

	Female	Male	Total
3 times per week or more	8 (2)	59 (24)	67 (11)
1-2 times per week	53 (15)	126 (51)	179 (30)
1-2 times per month	129 (36)	46 (18.5)	175 (30)
Less than once a month	105 (30)	12 (5)	117 (19)
Never	59 (17)	6 (2)	65 (11)
Total	354 (100)	249 (100)	603 (100)

Results

Exploratory factor analysis

Exploratory Factor analysis using maximum likelihood as a method of extraction was carried out using SPSS version 22. As all items were related to pornography use we expected the factors to correlate and therefore used an oblique rotation, Promax with Kaiser normalisation. The KMO measure was .964, suggesting factor analysis was appropriate for use on our data set. Anti-image matrices showed that partial correlations between variables were small with diagonals ranging between .244 and .603. Decisions regarding Factor retention were made based on examining the variance explained, eigenvalues, scree plot illustrations as well as conceptual considerations for item relevance to each factor. This resulted in nine factors which explained 64.47% of the variance. An a priori decision was made to retain items which loaded above .40 (Osborne, Costello & Kellow, 2008). Factor loadings ranged from (.436) to (.959). Factor 1 contains 22 items which relate to learning about sexual behaviour, Factor 2 contained 7 items regarding emotional and physical sexual safety, Factor 3 contained 7 items related to sexual exploration, Factor 4, 5, 6, 7 and 8 had 4 items each, related to transgender persons sexuality, body aesthetic, intersex and same sex-related items, respectively. And Factor 9 had 3 items related to female sexual pleasure.

Table 3.3. *Psychometric Properties of SIPS Scale*

Factor	Eigenvalues		
	Total	% of Variance	Cumulative %
1	21.78	36.92	36.92
2	4.23	7.16	44.08
3	3.06	5.19	49.27
4	1.99	3.37	52.64
5	1.72	2.92	55.56
6	1.52	2.57	58.13
7	1.32	2.23	60.36
8	1.27	2.14	62.51
9	1.16	1.96	64.47

Reliability

Internal consistency was demonstrated for the SIPS overall ($\alpha = .97$) and for its individual subscales: Behaviours ($\alpha = .96$), Emotions and safety ($\alpha = .89$), fetishes and exploration ($\alpha = .87$), transgender sexuality ($\alpha = .89$) anal sex ($\alpha = .86$), body image ($\alpha = .84$), Intersex ($\alpha = .78$), same sex ($\alpha = .75$), female pleasure ($\alpha = .74$). Factor loadings for the individual subscales are presented in Table 3.

Applied findings

In order of influence, results show that individuals report learning most about body aesthetic ($M = 2.91$, $SD = 1.21$), sexual exploration ($M = 2.66$, $SD = 1.18$) and sexual behaviour ($M = 2.45$, $SD = 1.07$); less about anal sex ($M = 2.02$, $SD = 1.16$), female sexual pleasure ($M = 2.12$, $SD = 1.15$), and same sex topics ($M = 2.10$, $SD = 1.12$), and report obtaining the least amount of information about emotional and physical safety ($M = 1.54$, $SD = 1.01$), as well as factors related to intersex ($M = 1.37$, $SD = .07$) and transgender sexuality ($M = 1.29$, $SD = .74$).

Gender differences

Because of the sample size we were unable to conduct separate EFA analyses by gender or sexuality. However, several tests were conducted to examine the gender mean differences between males and females on the nine subscales. T-tests were conducted on the three subscales which had a normal distribution; Behavioural, Explorative and Body aesthetic subscales, using a combined variable consisting of each of the factor items. Significant gender differences were observed between females ($M = 18.02$, $SD = 6.26$) and males ($M = 19.26$, $SD = 6.07$) ($d = .20$) regarding learning about sexual exploration, however, the effect sizes between these groups indicated no practical significance in these differences ($t(601) = -2.42$, $p = .016$). A moderate effect was found between men and women on learning and about body aesthetic, $t(601) = -3.89$, $p = .000$, females ($M = 11.10$, $SD = 4.09$) and males ($M = 12.38$, $SD = 3.80$) ($d = .35$). No gender differences were observed between females ($M = 53.48$, $SD = 17.94$) and males ($M = 54.60$, $SD = 17.63$), $t(601) = -.740$, $p = .460$, on what they learn about sexual behaviour from pornography.

Non-parametric tests were conducting on the remaining subscales. Small gender differences were observed on the following factors. Kruskal-Wallis H Test showed that there were statistically significant gender differences in the learning about several concepts from pornography; Sexual safety $\chi^2(1) = 19.70$, $p = .000$, with a mean rank (MR) of 276.03 for females and 338.92 for males ($d = .03$); and Transgender-related questions $\chi^2(1) = 12.92$, $p = .000$ with MR of 285.04 for females and 326.11 for males ($d = .02$).

Males reported learning more about anal sex (MR = 360.84) from pornography than did females (MR = 260.62), $\chi^2(1) = 49.192$, $p = .000$. ($d = .08$). Significant differences were also observed for females (MR = 283.51) and males (MR = 328.29) on items regarding intersex sexuality $\chi^2(1) = 12.148$, $p = .000$) ($d = .02$), and female sexual pleasure, $\chi^2(1) = 24.33$, $p = .000$, with a MR of 272.89 for females and 343.39 for males ($d = .04$). However, effect sizes for the non-parametric tests suggested no practical

significance of these differences. For full list of mean and standard deviation values see the Appendix.

Table 3.4. *Factor Loadings, Means, and Standard Deviations for the Porn as Sex education Scale Subscale Items*

Items	Loadings	M	SD
Subscale 1 (Sexual Behaviours)			
How to act sexy in bed	.959	2.17	1.07
How to please a sexual partner	.942	2.60	1.05
How to sexually communicate using body language	.856	2.15	1.04
About what is expected of a person when having sex	.851	2.42	1.07
What women should do during sex	.818	2.23	1.04
How to interact with a partner during sex	.812	2.34	1.04
About how to look hot in bed	.810	2.19	1.14
How to ‘talk dirty’	.786	2.47	1.17
How to make a sexual partner have an orgasm	.780	2.43	1.06
How to have good sex	.760	2.18	1.05
How to ‘turn on’ a sexual partner	.729	2.44	1.03
How to make someone orgasm	.686	2.47	1.10
What men should do during sex	.632	2.23	1.07
How people interact with one another during sex	.628	2.39	1.01
How to do popular sexual behaviours	.611	2.53	1.11
About heterosexual sexual behaviours	.605	2.89	1.10
How to communicate verbally during sex	.574	1.96	1.04
About different sexual positions	.570	3.18	1.03
About foreplay	.563	2.61	1.13
About things I’d like to try with my partner	.538	2.88	1.07
How bodies function during sex (*sex can refer to any degree of sexual intimacy or behaviour)	.490	2.52	1.03
Where things go during sex	.440	2.57	1.17

Subscale 1: Mean		2.45	1.07
Subscale 2 (Sexual Safety)			
How to ask for sexual consent from my partner	.887	1.40	.84
How to give sexual consent to my partner	.855	1.48	.91
How to feel physically safe	.728	1.32	.75
The emotional aspects of sex	.664	1.44	.84
About the use of condoms	.646	1.60	1.00
Why people have sex	.584	1.86	1.06
Attitudes surrounding condom use	.566	1.70	1.02
Subscale 2: Mean		1.54	1.01
Subscale 3 (Sexual Exploration)			
About different fetishes	.898	2.68	1.19
About different sexual fantasies	.785	2.80	1.15
About fetish communities	.646	2.22	1.29
About dominance and/or submission	.573	2.75	1.18
About things I didn't know would turn me on	.562	2.92	1.13
About new things that turn me on	.551	3.08	1.11
How unusual my desires/fantasies are	.485	2.16	1.18
Subscale 3: Mean		2.66	1.18
Subscale 4 (Transgender Sexuality)			
How transgender people have sex	.899	1.26	.74
How transgender persons behave during sex	.896	1.22	.65
What naked transgender persons' bodies look like	.769	1.42	.88
What sexual behaviours transgender persons engage in	.673	1.24	.68
Subscale 4: Mean		1.29	.74
Subscale 5 (Anal Sex)			
Penetration of anus by finger(s)	.852	2.14	1.16
About anal sex	.750	2.52	1.22
About anal fisting	.585	1.67	1.13
About anal rimming	.487	1.77	1.13
Subscale 5: Mean		2.02	1.16

Subscale 6 (Body Aesthetic)			
What breasts look like	.793	2.74	1.28
What naked bodies look like	.732	3.11	1.20
What genitals look like	.632	3.04	1.14
About vulva appearance (what the outside of the vagina looks like)	.517	2.74	1.23
Subscale 6: Mean		2.91	1.21
Subscale 7 (Intersex Sexuality)			
About intersex person's orgasms	.876	1.23	.71
About oral sex on intersex genitals	.711	1.38	.92
What naked intersex persons' bodies look like	.518	1.46	.10
How intersex persons behave during sex	.517	1.43	.91
Subscale 7: Mean		1.37	.07
Subscale 8 (Same-Sex Sex)			
About same sex sexual positions	.679	2.38	1.25
About same sex sexual behaviours	.584	2.27	1.17
The different roles people take during same sex encounters	.518	2.20	1.15
Phrases related to LGBT+ people	.436	1.49	.90
Subscale 8: Mean		2.10	1.12
Subscale 9 (Female Sexual Pleasure)			
Performing oral sex on female genitals	.560	2.40	1.20
Squirting/vaginal ejaculation	.496	2.24	1.19
How to make a partner 'squirt'	.457	1.72	1.07
Subscale 9: Mean		2.12	1.15

Discussion

The current study sought to develop a measure to assess what young people learn about sex from watching pornography. This research is important given the growing body of literature which shows that many young people use pornography as an informal educational resource (Dawson et al., 2018; Tanton et al., 2015; Wright, Sun, Miezán, 2019; Wright, Sun & Steffe, 2018). A comprehensive scale development process was employed,

involving collaborating with sex education, pornography and scale development experts, as well as engaging with students to ensure item clarity and relevance to the target population. Findings indicate that the items loaded onto nine factors related to the acquisition of sexual knowledge: (1) Sexual Behaviour (2) Sexual Safety (3) Sexual Exploration, (4) Transgender Sexuality, (5) Anal Sex, (6) Body Aesthetic, (7) Intersex Sex, (8) Same-sex Sex, and (9) Female Sexual Pleasure. The final SIPS is a 59 item measure with Likert-type response options. As demonstrated by the Cronbach's alpha scores, the subscales and full scale demonstrated high internal consistency. The involvement of experts in the field, participant-driven item development and review of scale items by a sample of the target population helped to establish face validity.

We found small gender differences in the degree of learning from pornography on several constructs. Specifically, males reported a small, but significantly larger proportion of their knowledge gained from pornography on all but one concept. Results also show that males more regularly engage with pornography. This could help to explain the reason for such differences in knowledge acquisition. Men have also been documented to engage with pornography in order to learn about sex more often than women (Tanton et al., 2015). Actively engaging with pornography in order to learn about sex may impact one's perception of learning than learning that occurs through passive engagement. Additionally, even though many report not learning about sexual safety and LGBT+ issues from pornography, this does not imply that they have learned a lot about these topics from additional sources. It is also important to note that the scale assesses what people have learned about these various topics from their current standpoint. As this study focused on young adults, the extent of learning about sexuality from pornography may differ from younger, less sexually experienced individuals or more sexually experienced individuals.

Contribution to Porn Literacy and Sexual Health Education

The findings show that some individuals learn a great deal about sex from engaging with pornography, particularly regarding sexual behaviours,

body aesthetic and exploration of sexual interests. Findings show a number of items in particular showed higher mean scores, including “what naked bodies look like”, “What genitals look like”, and “different sexual positions”. Among a predominantly cisgender sample, pornography provided little information about the emotional physical aspects of sexuality and safety, intersex, and transgender persons sexuality. Our findings show that information on sexual behaviour, sexual exploration, anal sex, same sex practices, and female sexual pleasure are available from pornography. How accurate or reliable the knowledge obtained from pornography is uncertain. Future studies should explore the sources of an individual’s pornography engagement, the acquisition of information and the accuracy of information provided.

Findings show that pornography can provide information about sex that people may not be able to access in school-based sex education. For instance, detailed depictions of varied types of genitalia are not part of any mandatory sexual health programmes in Ireland (B4U Decide, 2019; BeWiser, 2019); and many programmes do not show realistic depictions of naked bodies or genitals. The importance of improving sex education which has a focus on the identified factors is clearly of importance. Sex education which discusses pornography, the realities of sex for heterosexual and same-sex attracted youth, that includes realistic depictions of a variety of genital and body types, and which focuses on sexual pleasure are paramount to the sexual wellbeing of young people (McKee et al., 2010; Dawson, Nic Gabhainn & Mac Neela, 2018). Sex positive programmes can enhance youth sexual health (Albury, 2014; Bengry-Howell, 2012; Haste, 2013). However, such programmes are not widely accessible and many are based on policy guidelines that recommend educational initiatives focus predominantly on sexual risks (Mayock, Kitching & Morgan, 2007). Additionally, this instrument may also be useful to those conducting needs assessments related to sexuality education and allow for young people to provide detailed feedback about the information that they want to obtain from their formal sex education programmes.

Although pornography can contribute to sexual knowledge, it may contribute to setting sexual norms about behaviour and functioning, particularly if there is no available information about the realities of some practices. The findings may therefore be helpful to sex educators and those who develop sexual health interventions, by highlighting the necessary areas for improvement in sex education programmes. Providing information about real world sexual experiences and allowing youth time to explore these topics in individual and group settings may reduce the need for young people to use pornography as an education resource.

Limitations and Future Research

Temporal stability was not assessed which would provide further information about the reliability of the scale (DeVellis, 2003). Osborne and Costello (2004) argue that subject to variable ratio makes a significant contribution to the quality of the analysis; the sample size limited our ability to conduct confirmatory factor analysis. We invite researchers to use this measure among other samples to test whether the factor structure presented here is consistent across other groups of young adults. As there was no similar measure to the SIPS we could not assess the concurrent validity of the scale. This should be assessed in future research. Our convenience sample of university students is not representative of the rest of the population (Henrich, Heine & Norenzayan, 2010). The predominantly heterosexual-identified sample may limit the reliability of the finalised measure among same sex attracted people. We therefore urge researchers to replicate this study with a large LGBT+ sample to explore how the factor structure may differ between heterosexual and queer identified youth.

The level of sexual knowledge obtained from parents or school-based sex education should be explored in future studies. Those who have a great deal more sexual experience or who had good quality sex education may differ in the degree of learning about sex from pornography. The proportion of information that a person has learned about a sexual topic from watching porn is likely to be reduced or exaggerated, depending on the level of information about sex and direct sexual experience that they have.

In addition, participants were asked to report the degree of learning about each item from watching porn, however, as with all self-reported data, relying on subjective responses, participants may have interpreted the response options differently. In the current study we were interested in internet pornography and also used a rather “strict” definition of pornography. Pornographic magazines and other non-Internet-based sexual material were not considered for the current analysis. Individuals who read pornographic magazines or erotic novels, that some would consider pornographic may also be educational, particularly in terms of learning about sexual body parts and providing a space for sexual exploration.

Implications for future research

Future research should assess the type of content that an individual engages with. Those who watch a greater variety of videos may have learned more than those who habitually engage with the same content. Future research could explore whether participants with a more complex range of content choices learn more about sex from pornography. Although participants reported learning about sex from porn to different extents, it was beyond the remit of this study to explore whether such learning influences behaviours or feelings about themselves. The development of this measure allows for a more thorough exploration of such associations in future research. Future studies should explore whether those who actively engage with pornography for information, report greater learning from pornography as a result. Actively engaging with pornography for sex education may be associated with stronger social comparisons effects; if one purposefully uses a media source to gain information about behaviour. Using pornography for sex education may be associated with greater learning or personal comparisons in comparison to those who are simply engaging with pornography as an aid to masturbation. Finally, what a person learns about sex from pornography may be influenced by their gender, sexual orientation, motivation for engagement among a series of other personal and cultural characteristics, which influence reception of and reaction to pornography. Although individuals may be exposed to the same content it can be interpreted differently depending on a person's attitude

towards porn, beliefs about its effect, their sexual self-esteem a number of other characteristics.

Conclusion

The SIPS presented here can help to advance our understanding of the role of pornography as an informal source of sexual information, and the implications of such youth on healthy sexual development. The scale can also be useful regarding conducting needs assessments regarding sexual health interventions. The findings demonstrate that pornography can be useful regarding knowledge acquisition related to a specific number of constructs, including sexual behaviour, sexual exploration and body aesthetic, however, may be perceived as being less useful source of information about others, including sexual consent and intersex sexuality. Future research should test the construct validity of this measure across diverse samples of young adults, including larger samples of lesbian, gay and bisexual young people, as well as transgender and gender non-conforming individuals.

Study 4. Toward a model of Porn Literacy: Core Concepts, Rationales and Approaches

Abstract

Although some positive outcomes for pornography engagement have been highlighted, researchers and educators have also expressed concerns about youth pornography engagement and have called for porn literacy education to be incorporated into sex education programmes. As yet, there is lack of agreement regarding intervention development. This study aimed to engage participants in the identification of relevant curriculum content. Participatory methods of data collection were used with 54 young adults aged 18-29 to generate core concepts for porn literacy education and these concepts were subsequently explored in group interviews. Findings suggest that the proposed learning outcomes should focus on reducing shame regarding pornography engagement and improving critical thinking skills regarding the following sexual health topics: body image comparisons and dissatisfaction; sexual and gender-based violence; fetishising of gay and transgender communities; and setting unrealistic standards for sex. Methods of engagement for porn literacy, gendered differences and important findings that are specific to LGBT+ persons are discussed and recommendations regarding future research and intervention development are outlined.

Introduction

Young people engage with media to such a degree, that mass media and popular culture have become significant factors in youth socialisation (Koltay, 2011). As such, media literacy initiatives which empower people to access, produce, negotiate and understand media (Aufderheide, 1992) have become extremely important. Increased access to more explicit sexual media, like internet pornography have similarly led to calls for youth porn literacy education. However, unlike media literacy, which is a well-established area, little research exists which provides an evidence base for the development of porn literacy interventions. This study aimed to elicit young Irish adults' recommendations for adolescent pornography literacy intervention development.

There remains ambiguity over what porn literacy should entail. At the forefront of the debate around the inclusion of pornography in sex education programmes is the negative effects of pornography engagement, in spite of the fact that research shows that few experience adverse effects from watching pornography. Research has found that small percentages of pornography viewers have reported negative effects on both their personal lives and their sex lives (Hald & Malamuth, 2008). Rissel, Richters, de Visser, McKee, Yeung and Caruana (2017) found that 4% of men and 1% of women reported that they were addicted to pornography, and half of men who reported this said that it had a negative effect on them. However, positive uses have also been highlighted. For some youth, pornography provides an outlet to learn about sex in ways that positively affect their lives (McKenna, Green & Smith, 2001; Miller, Hald & Kidd, 2017). In their large-scale qualitative survey of youth and adults, aged 18 to 65+, Smith, Barker and Attwood (2015) found that for many, pornography helped to relieve boredom, reduce everyday stress and intensify orgasms. Some couples used it to enhance the erotic aspect of their lives, by sending each other links to videos and learning new sexual ideas. Other researchers have documented the purposes of pornography use as including sexual exploration (McKenna et al., 2001) and understanding peer group attitudes toward sexual behaviours through group viewing experiences (Löfgren-Mårtenson & Månsson, 2010).

There is inconsistency in the pornography research literature. For example, there is some evidence that pornography portrays “traditional” gender roles like male dominance and female submission (Klaasen & Peter, 2014), but also findings which indicate that people who had viewed pornography in the previous year held more egalitarian views than those who did not (Kohut, Baer & Watts, 2016). Such views included positive attitudes towards women in power and less negative attitudes to women within the workforce. Similarly, Wright and Bae (2015) found pornography consumption to be associated with more positive attitudes toward access to birth control. Pornography is often criticised for its portrayal of unattainable body types; however, Davis and colleagues (2017) found that for some individuals watching pornography was a liberating experience because it

gave people the opportunity to see other peoples genitals, while others felt that it reinforced their own and their partners sexual expectations for genital function and aesthetic (Davis, Carrotte, Hellard, Temple-Smith, & Lim, 2017). Such inconsistencies within the research indicate that experiences of pornography are highly individualised.

Whatever the associated outcomes are, many youth are engaging with pornography at an age where, in many countries, they are unlikely to have had any sex education (Sinković, Štulhofer & Božić, 2013). Although statistics on first engagement with pornography differs across countries (Hald & Mulya, 2013; Lim, Agius, Carrotte, Vella & Hellard 2017), research consistently demonstrates that most men first engage with pornography in childhood or early adolescence (Harper & Hodgins 2016; Davis et al., 2017). Given that significant proportions of male and female adolescents report recent use of pornography (Peter & Valkenburg, 2016), it is clear that engagement with pornography is now a critical influence on the sexual socialisation of youth. Although there could be a positive impact of such critical porn engagement, concerns have also been raised (Brown & L'Engle, 2009). There is a clear need to support youth to develop the competence to distinguish positive and negative models of sexual health and relationships from the pornography that they watch.

Ultimately, the experiences associated with pornography engagement are varied and therefore the primary goal of porn literacy education is for individuals to equip themselves to critique sexualised media and construct their own meanings from content (DeFur, 2014). As one of the primary concerns regarding youth pornography engagement is the impact it can have on shaping sexual scripts and expectations (Lofgren-Mårtensson & Månsson, 2010), developing porn literacy skills could assist individuals to anticipate sexual outcomes that are realistic for their lives. Set against these aspirations, porn literacy is a relatively new concept and, as such, there is little agreement or primary research available regarding what porn literacy education should entail (Albury, 2014).

The concept of “porn literacy” has evolved from a base of research into media literacy, an area which has developed over time. Originally, media literacy models focused on traditional print and audiovisual material.

However, this concept has expanded to encompass the Internet and other new forms of media (Livingstone, 2004; Livingstone, Papaioannou, Pérez & Wijnen, 2017). Contemporary understandings of the core principles of media literacy include the “active inquiry and critical thinking about the messages we receive and create” (Alliance for Media Literate America, 2007, p. 3) so that “people use their individual skills, beliefs and experiences to construct their own meanings from media messages” (Alliance for Media Literate America, 2007, p. 7). Media literacy is argued by various media theorists (e.g., Austin, Pinkleton, & Funabiki, 2007) to improve critical thinking skills, which are in turn proposed to support youth in health-related decision-making (Elias, Gara, Schuyler, Branden-Muller & Sayette, 1991).

Research shows that youth who participate in media literacy programmes can develop skills to critique media messages and in turn develop more realistic expectancies (Austin, Pinkleton & Johnson, 2006). Critical thinking is integral to media literacy, defined as “a metacognitive process that refers to purposeful, self-regulatory, reflective judgment; consisting of a subset of skills (i.e., analysis, evaluation and inference) and dispositions (e.g., open-mindedness, perseverance and organisation), that when used appropriately, enhance the likelihood of drawing a reasonable conclusion or solving a problem” (Dwyer, Hogan & Stewart, 2014, p. 43). Critical thinking has also been shown to be a protective factor against a variety of negative outcomes, and has been linked to prevention of body dissatisfaction among adolescent girls (Paxton, McClean, Gollings, Faulkner & Weirtheim, 2007) and drug abuse preventative behaviours (Moshki, Hassanzade & Taymoori, 2014). In addition, critical thinking has also been associated with a range of positive outcomes for youth, such as leadership (Burbach, Matkin & Fritz, 2004) and the capacity for higher order thinking (Fazey, 2010). Youth who acquire media literacy skills have been shown to have greater capacity to deconstruct media messages and the intentions behind their presentation than those who do not (Austin et al., 2006). This can result in a person challenging or becoming skeptical of content that they see and in turn beginning to adopt more realistic expectations for sex (Brown & L’Engle, 2009), but may also result in

increased confidence around sexual decision making (Pinkleton, Austin, Chen & Cohen, 2012).

Media literacy interventions have been shown to be effective across a variety of topics, age groups, and settings (Jeong, Cho & Hwang, 2012), and have been provided across delivery methods. Traditional methods like group discussions facilitate active audience engagement and foster the development of communication skills (Alliance for Media Literate America, 2007). Group discussions facilitate critical thinking as they require greater mental efforts (Jeong et al., 2012) and are found to be effective within media literacy interventions (Banerjee & Kubey, 2013). More generally, sexual health education programmes are increasingly employing digital platforms to engage youth and improve sexual health-related outcomes. A 2012 review demonstrated the effectiveness of new digital media, including website-based interventions, online discussion forums and mobile phone-based interventions (Guse et al., 2012). Many showed significant increases in knowledge acquisition (Marsch et al., 2011), as well as positive outcomes in reducing risk behaviours for sexually active youth (Torolero et al., 2010). With specific regard to sexual health promotion, evaluations of media literacy interventions illustrate their potential translation to media-acquired attitudes and sexual decision-making. For instance, in a US sample, interventions have been linked to delaying age of first sex by improving participants' beliefs in their ability to delay sexual activity (Pinkleton et al., 2012). In another study, older US adolescents in a media literacy intervention group reported less risk behaviours such as drug or alcohol consumption before or during a sexual encounter, increased sexual health-related knowledge and less acceptance of rape myths (Scull, Kupersmidt, Malik & Keefe, 2018), than those in the control group. Findings from a recent meta-analysis indicate that media literacy interventions facilitate adolescents in making healthier choices in health-compromising situations (Vahedi, Sibalís & Sutherland, 2018).

Porn literacy has been defined as “a framework from which young people can critically examine and make sense of the sexual images they see” (Hutchings, 2017, p. 292). However, in developing a porn literacy approach further it is important to distinguish pornography as a particular form of

sexual media. Overall, sexual media and the degree of its explicitness exist on a spectrum, ranging from non-explicit “e.g., a children’s television show that depicts two characters holding hands” (Rothman, Adhia, Christensen, Paruk, Alder & Daley, 2018, p. 2), to somewhat explicit (e.g., underwear or lingerie advertisements), to explicit (e.g., topless women in music videos), to very explicit (e.g., footage of people having sex with close up shots of their genitals). As such, sexual media research should look at the degree of sexual explicitness of media in which youth engage (Rothman et al., 2018). Although porn literacy is derived from media literacy, it differs from other forms of sexual media that have been studied, such as advertisements (Austin, Pinkleton, Chen & Austin, 2015), in that the content is more explicit, and includes actions that are unlikely to be seen in other types of sexual media, like male and female ejaculation. Media literacy interventions can also be modeled on a similar continuum, with porn literacy education at one extreme. Approaching sexual media in this way can help ensure that media literacy interventions coincide with appropriate age and life stages.

Yet, within sex education programmes many inconsistencies exist in how we inform, discuss or communicate with youth about pornography. Some interventions reflect the core principles of media literacy and critical engagement and aim to facilitate youth in exploring and understanding their own values about pornography and how a person’s values impact their pornography engagement (DeFur, 2014). Others, such as “Planet Porn” aim to stimulate discussion, challenge negative messages, and enable youth to develop positive relationships by helping them to distinguish between fantasy and reality (BishTraining, 2017). Some aim to increase educators’ knowledge and confidence in facilitating discussions on pornography, by providing up to date information on relevant research, and by encouraging educators to challenge their own attitudes regarding pornography (Owen & Gowen, 2014).

Pornography literacy is often understood as being different for adults and adolescents. For adults, pornography has been used as an educational resource to increase understandings of safe sex and queer sex (Dawson, Cooper, & Moore, 2018). In contrast, pornography education for minors has focused on achieving greater skepticism of the portrayal of sex and the

sexual messages within pornography (Albury, 2014). There is a developmental component to consider in conceptualising porn literacy. The implementation and delivery of adult and youth porn literacy will differ, as unlike adult porn literacy, minors cannot directly critique the text in question because of legal concerns. Several pornography interventions exist which have utilized indirect strategies to engage youth, including engagement with documentaries, (Crabbe & Corlett, 2011) and rather than providing depictions of explicit content, to employ humour to discuss the distinctions between “porn sex and real sex” (KN Creative Lab, 2013). However, there remains a relative dearth of studies on the effectiveness of porn literacy interventions (Vandenbosch & van Oosten, 2017). Buckingham (2008) argued that contemporary media literacy education should adopt a “student-centred perspective, which begins from young people’s existing knowledge and experience of media” (p. 13), and should be based on empirical evidence and amenable to measurement; many have not been evaluated and it is impossible to establish the quality of an intervention or its effectiveness. As such, young people should be at the centre of discussions of porn literacy intervention development (Smith, Barker & Attwood, 2014). In addition, it is also difficult to determine which interventions are based on theory.

A small number of studies have been carried out in recent years that have begun to look at the effectiveness of pornography interventions for young people. One longitudinal study of 1,947 Dutch 13 to 25 year olds, found that the more a young person had learned about the use of sexually explicit Internet material (SEIM) from their school-based sex education, the weaker their sexist attitudes became over time (Vandenbosch & van Oosten, 2017). The authors asserted that by learning about SEIM participants engaged in porn literacy education. Rothman and colleagues (2018) have recently developed a pornography education curriculum that aims to provide youth with evidence-based information focusing on consent and sexual orientation. During evaluation, American youth between the age of 14 and 18 completed pre- and post-intervention questionnaires. Their findings showed significant knowledge improvements regarding pornography and the law, including the posting and distributing of sexual images. Participants

demonstrated significant attitudinal changes and were less likely to believe that pornography was a good source of sexual information. Reported behavioural intentions also changed in that participants were more likely to report that they would seek advice and support if they felt that they were experiencing problems with pornography engagement. These studies provide some promising evidence for the effectiveness of pornography education; however, further research is required to understand which components of interventions are effective, and also to differentiate between which interventions aim to provide information about pornography and those which aim to promote critical engagement with content, thus reflecting the principles of media literacy.

Positive and negative outcomes of pornography engagement have been demonstrated in the literature (Hald & Malamuth, 2008; Rissel et al., 2017). Therefore porn literacy will need to be nuanced, providing opportunities to explore negative, neutral and positive dimensions. In the instance of bondage, dominance and sadomasochism (BDSM), this could involve recognition that, in isolation, individual BDSM practices such as whipping or slapping could be defined as violent. Yet when integrated with the person's sexual identity and relationships, BDSM practices can contribute to fulfilling and enjoyable experiences (Hébert & Weaver, 2015). Discussing the portrayal of BDSM scenes provides opportunities for people to explore sexual communication and consent, responsibility and respect, and the differentiation between non-consensual and consensual aggression. In considering a holistic approach to sexual wellbeing which is underpinned by the 15 domains identified for the multidisciplinary framework for healthy sexual development (McKee et al., 2010) and the World Health Organization (2006) definition of sexual health, there are likely to be other sexual behaviours, attitudes and beliefs that also have personal meaning and can be interpreted subjectively, that warrant exploration.

As individuals are likely to first engage with pornography during their youth, porn literacy should begin with young people in the first instance. Yet, many health education interventions for youth are based on adult models of health, and run the risk of failing to engage and inform those to whom they are aimed (Coll, Sullivan & Enright, 2017). In order to

bridge the gap between young people's lived experience and sexual health theory and practice, youth must play a more collaborative role in empirical research (Eglinton, 2008). Participatory research methods are being increasingly used in health education research for this purpose (O'Higgins & Nic Gabhainn, 2010). The underlying principles in participatory research, including youth engagement, advocacy, and empowerment means that youth are supported to represent their own realities, feel valued in their contribution, and produce findings that are reflective of their own needs (Szmigin et al., 2008). Participatory research strategies were employed in this study to develop a model of porn literacy, using a youth-centred approach.

The current research

The current study aimed to explore young Irish adults' beliefs about pornography, their suggestions for the core concepts and the recommended educational approaches that should be incorporated into porn literacy education, in order to develop a model for youth porn literacy education.

Method

Study design

This study had a group qualitative design underpinned by a participatory epistemology, which used flexible brainstorming methods to actively involve stakeholders aged 18-29. Six workshops were held. Each workshop included a participatory activity and a facilitated group discussion. The workshops took place between February and May 2017. The rationale for the number of groups held was based on data saturation (Fusch & Ness, 2015). Groups with a minimum of 6 participants and a maximum of 12 participants were required in order to facilitate effective group discussion (Fern, 1982). In order to ensure the inclusion of LGBT+ persons, we purposefully oversampled LGBT+ students; 5 workshops consisted of primarily heterosexual participants, and all participants identified as LGBT+ in the sixth group. The participatory phase of the research empowered participants to establish their own shared meaning and representation through the group activity and aimed to obtain information on what youth believed should be the core concepts for porn literacy education. The group discussion that followed provided the opportunity to

further describe the rationale for their core concept choices and the recommended methodologies to deliver the content. In order to standardise the meaning of pornography for the purpose of this study, the workshop began with the researcher describing the following definition of pornography “Pornography refers to any sexually explicit films, video clips or pictures displaying the genital area, which intends to sexually arouse the viewer” (Short, Black, Smith, Wetterneck, & Wells, 2012, p. 9).

Participatory activity. In order for successful youth interventions to be developed, young people must play a more collaborative role in empirical research (Eglington, 2008). Participatory methods for data collection have been shown to be effective in engaging youth in sexual health research (e.g., O’Higgins & Nic Gabhainn, 2010). As conducted in previous research, (O’Higgins & Nic Gabhainn, 2010) the first element of the group activity was to work individually to generate participants’ own responses to the trigger question: “What should teenagers learn about porn as part of porn education workshops?” They were invited to record these ideas on individual pieces of card, which were then collected by the researcher, combined and then shuffled. This was followed by collective brainstorming and integration of the individual responses. Participants were divided into small groups of 4-6 people, each of which was given an equal number of the shuffled cards. The small groups collaborated to thematically analyse the individual answers on the cards to address the trigger question. They grouped responses into themes and generated a label for each theme. These generated theme headings were presented by the groups on flipchart paper and are presented in table format below (see Table 2).

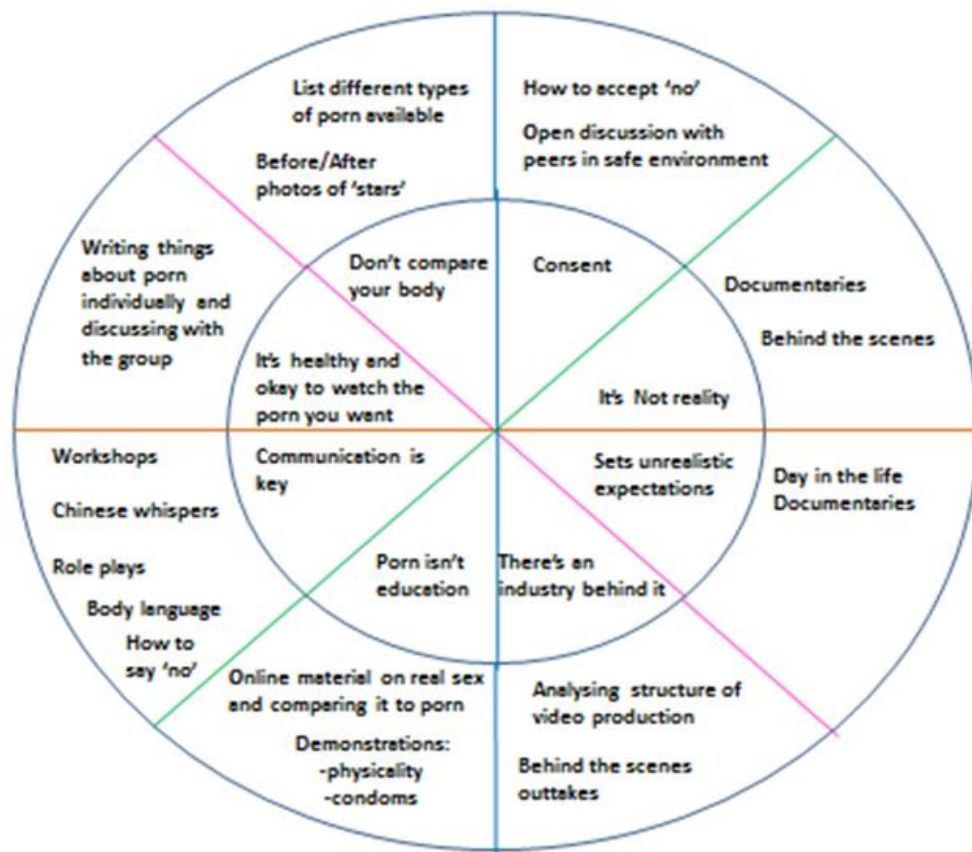
Table 4.2. *Generated Themes from each Workshop*

GD Feb 22 nd	GD March	GD 16 th March	GD 8 th April	GD 25 th April	GD 9 th may
Consent	Consent	Consent	Consent/ communication is key	Consent/communication	Consent (1)
Porn is unrealistic	Unrealistic		Not reality/sets unrealistic Expectations	Expectations/reality	Unrealistic (4)
Unrealistic body image	Body image issues Safe sex	Negative body image Can be addictive	Don't compare your body	Body image	Safety (2) Protection (3)
Porn is okay to watch or not watch)	Curiosity is normal	It's okay to talk about it Can be education	It's healthy and okay to watch porn if you want Porn isn't educational	Variety/acceptance Educational	Healthy porn habits (7) Effects (6)
Awareness of porn		Awareness	There's an industry behind it	It's an industry	Misogyny (5)

GD = Group Discussion

Each group was then invited to work collaboratively to present ideas on the most effective method to deliver the core messages. Flipchart paper was made available for participants who used it to report the findings back to the larger group. An example of such an illustration is provided in Figure 2.

Figure 2. *Workshop number 5, group work output*



Inner circle: Group response to question ‘What are the core concepts that should be included for teenagers in porn education?’

Outer circle: Group responses to question ‘What is the best way to engage teenagers so that we can get these messages across’

Each group presented the core concepts that they believed should be discussed in porn literacy education. The following “core concepts” for porn literacy education were highlighted by participants: (1) shame and acceptability (2) sexual communication and consent, (3) body and genital

image (4) the realities of sex (5) sexual functioning, (6) safe sex and (7) porn as education. Two additional issues emerged during the discussions, one of which was relevant to developing an underlying approach for porn literacy which involved the facilitation of critical thinking. The second referred to the perspectives of LGBT+ participants, in which the sexualisation and fetishising of LGBT+ groups emerged as a salient theme, which did not emerge within the primarily heterosexual group discussions. These themes are presented sequentially below, along with the proposed approaches to delivering the core messages identified by participants, including reference to content, mechanisms and timing of such porn literacy responses.

Group discussion. Group discussions can provide useful information when little is known about a topic (Bertrand, Brown & Ward, 1992). The semi-structured format of a group discussion can facilitate conversations which provide diverse opinions and can enable the researcher to gather information about multiple experience and beliefs at one time (Frith, 2000). Many experience discomfort and embarrassment when talking about sex (Frith, 2000). Frith (2000) posited that one of the most challenging aspects of qualitative sex research is to create an environment where participants feel comfortable enough to talk about sex. The two female researchers who facilitated the group discussions had a background working in the delivery of sex education. In addition, the majority of participants were unknown to both facilitators; however, some students had been taught college courses by one researcher, and this may have increased discomfort for some students.

The purpose of the group discussions was to enable greater understanding of participants' views of adolescent needs regarding pornography. The following prompts for discussion were employed; participants were asked (1) to provide clarity and information regarding what their identified core concepts meant (2) why the themes were particularly important for youth, and (3) to provide recommendations for how to engage youth in porn literacy education. Each group discussion lasted 50-90 minutes. In total the workshops lasted between 120-150

minutes. Verbal data were audio-recorded with the permission of participants and subsequently transcribed verbatim.

Recruitment

Data were collected at the university in the West of Ireland and at an LGBT+ youth organisation. A convenience sample of 54 students and LGBT+ youth centre members between 18-29 years old were invited to participate in the study via the university student email system, and through contacting youth organisations and university student-led societies. Eleven students were contacted via the Department of Psychology research participation system and received research credits for participating. In total, 63 students expressed interest in participating. The final sample consisted of 54 students who were eligible, i.e., were over the age of 18, and who gave their informed consent to participating. In total, 8 participated in the first group discussion, 9 in the second group, 9 in the third, 11 in group four, 8 in group five and 9 in the final group. Issues related to LGBT+ sexuality are often omitted from sex education initiatives, and therefore we purposefully oversampled LGBT+ participants to ensure adequate representation of LGBT+ youth.

A mixed-gender sample of 18-29 year olds were chosen for a number of reasons. The intention was to explore both cisgender and transgender men and women, as well as non-binary, perspectives on pornography usage, and thus an approximately equal sampling of each gender was preferred. Research suggests some gender-specific aspects of the meaning and usage of pornography. While individuals of all genders typically first engage with pornography during adolescence, adolescent women seek out pornography significantly less often than men (Ybarra & Mitchell, 2005; Peter & Valkenburg, 2016). Pornography engagement for women increases during early adulthood and many young adult women have diverse views about pornography. Second, perspectives on pornography from people who have learned lessons about their sexuality and sexual experiences were considered most valuable. Although sexual experience was not a criterion for inclusion in this research, this age cohort was more likely than younger adolescents to have established sexual preferences, greater pornography engagement (Sinković et al., 2013), sexual

relationships and increased opportunity for critical reflection on pornography.

The majority of participants were university students (79%) and 21% attended the LGBT+ youth organisation. (for detailed participant information, see Table 1).

Table 4.1. *Socio-demographic characteristics, by gender and overall*

Variables	Males (n = 23)	Females (n = 29)	NB (n = 2)
Age			
18-20	3 (13)	13 (44.8)	1 (50)
21-23	6 (26.1)	6 (20.7)	1 (50)
24-26	13 (56.5)	7 (24.1)	0
27-29	1 (4.3)	3 (10.3)	0
Nationality			
Irish	22 (95.7)	27 (93.1)	2 (100)
Non-Irish	1 (4.3)	2 (6.9)	0
Sexual Orientation			
Heterosexual	16 (69.6)	22 (75.9)	0
Homosexual	6 (26.1)	1 (3.4)	2 (100)
Bisexual	0	4 (13.8)	0
Pansexual	0	1 (3.4)	0
Undisclosed	1 (4.3)	1 (3.4)	0
Porn user			
Yes	19 (82.6)	17 (58.6)	2 (100)
No	3 (13)	12 (41.4)	0
Undisclosed	1 (4.3)	0	0

NB = Non Binary

Measures

The group discussions followed a semi-structured format. Participants were invited to discuss the findings from the participatory activity. Additionally, the following questions were used to prompt discussion: (1) What should the core messages for porn education be and why, (2) can porn function as an educator, and how/why not, (3) how is sex portrayed in porn, (4) what activities should be included in porn education, and (5) who should deliver porn education workshops.

Procedure

There were three routes to participation. Recruitment posters were displayed on the university campus. Electronic versions were shared online by the Students Union weekly email and via the Students Union Facebook page. Posters described that participants would take part in a group discussion and share their ideas for designing a pornography education intervention. Potential participants were invited to email the first author to express their interest in participating and were then provided with detailed study information prior to participation and once again at the beginning of the study. Information on free counseling services was provided to all participants. Participants gave informed consent on the day of the group meeting. Brief participant demographic information was collected at the beginning of each workshop. The study received full approval from the Research Ethics Committee at the National University of Ireland Galway.

Data analysis. The group discussion differed from traditional focus groups (Kitzinger, 1995), in that the overarching themes had been previously generated by the participants themselves. Consistent with Strauss and Corbin's (1998) understanding of inductive analysis, which states that "The researcher begins with an area of study and allows the theory to emerge from the data" (p. 12), the primary purpose of the qualitative analysis was to identify the dominant beliefs inherent in the data that related to each of the previously generated themes. An inductive approach was taken, using a constructivist approach to thematic analysis (Braun & Clarke, 2006). Data were analysed using NVivo software (QSR International Pty Ltd, 2012). The analysis of the group discussion data was based on the prompts employed to stimulate the discussion and further understand the participant's choices, their beliefs about the influence of pornography on youth and the most effective methods to engage youth in porn literacy education.

The first author selected and coded a transcript picked at random. The codes were later reviewed and discussed by the second and third author. The coding scheme was based on the core concepts that emerged during the concept generation phase. The first author continued to code the transcripts by categorizing quotations to the core concepts. Once this process was

complete, the quotations representing the arguments which emerged most frequently within each of these concepts were reviewed with the second and third authors. This facilitated the attribution of quotations in the Results section below. The quotes included below were chosen to be representative of the views of participants.

Results

Core concepts for porn literacy education

Participants identified eight core concepts for porn literacy education, which should be underpinned by an approach with facilitates critical thinking around the following topics: Reducing shame and increasing acceptability of pornography engagement, discussion of sexual communication and sexual consent, body and genital image, the realities of sex, pleasure and orgasm, physical safety and sex, the role of pornography as an educator, and the sexualisation and fetishizing of LGBT+ people.

Reduce shame and increase acceptability. Throughout the group discussions, participants spoke about a variety of positive and negative implications associated with pornography engagement for youth. General language was often used, such as “some people” or “they,” a form of language use that does not link to personal use of pornography, and may reflect a discomfort with direct personal references of this kind. Many believed that encouraging open communication could challenge the negative effects and highlight positive outcomes. More specifically, tackling stigma, reducing shame, and eliminating discomfort around discussing pornography were considered central to this:

Some people just enjoy porn, some people enjoy making porn and I think it's about highlighting those things as well but it's about a balance of you know telling them about the negatives while telling them about the positives too. While also not like trying to repress how they are expressing themselves sexually (Heterosexual woman, 22).

Participants believed that such stigma could be reduced if accurate social norms information around accessibility, ubiquity, and frequency of pornography engagement were highlighted: “*Acknowledging its prevalence*

is one way to normalise it so you don't end up feeling ashamed as a boy or a girl, for watching porn" (Bisexual woman, 22).

Sexual communication and consent. Participants argued that promoting sexual consent was central to porn literacy education. Many believed because of their own experience that pornography often depicted non-consensual, violent or rough sex, and that such representations glamourised aggression, particularly against women: *"The mainstream heterosexual one seems to be a lot of the guy ravishing the woman until she can't even speak"* (Homosexual, non-binary, 19). Speaking more generally, others discussed how such approaches diminished the real-life importance of sexual communication. Participants provided examples of footage that they had seen which they believed trivialised sexual violence, including sexual coercion, the portrayal of power imbalances, and scenes which featured adults engaging in sex with [people who were portrayed as] minors:

In some porn it might not be like rape but it might be like cajoling or pressuring, there's one like teacher-student, like oh you do something bad, you have to do this, but like it wouldn't be as kind of obvious that it was like sexual assault (Bisexual woman, 19).

Concerns over the impact of pornography on the sexual scripts of young people were frequently discussed. Scenes featuring coercion or token resistance were believed to influence perceptions around acceptable sexual behaviour for young people.

It's the fake "no" that can throw off some kids because they don't understand. They weren't thinking 'oh this is acting, this is part of the script' ... so you're kind of taught from a young age that the chase is part of it and "no" is up for debate (Heterosexual woman, 26).

Activities were proposed that would enhance young people's understanding of non-consent in pornography. These involved the identification of non-consensual pornography-based scripts by reviewing videos or discussing the portrayal of sexual aggression and lack of sexual communication. Many involved improving confidence and communication skills by practicing both asking for and giving consent, the use of sexual language, and having to negotiate different situations.

Giving people options of rating what they would feel comfortable saying and what they wouldn't feel comfortable saying, in terms of asking and responding to different sexual requests (Heterosexual woman, 29).

Body and genital image. Conflicting views about the impact of exposure to body types in pornography emerged. One homosexual participant spoke from their own experience and argued that pornography provided a platform for sexually inexperienced people to explore their own body aesthetic: *"It allows you to figure out who you are, what does your body look like in comparison to someone else, especially if you haven't had sex with someone else"* (Homosexual non-binary, 19). More generally, however, the dominant discourse was that although pornography depicted a variety of body types, most reinforced physical attractiveness 'ideals':

You can find whatever you're into [in terms of attraction], if you're into bigger girls, smaller girls, you name it you can find it, so you can make an argument that it is kind of inclusive for everyone. But then there's the other side of the coin where the mainstream is what everyone's idea of a perfect woman or man is (Heterosexual man, 26).

The majority of women held more critical views of pornography but often spoke in terms of the general "other" in this regard, rather than referring to their own experiences. They felt that pornography reinforced a societal standard of beauty that is largely unattainable by the average person. Women frequently made reference to slim builds, genital representations, and pubic hair norms set by pornography. Although many participants spoke of such attributes being unrealistic, they described the many ways in which exposure to these body types could influence how a person feels about their body. Female participants discussed how women in particular could be affected not only by their own, but also by their male partner's, pornography engagement: *"I think especially if you knew anything about, say if your boyfriend watched porn a lot and you knew he liked certain actresses and you were like oh my God I look nothing like them"* (Heterosexual woman, 24).

Impact on genital self-image was discussed by male participants as an issue that might affect other men. It was the muscular physiques of pornography actors that were cited more frequently as a potential source for their personal comparisons to take place: *“It is going to knock your confidence a bit like if you feel like you should look like that”* (Heterosexual man, 26). In order to challenge body-related ideals, participants suggested that young people should be provided with the opportunity to see illustrations of a greater variety of genitalia and to provide context for young people on the differences that exist between their lives and the lives of pornography performers:

Show them [pornography performers] need to spend like four hours in the gym and have like egg whites and kale. And that’s just their life and just to give it a context like ... That’s their job, but if you’re in school or in another job ... I’m not going to be in the gym from eight [AM] till two in the afternoon (Heterosexual woman, 24).

The realities of sex. Many participants discussed how pornography depicted an unrealistic representation of real life sex by making sex look easy. Participants reported that it was important to inform young people about realistic sexual expectations, including the awkward, funny, and disappointing moments that people are likely to experience in their sexual lives: *“Something as simple as putting on a condom ... there can be a bit of fumbling in the real world and like in porn the guy mightn’t be wearing a condom”* (Heterosexual woman, 22). Online interventions using video campaigns which incorporate the use of humour were recommended in order to help youth to establish realistic expectations for sex:

A campaign with a website which is tailored towards young people... Even one minute videos, like “hash tag real porn” and if it’s somebody getting a leg cramp in the middle of something, this is the reality of what it’s like... If you did it in a funny way, make it more accessible and people would actually watch it (Heterosexual woman, 25).

Pleasure and orgasm. Discussions comparing “real world sex” and “porn sex” often centred on genital functioning. Some participants believed that representations of sexual pleasure and orgasm were portrayed as

dramatic and overt, with ease of orgasm, ejaculation, and “squirting” or female ejaculation being cited as some of the most unrealistic aspects of genital functioning in pornography (“... *or orgasm through penetration, that seems to happen a lot in porn and that’s not the reality*”, Heterosexual woman, 26). Many male participants acknowledged the unrealistic nature of on-screen sex, yet discussed personal accounts of how pornography created a standard for sex and failing to achieve such outcomes reflected poorly on their sense of self:

I think for guys it [is] a lot more deep rooted in their psychology and how they think about sex and how that reflects on themselves ... If something doesn’t go the way they pictured it ... that’s it, it’s game over you know (Heterosexual man, 24).

Others believed that some bodily functions that feature extensively in pornography, but which are less common in reality, such as vaginal ejaculation or “squirting”, can positively reinforce such bodily functions for those who experience them or show the potential of the human body:

In porn you see things you don’t normally see in real life, like it’s good to watch porn and think like, well actually a human body can do that! To see like different things, probably if you don’t watch porn, you will never see a squirt. So yeah, for people who do squirt, then that’s really positive, like, okay they can happen sometimes (Heterosexual man, 24).

“Myth-busting” activities and videos on social media platforms were recommended to challenge perceptions of idealised genital functioning:

You could present like myth and fact, and like short YouTube videos or a Snapchat that you could follow. And be like “myth” about penis size, or something like that, and then “fact”: “most penises are this size” or most sexual interactions will last this long on average (Heterosexual woman, 29).

Physical safety and sex. Contrasting views on safety emerged during discussions. On the one hand, pornography provided a safe space for individuals to express and explore their sexuality (“*That you know it’s a safe enough place to explore your fantasies or you know, your sexual orientation or your interests, whatever*”, Heterosexual woman, 25). On the other hand,

the greatest concern regarding safe sex was related to physical pain or injury. Participants discussed how pornography often portrayed pain as pleasurable and that youth should be informed about the real life implications of such behaviours so that they can make informed decisions about what they become involved in: *“If you watch those videos, you never see the actual damage to the person like you do in real life. There’s a lot more that goes into it than smacking someone around”* (Heterosexual man, 24).

Many believed that certain pornographic videos glamourised physical pain in sex, which in turn could prompt youth who learn about sex through pornography to put themselves in danger by practicing unsafe sex or “risky” behaviours. Participants believed that youth could be supported to understand the capacity of the human body if relevant information about anatomy and physiology, reproductive organs and sexual response were provided:

Anatomy is important, you’ve got to be relaxed for it not to be uncomfortable or painful, or you know, in terms of lubrication, but ... it’s also psychological. So, free of judgements, just the facts, that for some people they may need more foreplay or whatever to be physically ready to engage in penetration or something like that (Heterosexual woman, 29).

Porn as education. Many LGBT+ participants reported that they used pornography as a source of education, with many arguing that it was the only source of information which helped them to identify their sexual orientation:

For a lot of gay people anyway its used very much as a common tool for people to eh, to figure out their sexual orientation, because at that age it is confusing, so I suppose, porn is a go-to medium for people to find out what they’re reacting to sexually I suppose (Homosexual man, 24).

Many discussed how they consulted pornography for information because their formal sex education was lacking. Homosexual participants discussed how this was particularly the case for LGBT+ youth, but that it did not always provide them with factual information:

It makes it this idealised concept for homosexual males, they make anal look so easy [group laughter] ... and it isn't easy [group laughter] ... Particularly if you're LGBT you don't see representation of how you would have sex in school, from books, media ... so I think LGBT people at a younger age use it to learn how they should function (Homosexual man, 19).

Most participants believed that porn literacy education should commence at the beginning of puberty, but some believed that it should coincide with when children or adolescent first gain Internet access. Regardless of the age, all participants agreed that the content should be age and stage appropriate: *"I'd say about the same time as Sex Ed, so like 10, 11. Not going right into the nitty-gritty or gory details, but just starting that conversation"* (Heterosexual man, 24). Early education was believed to be central to supporting youth to understand and negotiate their sexual realities and also in avoiding the acquisition of negative sexual scripts that could be applied later in life. One woman commented that early education, particularly for young women, would provide greater power to people to make healthy choices for themselves:

Sex and self-worth for younger girls and this pressure to perform ... you don't just need to do what is being asked of you, you can have your own voice, but that kind of comes with age, I don't know how you begin to do that from younger unless you start the conversation earlier (Heterosexual woman, 27).

Critical thinking. Many believed that porn literacy education was important so that youth have the knowledge and confidence to make decisions about their sex lives that reflect their own needs and not that of perceived norms: *"They [young women] need to be educated that your self-worth isn't linked with your sexual performances or what you do with a guy, you're better off to stay true to yourself"* (Heterosexual woman, 27). Participants argued that because pornography is ubiquitous and access to it is impossible to fully control, promoting critical thinking within porn education would encourage youth to ask questions about the pornographic content that they see.

I think again the issue isn't so much that we should change porn. As how much that we should teach people to think critically ... because porn is an industry. They're going to keep doing what they're doing to get sales. There's no way we can really change that problem (Queer transgender man, 22).

Sexualisation and fetishising of LGBT+ groups. During the group discussions, LGBT+ participants expressed concern over the inequality and underrepresentation of certain sexual orientation groups. Some LGBT+ participants believed that the portrayal of transgender people in pornography reinforced negative stereotypes, ridiculed transgender communities, and, rather than promoting awareness of sexual diversity, could contribute to transgender-based violence and stigma. One heterosexual man believed that pornography helped to increase trans visibility “*Categories you see in porn have gotten better over the years, they're including a lot more variety, so there is a lot more representation for trans or queer, gay has expanded a lot*” (Heterosexual man, 26). Some LGBT+ participants felt that the representation of lesbian women catered to the enjoyment of heterosexual men, and by doing so, failed to represent the realities of same-sex relationships, in that their relationships were simply portrayed as a source of entertainment for consumption by others:

Heterosexual porn is produced for heterosexual men and you'd think lesbian porn would be produced for lesbian women, but it is still produced for heterosexual men and it just goes to show that women have like no ... it's for consumption, their sexuality. It's for like performance, it's for like someone else, other than them (Homosexual non-binary, 19).

LGBT+ participants believed that in order to tackle negative stereotypes portrayed in pornography, youth need to be encouraged to explore and understand the origins of stereotypes and the potential implications for transgender people: “*You have to understand why it's wrong ... So really exploring that stereotype and where it's from as opposed to just don't watch it because it's wrong ... because that's not really going to change anyone's opinion*” (Queer Trans man, 22).

Discussion

Our findings suggest that objectives for porn literacy interventions should center on reducing shame regarding pornography engagement and improving critical thinking skills related to the following sexual health topics: increasing acceptance of and reducing stigma around pornography, sexual consent and communication, body image comparisons; the realities of sex in the “real world”, sexual pleasure and orgasm, physical safety, sexual and gender-based violence; the role of pornography as an educator, and the sexualisation and fetishising of gay and transgender communities. Some have (Wright, Tokunaga & Kraus, 2016; Peter & Valkenburg, 2016) suggested that some youth may not be equipped with the skills to distinguish between the portrayal of sexual relationships in pornography and those in real life. Porn literacy education aims to facilitate youth in thinking critically about the content that they see. Therefore, supported by theoretical models such as the 3AM (Wright, 2011), effective porn literacy education may potentially reduce the perceived realism of sexual portrayals in pornography by undermining beliefs regarding the plausibility of certain pornography-based messages and by highlighting the scripted and dramatized nature of sex in pornography. Challenging such messages may also confront youth perceptions of sexual norms and facilitate the development of personalised sexual scripts.

Previous studies have suggested that young people should be informed about risks related to pornography engagement (Baker, 2016); however, Spisak (2016) discussed how portraying pornography solely as a risk behavior may negatively influence people’s perceptions regarding their own use, increasing shame and embarrassment about engagement, sexual exploration, and masturbation. It is important therefore to resist using any intervention to reinforce the perspective that pornography engagement is shameful and to thereby restrict open sexual health communication. It is also important when considering the development of interventions for media commonly used by youth to acknowledge that criticising such media may produce undesired outcomes (Banerjee & Kubey, 2013). Condemning media like pornography may be unnecessary, as having affinity for pornography is not incongruent with having a critical evaluation of it at the

same time (Austin et al., 2015). In addition, taking an educational perspective on “risk” could incorporate the aim of replacing individual perspectives with other, “approved” perspectives, which would imperil the acquisition of skills which helps young people to become critical thinkers and effective communicators with the ability to express their own beliefs (Alliance for Media Literate America, 2007).

This study set out to explore the development of a model of porn literacy underpinned by critical thinking. The adoption of a participatory mode of working with youth demonstrated that this approach could be acceptable and match their own values. The findings also provide a basis for youth-derived content for porn literacy to examine further with adolescents. The findings show that a media literacy approach can be adapted to pornography, and provide a rationale, key components, and approaches for future research. These findings also support an approach that facilitates the development of critical thinking skills, and provides youth with information so that they can explore a variety of sexual health-related topics, beginning at a young age.

Findings indicated that certain elements of porn literacy are gendered. The manner in which men discussed pornography and its effects indicated that they believe women and men experience pornography in the same way and are likely to have similar effects from it as a result. Men were critical of pornography, but less so than women. Yet there are gender differences in how media portray men and women (Hust, Brown & L’Engle, 2008). Boys have been found to believe that general media messages are more desirable than girls (Austin et al., 2015); this may be as a result of how men are portrayed. Pornography often portrays men as dominant and women as submissive, prioritising male sexual pleasure and orgasm. As a result most pornography may be more desirable to men as it highlights their perspective and prioritises their pleasure.

Overall, women in this study were more critical of pornography than men, were more likely to refer to the sexual inequalities portrayed in pornography, and more often expressed how women are indirectly affected by pornography as a result of men’s use. These findings suggest that men may not be aware of the potential indirect effect of their own consumption

on their female partners. Young women may enact pornography-based scripts in order to impress their partner and may believe that a failure to replicate such scripts would reflect poorly on themselves. There was comparatively little discussion of the direct effect of their own engagement on their personal beliefs. The nature of some participant responses drew on their own experiences of pornography, while most spoke about pornography more generally. The sensitive nature of this research may result in the problem of social desirability in responses (Catania, Gibson, Marin, Coates & Greenblatt, 1990). The presence of others in focus groups has been argued to pressure participants into presenting alternative views that they believe may be considered more socially acceptable, yet may contradict their true experiences or beliefs (Frith, 2000). The information provided by participants who refer to pornography use more generally may be influenced by the type of information that they have received about pornography, either from peers, the media or their family members. In such instances it can be difficult to determine whether the information they report reflects their own experiences. This is an important consideration for future research. Future studies should investigate where young people get information about pornography and whether this influences the way they discuss it in group situations.

These findings are important for intervention development. Porn literacy education may differ by gender in offering more support to girls for resisting indirect pressure and to boys for resisting direct pressure. It is also important to consider how women in this study constructed the use of pornography as a source of pleasure. Other studies have reported many positive uses of pornography (Smith et al., 2015), and women in this study may have felt the need to talk about pornography in a negative way. This suggests that women may need to be encouraged to a greater extent to feel unashamed or more comfortable discussing pornography.

Our findings on LGBT+ youth are somewhat inconsistent with existing literature. Previous research suggests that many gay men value pornography for sexual exploration (Arrington-Sanders et al., 2015). Our LGBT+ participants often used pornography to explore their sexual identities, but some also believed that pornography reinforced negative

stereotypes about transgender people and contributed to the hyper-sexualisation of gay couples. Moreover, rather than normalising bisexual or same sex relationships, some participants suggested that pornography further stigmatises them by fetishising their sexuality. Such messages may be particularly damaging for young people who are struggling with their sexual identity or ‘coming out’, and may mislead youth regarding the perceptions of LGBT+ people in society, or what is expected in same-sex relationships. What is of particular concern is that although many damaging portrayals of LGBT+ persons were highlighted, LGBT+ participants often described how pornography had been important to their own exploration and understanding of their sexuality. These findings are reflective of other studies (Arrington-Sanders et al., 2015), and may be due to the lack of information about LGBT+ sexual practices and relationships in formal sex education. As youth may be more likely to receive general sexual health education at a young age, it is crucial that sex educators ensure that a heteronormative discourse does not dominate educational interventions.

Many of the recommended approaches to engaging youth in porn literacy education, such as facilitated group discussions, were consistent with strategies employed in existing media literacy initiatives. A variety of teaching methods could be employed within a porn literacy intervention, including the utilisation of factual information about anatomy, group work discussions to explore gender representations and stereotypes, and the use of activities or video content on digital and social media platforms. This is consistent with principles of media literacy education that suggest use of a variety of learning styles (Alliance for Media Literate America, 2007). Providing factual information about anatomy and sexual functioning, for instance, supports youth in using well-reasoned evidence in establishing their opinions and beliefs (Alliance for Media Literate America, 2007). Teaching youth to question the representation of people or communities in pornography can help to foster a more sophisticated understanding of media and the implications of engagement.

One of the greatest barriers to successful sex education implementation is that many programmes are delivered in schools that restrict the delivery of certain content. Digital media can provide important

prospects for the development of sexuality education by facilitating greater reach at lower costs (Bull, Levine, Black, Schmiede, & Santelli, 2012), and might be particularly effective at engaging youth around sensitive topics because of the anonymity that it provides. However, digital content may work best in conjunction with group discussions, as they can help students to understand different perspectives and potentially reduce the influence of perceived norms on sexual decision-making.

Participants believed that in order to challenge media messages and acquisition of potentially negative sexual scripts, reducing shame associated with pornography engagement was just as important as talking about the potential risks. This would aid in the development of critical thinking skills and help youth to come to their own consensus on their beliefs about pornography. Such education should begin at an age where young people are likely to be engaging with pornography for the first time (Sinkovic et al., 2013). Our findings suggest that porn literacy interventions could take a staged approach, with the first level of engagement using age-appropriate content with young adolescents, which could then be developed further for older adolescents. Adolescence is an important stage for sexual development, where sexual socialisation is at its strongest. This stage of life is important to the acquisition of knowledge and beliefs regarding sex that may last into adulthood. If we are to effectively equip youth with the knowledge and skills to challenge media messages, educational efforts need to begin before pornography-acquired sexual scripts are likely to be applied in their own relationships.

Conflicting beliefs about the core concepts proposed in this study demonstrates that differing constructions can be applied to the same aspects of pornography (Brown & L'Engle, 2009; Bridges, Wosnitzer, Scharrer, Sun & Liberman, 2010; Klaasen & Peter, 2014). Although the beliefs expressed by participants in this study may not cover the breadth of differing beliefs that exist about pornography in general society, the findings may help intervention developers to preempt topics of conversation that may arise within porn literacy interventions and also to design content which helps youth to critique commonly held view points.

Strengths and Limitations

To the best of the authors' knowledge this is the first study to provide a youth-centred, evidence based approach to the development of porn literacy interventions. Another strength of this study includes the relatively large and diverse sample. This study also had several limitations. First, our sample was a convenience sample of university students and LGBT+ young people who actively engaged with an LGBT+ resource centre. Given that the study was qualitative and participation was voluntary the findings cannot be generalized. The study was conducted in Ireland, a country with a conservative sexual history. Findings may not be reflective of youth in more liberal countries. Second, we rationalised that, by engaging with young adults for this study, we may acquire an appropriate and relevant set of recommendations for porn literacy education for adolescents. Young adults can provide insight into the differences between pornography and real world sexual relationships, in which adolescents are likely to have less experience. However, this is no guarantee that the suggestions made will be reflective of the porn literacy educational needs of adolescents. This will need to be explored in future studies. Third, because of the underrepresentation of lesbian women, perspectives from the LGBT+ cohort are predominantly from gay men and non-binary participants. Lesbian women may have differing perspectives. Fourth, researcher subjectivity or bias can be introduced during qualitative data analysis. We believe that the participatory component of the research mitigated against this occurring during the development of the core concepts for porn literacy, as the participants themselves produced, analysed and presented their own data. However, data were then explored in greater detail during the group interviews and researcher subjectivity may have been introduced during the interpretation of the data.

Although it was not highlighted in our findings it is also important that young people are made aware of the laws around pornography and how they might affect them. Finally, the number of sessions and components, as well as the sequencing of topics will impact upon how well the content is absorbed by the learner (Ritter, Nerb, Lehtinen & O'Shea, 2007). Media literacy interventions with fewer components and that take place over a

greater number of sessions have been shown to be more effective (Jeong et al., 2012). Interventions with many topics may be cognitively demanding for young children; therefore, porn literacy interventions for younger age groups may be more effective the fewer topics they cover. Finally, topic sequencing was not explored nor did it emerge in this research. Future studies should test whether topical or spiral sequencing (Ritter et al., 2007) is best suited to skill and knowledge acquisition and student engagement.

Implications and recommendations

A variety of engagement strategies were highlighted by participants, which align with strategies utilised in media literacy interventions. Sex educators should endeavour to develop materials and activities that engage youth in these ways and researchers should evaluate the effectiveness of such techniques, piloting interventions and evaluating interventions with younger and older youth who engage in porn literacy interventions based on this approach. Studies with longitudinal experimental designs should test the effectiveness of this model with youth.

The current study has demonstrated that eliminating stigma is central to porn literacy. This suggests that participants believe that some types of pornography are acceptable and others are not. Participants acknowledged that pornography is here to stay and rather than trying to fight against it, youth should have the opportunity to discuss its content and acquire tools to navigate their sexuality. It is important for sex educators to consider the potential implications of possibly legitimising pornography for youth through such discussions. In addition, young men are likely to have first engaged with pornography at a younger age than adolescent women (Sinković et al., 2013). Group discussions involving individuals with differing levels of experience with pornography may result in less experienced youth becoming inadvertently aware of pornography and encourage youth to access such content. This remains an important consideration for porn literacy, particularly when working with mixed gender groups of young adolescents.

Conclusion

The use of the youth-derived approaches described here may help youth to develop critical thinking skills to challenge sexual media messages, expect realistic outcomes from their first sexual experiences and develop the capacity to have fulfilling and satisfying sexual relationships. This contribution needs to extend beyond the research process in order to develop youth-based programmes. This information is important to researchers, intervention developers and policy makers. Only when we know how best to engage youth can we develop effective porn literacy interventions. These findings provide a promising starting point for sex educators to develop content that meets the needs of young people. Future research should test the effectiveness of this model with younger and older adolescents. Only by investigating the differences between such groups will we be able to develop programme content that is engaging, age appropriate and effective.

Study 5. A Qualitative Exploration of Parents' Beliefs about the Effects of Pornography on Pre-teens and Teenagers

Abstract

International reports highlight that one of the primary concerns for parents related to youth engagement with sexual content online is that young people will see sexually explicit content, and communicate with strangers. Pornography, therefore, may contribute to increased stress for parents as it commonly portrays explicit sexual content and provides a platform to communicate with other viewers and performers. Although a number of studies have highlighted the potential implications of youth pornography engagement there is a dearth research that explores parents' perceptions about the effects of pornography on young people. Parents' beliefs about the impact of pornography may influence what they say to their children about pornography, how they react to finding out about their child's pornography engagement, and whether or not the risk of their child's pornography exposure contributes to their own emotional distress. This study aimed to investigate parents' beliefs about the effects of pre-teen and adolescent pornography engagement. Findings show that parents' views on pornography are characterised by uncertainty but tend toward a set of beliefs identifying porn as having a negative influence on young people's lives. Negative beliefs were particularly linked to gendered expectations, with stigma and danger especially associated with girls using pornography.

Introduction

Engagement with pornography during childhood or adolescence is a concern for parents all over the world (Livingstone & Haddon, 2009; Byrne, Kardefelt-Winther, Livingstone & Stoilova, 2016; Rothman et al., 2017). International reports highlight that the primary concerns related to youth engagement with sexual content online is that young people will share sexually explicit image images or video of themselves with other people, see sexually explicit content, and communicate with strangers (Family Online Safety Institute, 2014; Livingstone & Haddon, 2009). Pornography, therefore, may contribute to increased stress for parents as it commonly portrays explicit sexual content and provides a platform to communicate with other viewers and performers. Although a number of studies have highlighted the potential implications of youth pornography engagement, including, but not limited to sexual permissiveness, sexual risk taking, sexual behaviour, as well as sexual knowledge acquisition (Peter & Valkenburg, 2016; Wright & Stulhofer, 2019), there is a dearth research which explores parents' perceptions about the effects of pornography on young people.

Parental knowledge and awareness of their child's pornography use is important regarding specific experiences that children may encounter online. Parents' beliefs about the impact of pornography may influence what they say to their children about pornography, how they react to finding out about their child's pornography engagement, and whether or not the risk of their child's pornography exposure contributes to their own emotional distress. Parental perspectives on adolescent pornography use may therefore be important in advancing understanding on adolescent self-perceived effects of pornography, reported comfort with watching pornography, and internalised shame among youth for pornography engagement. Understanding parents' concerns about the impact of pornography can facilitate the development of resources which help parents to make sense of adolescent pornography use. Thus, the present study investigated parents' beliefs about the effects of pre-teen and adolescent pornography engagement.

Effects of adolescent pornography use

The growing body of pornography research highlights mixed findings in relation to negative associations and impact on attitudinal and behavioural outcomes (Peter & Valkenburg, 2016; Ashton, McDonald & Kirkman, 2018; Owens, Behun, Manning & Reid, 2012). For example, reviews have suggested a range of findings on the link between pornography and sexual aggression. The pornography research literature regarding adolescents also tends to have a negative bias, with most research seeking to explore the negative implications of engagement (Peter & Valkenburg, 2016; Owens, Behun, Manning & Reid, 2012). As a result, most research findings that are disseminated to the public focus on the negative implications. In addition, much pornography literature is based on cross-sectional research findings, so we still know comparatively little about the causal effects of pornography on young people. Some longitudinal research findings on the link between pornography and aggressive behaviour have highlighted significant, but small effect sizes (Ybarra, Mitchell, Hamburger, Diener-West, & Leaf, 2018; Tomaszewska and Krahe, 2018).

Overall, the research indicates that negative implications from engaging with pornography may only be experienced by a small percentage of adolescents. This, coupled with more recent findings, indicate that potential risks of youth pornography engagement in the general population may not be as grave as we once thought (Zilman & Bryant, 1982, 1984). Nevertheless, negative implications are more often reported upon, and may contribute to increased parent stress regarding youth internet use (West, 2018). Limited research exists which explores parents feelings about youth pornography use. However, some studies indicate parental disapproval of pornography use by responding harshly to their child's pornography use; Rothman, Paruk, Espensen, Temple & Adams (2017) found that typical responses to finding out about their child engagement could be categorised as "*angry, shaming and punitive*" (Rothman et al., 2017, p. 846). The manner in which pornography is reported upon in the media is often sensationalist and provides little information about the nuances regarding pornography and its effects (West, 2018). As many of these media sources may be a parent's primary source of information about pornography, it is

likely that there is disconnect between parental perceptions about pornography effects and research evidence.

Parental beliefs about their child's pornography engagement may also be influenced by parent's gendered beliefs about their children. Findings from studies conducted with parents in more conservative countries point toward a sexual double standard for their children regarding pornography engagement. There is no research in this regard in a European context, however, some mothers in Arab countries indicate that they know their sons watch pornography, but may be unaware that their daughters do (Gesser-Edelsburg & Elhadi Arabia, 2018). This is in contradiction with findings that indicate young women do engage with pornography in Arab countries (Kasemy, Desouky & Abdelrasoul, 2016), and that most young women are accepting of pornography (Price, Patterson, Regnerus & Walley, 2016). Their findings also indicate that beliefs about sexuality and use of pornography may be strongly influenced by traditional gender ideologies, with boys being afforded more freedom of sexual expression than girls (Gesser-Edelsburg & Elhadi Arabia, 2018). Beliefs about girls' pornography engagement often fail to recognise the sexual curiosity of young girls, and sees girls as victims of pornography, who are accidentally exposed to it and are more negatively affected than boys (Gesser-Edelsburg & Elhadi Arabia, 2018). Gendered beliefs about pornography may contribute to boys and girls being treated differently regarding their pornography engagement; for example, increasing internet monitoring for boys but reducing such monitoring for girls. Thus, potentially leaving young girls more vulnerable to sexual exploitation online.

The current study

Research indicates that parents may be aware of young people's pornography use, however, there is a considerable lack of information regarding parents' perceptions about the impact of pornography on their children. Such perceptions may impact parents' conversations with their children, how they respond to finding out about their child's pornography use, and may be a considerable source of distress for parents. Therefore this research aims to explore parents' beliefs about the perceived outcomes associated with teenage pornography engagement.

Method

Study design. An inductive approach to data analysis was taken, using thematic analysis (Braun & Clarke, 2006). Open-ended questions were used in one-to-one interviews with parents of pre-teens and teenagers. An exploratory qualitative design was used to elicit data on the perceptions of parents about the effects of pornography on pre-teens and teenagers. There is a dearth of knowledge on parents' attitudes towards pornography and their willingness to engage in conversations about pornography with their children. Therefore, a qualitative research design was employed. Beliefs about pornography may depend on the gender and age of the child. A qualitative approach facilitates the exploration of different parenting experiences and will allow for a more nuanced understanding of the types of relationships and contexts within the home that facilitate and block communication. Consistent with Strauss and Corbin's (1998) understanding of inductive analysis, which states that "*The researcher begins with an area of study and allows the theory to emerge from the data*" (p. 12), the primary purpose of the qualitative analysis was to identify the dominant beliefs inherent in the data that related to each of the previously generated themes.

Inclusion criteria. Parents of pre-teens and teenagers were recruited as research shows that this is the age where most young people see pornography for the first time. In addition, the children of the parents in this study were not required to have been exposed to pornography.

Participants. A total of fourteen parents (10 females and 4 males), from different families, with an age range of 31 to 58 years, participated in the one-to-one interviews. Collectively, participants were parents to 30 children, 9 of whom were pre-teens (ages 10-12) and 15 teenagers (ages 13-17). The majority of participants were Irish, were single or had never married, and lived in a household which earned between €20,000 and €40,000 euro per annum. See Table 1 for additional demographic characteristics.

Table 5.1. *Parent and Family Characteristics*

Family Characteristics	Number of families
	(14)
Family Size (Number of children)	
1 child	4
2 children	6
3 children	3
4 children	0
5 children	1
Family Size (Number of teenage children)	
1 child	11
2 children	2
Nationalities	
Irish	11
Dutch	1
British	1
Czech	1
Parent Income per Annum (Gross)	
<€20,000	4
€20,000 - €40,000	8
>€40,000	1
Unspecified	1
Highest Level of Parent Education	
Completed Secondary School	4
Some Third Level Education	5
Completed 3 rd Level Education	3
Unspecified	1
Marital Status	
Married	3
Cohabiting	1
Widowed	1
Separated	1
Divorced	1
Single/Never Married	7

Recruitment. Recruitment posters were displayed in local community centres and on the university campus. Potential participants were invited to email the researcher to express their interest in participating. Participants were also recruited via the mature student society of the

university. In total nineteen parents expressed interest in the study, the final fourteen participants were selected to ensure that the sample was diverse regarding parents' gender and the gender and age of their teenage children. Recruitment email and poster contained the following information about the research "The interviews will be audio-recorded and will last approximately 1 hour. They will involve a discussion, which will explore parents' beliefs about pornography, their views on how we can support parent-child discussions on sexual health and what information parents feel they need to be supported in this process."

Materials. The one-to-one interviews were semi-structured to enable exploration of different experiences and approaches for communicating with their children. One-to-one interviews were utilised for a number of reasons. First, because of the sensitive nature of the topic. One-to-one interviews can provide guarantee of confidentiality and anonymity that focus groups or group interviews may not. Second, the interviewer can probe for further explanations of a participant's response, this is an important aspect of exploratory work that cannot be achieved through online qualitative data collection methods. One-to-one interviews also allow for participants to take time to reflect upon their answers and to respond in their own time.

Interview schedule development. Particular attention was paid to the sensitive nature of the research question in designing the open-ended interview schedule. Pornography, as a topic, may be considered embarrassing and parents may have not disclosed information regarding their beliefs or experiences about pornography to another person. We therefore spent time, at the beginning of the interview, discussing sex education in a general sense, paying attention to their understanding of the content of current sex education programmes, transitioning to their child's experience of sex education at school and in the home environment. On average, discussions regarding sex education lasted 10 minutes. Interestingly, ten out of fourteen participants began to discuss pornography in this context, prior to interviewer prompting. Questions regarding pornography were centered on parents' experiences of talking to their child about pornography, their beliefs about the effects of pornography on their

children and the strategies deemed most appropriate in addressing their pornography-related concerns with young people. The interview schedule below was used as a guide to ensure that all research questions were addressed. The schedule below was piloted with one female and one male parent before the study. The first author conducted all of the interviews.

Table 5.2. *Interview Schedule*

Interview Question	Prompts
1. Can you tell me about your own experiences of sex education growing up?	What did you learn? Was it helpful?
2. What was your child's sex education like in school?	What did they learn? Was anything left out?
3. Do you know if your child has seen pornography?	Where? How? What did they see? Did they tell you about it?
3. Have you ever spoken to your child about pornography?	What did you say? Why did you feel that information was important? Why not?
4. Would you feel comfortable to talk to your child about porn?	What would you say? What makes the conversation difficult/easy? Would there be limits to the conversation?
5. Where do you get most of your information about porn?	What do the sources say about porn?
6. Do you know if there any effects of watching porn on young people?	Are the effects the same for boys and girls? Children/Adults?
7. What are your own thoughts on young people using porn?	What are the positives/negatives?

Procedure. All participants took part in individual one-to-one interviews. Interviews were carried out by the first author, who is experienced in working delivering workshops and seminars to parents on adolescent sexual health. Interviews took place between April and May 2017 and lasted between 40 and 82 minutes. Parents were invited to contact the researcher if they had additional questions about participation. Once parents requested additional information about the study or asked to participate, they were sent a copy of the study information sheet which provided a brief overview of the types of questions that would be asked, and

important information about anonymity and confidentiality, as well as voluntary participation. All interviews took place on the university campus. Parents were not incentivized for their participation but were provided with tea and coffee during the interview. This study was approved by the Research Ethics Committee at The National University of Ireland, Galway.

Analysis. Data were analysed using the six steps for Thematic Analysis (Braun & Clarke, 2006). Due to the limited amount of research in the area of parent communication with their children regarding pornography engagement, an inductive approach to data coding was used.

Results

Overall, parents were quite open discussing their personal attitudes towards pornography and sharing their lived experiences. The parents discussed pornography with the researcher with ease and enjoyed having the opportunity to speak candidly about what is commonly referred to as an embarrassing topic. Mothers in particular appeared to speak more unreservedly about pornography than fathers. Once the interviews ended, five parents asked the researcher for advice regarding parent-child conversations about pornography. This may indicate that the parents who volunteered to contribute wanted to begin talking to their child about pornography, had reason to feel an urgency regarding these conversations or were more aware, in general, of the extent of pornography use among young people in Ireland. Out of the fourteen parents interviewed, only eight were aware that their child had seen pornography, however, all parents expressed concern about the impact of pornography on their children. The perceived threat of pornography was reflective of the child's gender and age.

Uncertainty but concern

Porn is better than no sex education at all. Parents wanted their children to have positive role models for sexual health and commonly described the detrimental effect of being ill-informed and unprepared for sexual relationships. All parents had bad experiences of sex education in school and although each parent expressed concerns about the availability of pornography, three parents believed that pornography provided learning

opportunities that were not available to them as teenagers. One mother discussed how sexuality education in school was non-existent “*well I guess it, it allows conversation. It allows (pause) certainly learning opportunities [laughs] more than you get with pickle fetuses and mice and a fumble in the back of the bike shed [Laughs]*” (Anne, son age 12). Another discussed the acceptability of discussing sexuality more generally in society, particularly regarding sexual pleasure and exploration of female sexuality

“Certainly when we were growing up you were not encouraged to know your body or to masturbate or do anything. It wasn’t even spoken about. So I think it’s good for them to be more comfortable with themselves and their sexuality and for it to be normal” (Joan, daughter age 11).

Uncertainty about the effects of pornography. Parent confidence regarding their knowledge about pornography effects varied greatly. Few were confident that the knowledge they possessed was accurate. Most expressed a great deal of uncertainty. Uncertainty about the effects of pornography on young people were described as being as a result of a lack of sex education, direct pornography engagement and skepticism about the portrayal of pornography in Irish media. Although most parents discussed their lack of sexual health education in school, as well as having no conversations with their own parents about sex, a few used language that positioned themselves as knowledgeable about pornography and its effects “*If is something that you end up watching all of the time, there is going to be negatives*” (Molly, daughter age 14). Most discussions around teenage pornography engagement centered on the detrimental effects. However, the language used by two parents who did not watch pornography themselves implied that there was uncertainty about the content of pornography and its impact because of a lack of direct engagement with pornography.

“There’s a lot of objectification and violence isn’t there?” (Anne, son age 12).

“There are probably a lot of negative side effects” (Kasia, daughter ages 13 and 12, son age 10)

Many parents reported learning about the impact of pornography from newspapers and other media sources “*See I don’t watch porn, a lot of what I*

know about it would probably be through reading stuff on the media” (Caroline, daughter age 17). They were often skeptical about whether or not the information they received was accurate *“there’s an awful lot of generalisation. I don’t think it’s true at all. I just think it makes a good headline, some of the times”* (Don, daughter age 11, son age 9). Uncertainty was also evident from expressing conflicting points of view. Don’s first quote describes an awareness of sensationalist headlines, but in the second he casually discussed the serious implications of pornography engagement during adolescence which could have lifelong implications. This was evidenced by his non-hesitant response: *“It could possibly scar them for life absolutely”* (Don, daughter age 11, son age 9).

Media as a source of information about pornography. Two mothers believed that people may use the media to look for information about porn that coincides with their existing beliefs and that many parents do not make the effort to become informed about the effects of pornography *“if you think there porn is bad you are going to look for things that say that porn is bad”* (Joan, daughter age 11). Three parents expressed frustration over the fact that debates about pornography in the media were sensationalist and rarely involved expert discussion, contributing to further stigma around discussing pornography. One father believed that the media should take a more proactive and responsible role in disseminating information to parents:

“The perfect example was that debacle on the Ryan Tubridy show (Popular TV chat show) which was absolutely counterproductive... anybody who tuned into it would have been extremely disappointed because it was, it was really very poorly done. It was like three journalists who really had no expertise in the area, just waffling. Like a pub conversation about porn. And it was very irresponsible”. (Mike, daughter age 17)

Pornography as a threat. Participants were also concerned about the risks posed by new technologies. They generally felt that, compared with their own childhood, today’s youth were more regularly exposed to sexually explicit content. Many parents acknowledged that the societal pressure to have sex has always been present, but that the influence of the

media and pornography are novel. They reinforce ideas for young people that the behaviours are accepted and expected at a peer level but also a wider social level. One mother spoke about her own experiences of feeling pressure to be sexually active as a teenager:

There was a lot of peer pressure when I was a kid as well. Have you done this, have you done that, all these whispers and you ought to try this. Everybody else does it. But I guess now it is more institutionalised because they see it on screens all of the time and so they feel like society accepts it as well as their little group of friends. Society accepts what they see whether that be hardcore pornography or abusive relationships on television screens (Anne, son age 12)

This parent introduces a societal-level evaluation of the pervasive depictions of sex, including the accessibility and ubiquity of pornography, as well as explicit sexualised content in general media, which she believed to be a reinforcing factor for today's youth. Anne's experience highlights how societal norms about the ubiquity of sex amongst their peers has always been present, passed on through peer group 'whispers'. However, now these conversations not only happen in person, but also online and through mainstream media outlets.

Parents also talked about pornography engagement in conjunction with other worries. They worried not only about the content of pornography but that pornography could act as a means through which strangers could contact children online ("*porn sites have interactive chat rooms*", Joan, daughter age 11). Both Anne and Joan discuss the direct social influences as a threat to their children. She reflected the feeling of other participants who felt that the availability of online technologies made it difficult to know what was going on in their child's life, making it more difficult for them to protect their children.

Concerns for children. Parents' perception of children and teenagers risks related to pornography varied. Parents of younger children worried that seeing pornography during childhood would be frightening and could contribute to confusion about sexuality, whereas parents of teenagers were more concerned that their teenage child would try to replicate behaviours seen in pornography. In general, parents who also knew about

their child's pornography use perceived the highest risk, in comparison to those who did not know if their child had seen pornography. Parents assumed that their young children would not actively search for pornography and that accidental exposure would be frightening, as illustrated by one mother by Joan, who discovered her daughter had seen pornography and said "*You must have found that to be really scary*" (Joan, daughter age 11), even though throughout this interview discussion, Joan reported that her daughter seemed to enjoy watching pornography and was not frightened by its content. Other parents believed that becoming aroused by pornography could contribute to feelings of confusion which would have detrimental effects on a child's wellbeing. This was compounded by the belief that young children are unlikely to understand their own sexual responses, particularly if they become aroused by violent content

"God forbid a younger child of 13 stumbles upon something violent on the Internet but they see naked bodies and they get aroused by this and then they don't know what they're getting aroused by...and to tie this together for a young person I think that could be really, really detrimental for them you know" (Don, daughter age 11, son age 9).

Here, pornography is framed in terms of exposure to violent sex, not as a 'normative' model of sexual relationships that a child can regulate. This might explain why being exposed to pornography during childhood was also believed to be associated with developing impulsive usage patterns which would lead to a desire for more explicit and extreme content overtime

"Once you start with one, you are always going to want something a bit different. And then, where does it end." (Joan, daughter age 11).

Gendered interpretations

Watching pornography is okay for boys but not for girls.

Parental narratives pointed towards a shared cultural belief of a sexual double standard whereby teenage boys and girls were afforded different degrees of freedom regarding sexual exploration and desire. This was evidenced by personal accounts regarding their child's pornography use. Parents struggled to understand why their daughters would want to watch

pornography, as illustrated by Shane “*If I walked into [daughters] room and I saw porn I would go, what the fuck.*” (Shane, daughter age 11). Generally, parents of girls were less likely to think that their daughters had intentionally looked for pornography “*one thing had led to another, led to another, led to another. She didn’t start out looking for porn. She certainly didn’t type in, find me porn*” (Joan, daughter age 11). One parent was particularly troubled by the fact that she believed her daughter enjoyed watching pornography “*but the worst thing is that I think that she kind of enjoyed it. She went back for more and more and more. She did this over two evenings*” (Joan, daughter age 11). Contradicting this, boys were overwhelmingly represented as innately sexual, parents were overwhelming situated as understanding of the need for boys to be curious about sexuality “*Boys are bound to be curious if they see a picture of a naked woman*” (Don, daughter age 11, son age 9).

Risks are greater for girls. For girls, such activity was implicitly positioned as ‘unusual’, simultaneously positioning girls and women as non-adventurous. These narratives represent the belief that girls should strive to resist their sexual urges, common to the discussion of women as the ‘gatekeepers’ of sex in dyadic sexual relationships. Parental narratives implied that they believed they could play a part in helping to protect their daughters from sexual exploration. This may be because parents often perceived the risks associated with sex to be greater for girls. The risks discussed for girls were not directly linked with pornography use, but indirectly through becoming sexual too early. Implying that parents may see pornography as a gateway to early sexual debut through increased interest and/or awareness about sex

Int. What do you think might be the risks [associated with pornography use] for boys and girls? Are they the same?

“They would be different yeah. The risk is mostly in and around responsibility with [daughter]. Obviously the bigger concern is that if she were to get engaged in sexual activity, the implications of that should, she’s become pregnant or, they would be larger for her than they would be for [son]. That’s a life changing situation for her”

(Mike, daughter age 17)

Gender differences in pornography effects. A number of parents believed that gender differences existed in how boys and girls were affected by pornography; that boys were directly affected and would feel under pressure to re-enact behaviours that they had seen in pornography, and girls would be indirectly affected by being victimised or exploited. Jim worried that porn contributed to inequality between men and women *“that somebody needs to be at the bottom at all times and somebody needs to be over them”* (Jim, daughters age 11 and 13). Although parents’ perceptions of teenage boys’ desire to engage with pornography was more accepted, parents also expressed concerns about their engagement. The replication of behaviours seen in pornography by young people also pointed towards pre-conceived ideas about the roles of ‘dominant’ men and ‘passive’ women. Don’s statements implied he believed women have little agency in sexual relationships. Females were always described as the recipients of violent sex, rather than sexual beings who actively engage in intimacy with their partner.

“I’m concerned a lot of it is poor woman or it seems to be a very male denominated thing which is fine for two adults who like to smack each other but for a young girl saying that is that the way it supposed to be, you know. You know I worry about that.” (Don, daughter age 11, son age 9)

The language used regarding girls pornography use was much more extreme. It suggests that pornography poses a much more serious threat to girls, however it may reinforce existing norms about masculinity. This also implies that boys are expected to have more sexual knowledge, having discussed sex with their peers (*“Girls find out the hard way”*, Jim, daughters age 11 and 13) and (*“It’s that boy locker room mentality”*, Gill, sons age 10 and 13).

Appearance-related pressure. Parents’ beliefs about the effects of pornography on boys and girls highlight their assumptions about the needs of young people. However, based on parents’ previously discussed desires for their children, for girls to be sexually responsible and boys autonomous, these beliefs may also be linked to some parents’ goals in policing their daughter’s sexual behaviour. Appearance-related pressure was discussed

related to boys and their genitals “[Body image] *is a huge one. Because boys are going to look at a male porn star with an erect penis and their penis might not match up to theirs*” (Molly, daughter age 14). However, this was predominantly highlighted as an issue for girls. Parents worried that their child would feel under pressure to conform to standards of beauty portrayed in porn. Here, female sexuality was more so linked to body aesthetic and perceived attractiveness. Implying that boys would feel compelled to learn about sexual behaviour, because they are dominant and agentic but that girls would feel pressured to conform to standards of attractiveness represented in porn.

Discussion

Parents described pornography use in terms of threat because of the associations they had with violence and extreme behavior being depicted within pornography. Some of the fears were consistent with the fears related to young people lives off-line, however, how these concerns manifested with regard to the online space were less straightforward. There was a sense that it was more difficult to protect children online and that pornography provided a platform whereby two major concerns of exposure to dangerous people and a “loss of innocence” could take place. Overall, perceptions regarding a young person’s motivation to watch pornography, as well as the negative implications of pornography use, were framed with respect to gender and the age of the child.

Our findings related to parental concerns about widespread use of the internet use among children and teenagers support previous research (Turow & Nir, 2000; Livingstone, Mascheroni & Staksrud, 2015; Livingstone & Haddon, 2009; Byrne et al., 2016). Parents’ perceptions of the effects of pornography on young people related to public threats to children, including contact with dangerous people and a loss of childhood “innocence”. Fears for the child in the outdoor space related to child vulnerability to “dangerous strangers” were also echoed, however, the online space was perceived as being a greater risk in exposure to these threats, as children’s increasing technological competencies put them at greater risk of navigating their online worlds. For those who knew about their child’s pornography use, this was portrayed as being an immediate

threat. For others the threat was theoretical in the sense of not having dealt with their child's pornography use directly but still possessing anxiety about their potential exposure and harm.

Our findings reflect those of others who see the online space as an additional threat to children's normal development. Some of these concerns appear to be less about pornography as a source of danger or abuse and more about protecting children's innocence by preventing access to inappropriate information about sexuality (Valentine & Holloway, 2001). Parents' concerns about the perceived addictive nature of the internet and pornography are reflected in our findings (Sorbring, 2014). Solitary internet use was an added barrier to protecting children. Parents' mediation practices to prevent children from being exposed to violent or inappropriate content online are becoming increasingly difficult as parents worry children can circumvent content blocks (Livingstone & Helsper, 2008; Hansaram, 2019). Sorbring (2014) also discusses an additional contributor to parents' internet worries and states that a "combination of insecurity, and lack of knowledge about the internet cause parents greater worry" (Sorbring, 2014, p. 90).

Our findings that parents express greater concern for younger children with regard to pornography engagement are reflective of others (Ofcom, 2017). Such concerns are based on the belief that children do not understand or know how to react to certain content. Parents of younger teenagers were worried about their child accessing violent or distressing content. This may be linked to the parents' beliefs about the child's maturity and ability to cope with this type of experience. Younger children are not exposed to these types of experiences as often as older children, but they more often become distressed. Parents' lack of information may also have been a contributor to their anxiety about the effects of pornography on their child. Sorbring (2014) found that parents who expressed a lack of knowledge about the internet worried the most about it (Sorbring, 2014). Similarly, the more skillful a parent considers their child to be at navigating the internet, increased parents' worries about their child's use (Livingstone & Bober, 2005). Parents worried about the effects of pornography on their children's development and wellbeing, supporting findings by Rothman et

al (2017). However, parents also varied in their perceptions of severity of the implications of pornography use.

Beliefs regarding adolescent boys and girls differ regarding pornography use motivations, curiosity and experiences were identified across families. Parents' beliefs were gendered and based on perceptions about how boys and girls behave in stereotypical ways. These beliefs may be founded on parents' past experiences, but they also uphold the maintenance of these stereotypical categories. However, upholding these beliefs was not always evident. Parents concerns about childhood exposure to pornography were largely the same for boys and girls. Primary concerns related to children seeing pornography were related to a loss of innocence, desensitisation to extreme content, confusion and fear, but also discussed how seeing pornography was better than having no sex education at all. Interestingly, parents assumed that their child was frightened by pornography content, however this was not evidenced by the child. In fact, there is some evidence to suggest that pornography exposure during childhood is characterised predominantly by curiosity and amusement rather than that of fear or confusion (Spišák & Paasonen, 2017). However, these findings rely on retrospective accounts related to finding pornographic magazines as a child, the content of which may not have been as 'extreme' as parents believe mainstream Internet pornography is today.

Gendered differences may, to some extent be explained by the perceived risks of pornography use for teenage boys and girls. Parents believed that pornography would encourage early sexual debut, a factor of increased concern for girls because of the risk of pregnancy (Woodward, Horwood & Fergusson, 2001). Nonetheless, these beliefs reinforce stereotypical gender roles, identified in previous studies (Eccles, Jacobs & Harold, 1990; Hellman, 2010) where boys are active and girls, passive. Statements such as "boys are bound to be curious" and "If I walked into [daughters] room and I saw porn I would go, what the fuck." indicate that boys and girls are afforded different experiences in the exploration of their sexuality. Similarly, body image concerns related to pornography use were discussed more so in relation to girls. This has also been highlighted by others who argue that intrinsically associating female sexuality with

physical attractiveness implies that women strive to be attractive so that they can become an object for men's desire (Farvid, Braun & Rowney, 2017). It has been argued that "*the conflation of physical appearance and sexuality is detrimental to women on individual, interpersonal, and systemic levels and that it ultimately sustains gender-based oppression*" (Travis, Meginnis & Bardari, 2000, p. 237). These support those of Sorbing (2014) who found that parents' internet concerns were greater for their daughters than their sons, and concerns regarding internet use for older and younger children.

Parents wanted the best for their children, but our findings show that this may depend upon what the parent perceives is most appropriate for boys and girls behaviour. Adults strive for sexual relationships which are consensual, pleasurable and mutually beneficial (Mulhall, King, Glina & Hvidsten, 2008). The experiences during childhood lay the foundation for the development of such skills. Enabling different experiences for boys and girls contributes to a society where the stereotypes of active men and passive women are perpetuated and maintained.

The role of media. Anxieties about the risk of pornography may be shaped by public discussion of pornography. Such public discussions may not be founded on evidence yet have the capacity to shape understanding of pornography use, contributing to moral panic. In this context the availability heuristic may be of importance regarding perceived pornography risk (Tversky & Kahneman, 1973). The availability heuristic states that scenarios which are easy to image or recall bias individual's perceptions of actual risk (Tversky & Kahneman, 1973). Under the availability heuristic, individuals tend to base their judgments on recent information. Parents in this study reported having little information about the effects of pornography but also reported they rely on media portrayals to learn about the impact of pornography. Media portrayals in Ireland sometimes misrepresent or inflate study findings regarding pornography and sexual aggression or anecdotally conflate stories of aggressive behaviour with a history of pornography use (West, 2018). This, in turn, becomes easily accessible or memorable and is then thought of in the context of youth pornography use, and in this context may impact perceptions of pornography influence. Some parents were strong in their beliefs about the

negative implications of pornography. Indicating that although they are skeptical of its portrayal in the media, media reports may still influence parent's beliefs about the consequences of porn use for youth.

Parental sources of information about pornography may be limited. Parents may therefore rely upon media as their primary source of information about pornography and be misled about the outcomes of pornography use for young people. The findings therefore indicate that parents need additional sources of information about pornography which can provide information on evidence-based information on pornography and sexual development. Parents may also need additional support in talking to their child about their pornography use. Indeed, pornography is rarely discussed as part of parent-child conversations about sexual health. There was little discussion regarding youth autonomy and agency regarding pornography use. Similarly, there was little understanding regarding youth pornography use or trust in relation to young people's capacity to navigate pornography, indicating that parents' thoughts regarding the impact of pornography are too extreme to allow young people to make their own decisions about their pornography use.

Limitations and future research

This study provides important insights into parents' perceptions of the effects of pornography on their children, however, there are also several limitations that warrant discussion. First, the qualitative nature of this research provides depth to our understanding of parents' beliefs, however, we do not know how widespread these beliefs are among larger samples of parents living in Ireland, or indeed, around the globe. Cultural differences are likely to impact parents' attitudes towards and beliefs about pornography use. There is therefore a need to validate our findings by exploring this topic among diverse samples including more liberal and conservative nations. In addition, certain beliefs may be more prevalent across groups of parents who are aware of their child's pornography use. There is a need to explore this phenomenon across larger groups, and to quantitatively assess the impact of such beliefs on parents' emotional distress, approach to parent-child conversations about sex, and which past

experiences, including media use, or conversations which contribute to the development of such beliefs among parents.

Conclusion

The impact of media on shaping youth sexual expectations and experiences are well documented. Consistent with theory and literature on pornography and adolescent effects, parents highlighted a number of concerns related to the influence of pornography on young people, particularly regarding sexual behaviour, and body image (Simon & Gagnon, 1973; Wright, 2011). This study highlighted that parents perceptions about the impact of pornography on young people in gendered. Parents were more accepting of boys' pornography engagement than girls and girls' pornography use was associated with greater perceived risk to their sexual health. These findings have important implications for the development of resources to support parents in understanding the role of pornography in young peoples' lives.

Article 6. Strategies to support parents in talking about pornography with their children

Abstract

Research suggests that most parents do not discuss pornography as part of parent-child conversations about sexuality. It is unclear whether or not parents feel it is their role to discuss intimate issue like pornography with their children. However, some research indicates that parents avoid talking about pornography with their children because they lack the information about how to appropriately address it. This study therefore seeks to explore parents' perceptions of their role in conversations about pornography, their beliefs about what teenagers should know about pornography, and their recommendations regarding the development of practical supports for parent-child conversations about pornography. In total, fourteen parents were recruited from local community centres and the university campus. Findings indicate that parents want to support porn literacy efforts with their children, but have had little or no exposure to supports to help them do this. They recommend different strategies that suit particular parenting styles.

Introduction

Although adults regularly report that pornography has a positive role in the lives much of the research literature has focused on the negative implications of pornography use for adolescents (McKenna, Green, & Smith, 2001; Miller, Hald, & Kidd, 2017). To date adolescent pornography use has been associated with setting unrealistic expectations with regard to sexual relationships, increased sexual preoccupation, earlier sexual experience, body image dissatisfaction, and low academic performance (Tsitsika, Critselis, Kormas, Konstantoulaki, Constantopoulos & Kafetzis, 2009; Haggstrom-Nordin, Sandberg, & Tyden, 2006; Brown & L'Engle, 2009; Delmonico & Griffin, 2008; Beyens, Vandenbosch, & Eggermont, 2015). As a result, educators and academics have begun to advocate for porn literacy education for young people to tackle the negative outcomes of pornography use. Many believe that in order to impart important information about pornography schools should facilitate discussions on the

topic as part of comprehensive sexuality education (Dawson, Nic Gabhainn & MacNeela, 2018; Baker, 2016).

While some young people prefer to receive sex education in their schools (Pound, Langford, Campbell, 2016), many want to get information about sex from their parents but rarely report that they do. This is particularly the case regarding more sensitive topics like sexual pleasure and pornography (Flores & Barroso, 2017). Even if parents were better supported in having conversations about pornography, it is unknown to what extent parents feel it is their role to discuss it with their children or indeed if they believe pornography literacy education to be necessary. This study therefore seeks to explore parents' perceptions of their role in conversations about pornography, their beliefs about what teenagers should know about pornography, and their recommendations regarding the development of practical supports for parent-child conversations about pornography.

Evidence suggests that parent-child conversations about pornography can have a protective effect regarding adolescent pornography use, leading to lower rates of pornography use as well as a reduced impact of pornography on their lives (Zurcher, 2019, p. 2; Rasmussen, Ortiz, & White, 2015; Rothman, Paruk, Espensen, Temple, & Adams, 2017; Wolak, Mitchell, & Finkelhor, 2007; Zurcher, 2017). Parental mediation has been shown to influence children's beliefs and attitudes about media, as well as their motivations to engage with media content (Fisher, Hill, Grube, Bersamin, Walker & Gruber, 2009; Nathanson, 2001).

Parents can influence their child's pornography use through restrictive and active mediation strategies. Restrictive mediation, including the restriction of media use or parental rules about media use is associated with less sexual media exposure (Chakroff & Nathanson, 2008). However, others show that restrictive mediation, increase the likelihood that a child will watch sexual media with their friends (Nathanson, 2002). Restrictive mediation of pornography through the use of parental blocks is relatively uncommon, with 39% of UK parents of children aged 4-16 setting controls across their broadband or mobile network (InternetMatters, 2018). This

approach has been shown to be ineffective at preventing adolescent pornography use overall, particularly as many youth watch pornography with their peers (Ševčíková & Daneback, 2014).

Active parental mediation, involving parent-child discussions impact children's reactions to media (Chakroff & Nathanson, 2008). Active mediation has also been shown to impact the extent to which children identify with media (Rasmussen, et al., 2015). Norms can be communicated through parent-child discussions or through observing parent behaviour (Perkins, 2002). Parents can influence their child's attitudes towards pornography. Among a sample of American parents and their children, Rasmussen, Rhodes, Ortiz & White (2016) found parental mediation and communication about pornography disapproval with their adolescent child decreased pornography use during emerging adulthood.

Adolescent development theorists acknowledge and support the role of parents as their child's primary educator of life skills and believe a joint effort between schools and parents may be more effective than one single source of information (Flores & Barroso, 2017). The impact of parent involvement in child sexual education is well documented (Cheshire, Kaestle & Miyazaki, 2019). Many parents feel compelled to provide their children with accurate information about sexual biology (LaSala, 2015), yet report that they have inadequate knowledge when it comes to talking about pornography (Rothman et al., 2017).

Few studies indicate that parents talk openly about pornography (Rothman et al., 2017; Gesser-Edelsburg & Elhadi Arabia, 2018). This is likely attributed to a number of factors. First, it has been documented that many people find sexuality embarrassing to discuss (Flores & Barroso, 2017). Parental talk with children about sexual health is typically focused on risk avoidance topics concerning sexually transmitted infections (STIs) and unplanned pregnancy (Flores & Barroso, 2017; De Looze, Constantine, Jerman, Vermeulen-Smit, & ter Bogt, 2015). Topics related to sexual pleasure are least often communicated (De Looze et al 2015; Schalet, 2011). Because pornography use is associated with masturbation and sexual

pleasure, parents may find it to be a particularly embarrassing topic for discussion, which may reflect the impact of parents' own sexual education received from their own parents (Lehr, Demi, DiLorio & Facticeau, 2005; Noone & Young, 2010).

Many parents struggle to acknowledge their child's sexuality. For example, one study found that some mothers of 6-10 year olds did not consider that sexuality is part of childhood and felt unprepared to talk about sex with their child if they were asked (Pluhar, Jennings & Dilorio, 2006). Separately to this, parents may be unaware of the extent of children and adolescent pornography engagement and therefore deem it an unnecessary topic for discussion. Parents may worry that talking about sexual activity will increase their child's interest in sex (Ohalete & Georges, 2010) and encourage early sexual debut (Meschke & Dettmer, 2012). Similarly, parents may not want to discuss pornography out of fear that by doing so will inadvertently encourage their child to seek out pornography. In turn, young people report that they avoid conversations about sex because of anticipated parental disapproval (Pluhar & Kuriloff, 2004) and belief that if they are asking about sex they must be sexually active.

How parents approach the topic of pornography in talking to their children may act as a barrier to providing relevant information and supporting ongoing conversations. Gender stereotypes play an important part in how parents address discussing pornography, for example, recent studies have found that parents' beliefs about their children's pornography engagement suggest that mothers may feel more comfortable with their sons engaging with pornography compared with their daughters (Gesser-Edelsburg & Elhadi Arabia, 2018). Daughters may therefore be more likely to miss out on conversations about pornography. Studies which have highlighted parenting approaches to talking about pornography also vary; some parents are likely to approach the topics in a non-judgemental way. Small proportions of parents have been reported to respond to their child's engagement with anger and in some cases physically punishing their child ("I slapped him") (Rothman et al., 2017). Rothman et al. (2017) asserted that some of the frequent responses to finding out about their child

engagement could be categorised as “angry, shaming and punitive” (Rothman et al., 2017, p. 846). Such responses are known to increase feelings of shame and embarrassment (Dhuffar & Griffiths, 2014), thereby creating barriers to further conversations about sex.

Finally, we do not know if parents talking to their child about pornography will have positive outcomes for the child or the parent-child relationship. Dailey argues that adolescents respond more positively to “responsive and accepting parents” in comparison to “rejecting and judgmental parents” (Dailey, 2006, p. 435). Parents may provide information about the acceptability of content that they believe is amoral and run the risk of demonising certain preferences which are in fact be part of healthy and consensual relationships. Additionally, the implications of pornography use appear to differ for those who report religious affiliations. For example, studies have shown those who are religious and engage with pornography report greater moral stigma, that their use as problematic, and worse relationship quality (Doran & Price, 2014; Perry & Whitehead, 2019). Parents may strive to impart their own beliefs about pornography which may have negative implications on their children by contributing to greater guilt or shame (Perry & Snawder, 2017).

The current research

Several factors influence parent-child communication about pornography, including embarrassment, a lack of information, and gendered beliefs about the relevance of pornography to young peoples’ lives. Parents may therefore need additional support to overcome learned anxiety and gendered beliefs related to discussing topics like pornography. This study seeks to explore parents’ perceived barriers to talking to their children about pornography and the extent parents feel it is their role to be involved in conversations about pornography. This study also explores parents’ beliefs about pornography education for their children. Finally, this study will explore parents’ recommendations for parent-child conversations about pornography.

Research Questions

1. Do parents believe pre-teens and teenagers should be educated about pornography?
2. To what extent parents feel it is their role to be involved in conversations about pornography.
3. How can parents be supported in talking to their children about pornography?

Method

Study design. To the best of the authors' knowledge, no study to date has engaged parents to explore their perspectives on teenage pornography education. A qualitative approach facilitates the exploration of different parenting experiences and recommendations, allowing for a nuanced understanding of the types of relationships and contexts within the home that facilitate and block communication. Therefore, a qualitative research design was employed utilising the six-steps, identified by Braun and Clarke (2006) for thematic analysis. The first phase of analysis involved data familiarization; codes were then identified and recorded during the second phase. The third involved identification of overarching themes through the use of mind-maps. Phase four involved re-readings quotes within each theme to ensure the relevance of the quotes to each theme. Phase six involved theme refinement and creation of subthemes.

Inclusion criteria. Research shows that a majority of boys and girls living in Ireland see pornography for the first time during late childhood and early adolescence (Dawson, Nic Gabhainn & MacNeela, 2019). Therefore parents of pre-teens and teenagers (ages 10-17) were invited to participate in the research.

Participants. A total of fourteen parents (10 females and 4 males), with an age range of 31 to 58 years, participated in the one-to-one interviews. Collectively, participants were parents to 30 children, 9 were pre-teens (age 10-12) and 15 were teenagers (ages 13-17). The majority of participants were Irish (N = 11) three were non-Irish. The majority were

also single or had never married. See Table 1 for additional demographic characteristics.

Table 6.1. *Parent and Family Characteristics*

Family Characteristics	Number of families (14)
Family Size (Number of children)	
1 child	4
2 children	6
3 children	3
4 children	0
5 children	1
Family Size (Number of teenage children)	
1 child	11
2 children	2
Parent Income per Annum (Gross)	
<€20,000	4
€20,000 - €40,000	8
>€40,000	1
Unspecified	1
Highest Level of Parent Education	
Completed Secondary School	4
Some Third Level Education	5
Completed 3 rd Level Education	3
Unspecified	1
Marital Status	
Married	3
Cohabiting	1
Widowed	1
Separated	1
Divorced	1
Single/Never Married	7

Recruitment. Recruitment posters were displayed in local community centres and on the university campus. The mature students' society at an Irish university was also invited to share the study invitation email with their members. Potential participants were invited to email the researcher to express their interest in participating. In total nineteen parents expressed interest in the study. Fourteen participants were selected by the researcher to participate in the study to ensure that the sample was diverse regarding parents' gender and the gender and age of their teenage children. The recruitment email and poster outlined that the study would involve participating in one-to-one interviews that would be audio-recorded, lasting approximately one hour, and involved a discussion of parents' beliefs about pornography, their views on how we can support parent-child discussions on sexual health and what information parents feel they need to be supported in this process.

Materials. The one-to-one interviews were semi-structured to enable exploration of different experiences and approaches for communicating with their children. The interview schedule below was used as a guide to ensure that all research questions were touched upon. The schedule below was piloted with one female and one male parent before the study.

Table 6.2. *Interview Schedule*

Interview Question	Prompts
1. Have you ever spoken to your child about pornography?	What did you say? Why did you feel that information was important? Why not?
2. Would you feel comfortable to talk to your child about porn?	What would you say? What makes the conversation difficult/easy? Would there be limits to the conversation?
3. Where do you get most of your information about porn?	What do the sources say about porn?
4. Do you think teenagers should be educated about porn as part of comprehensive sex education?	What should they learn? Why not?
5. Should parents be supported in talking to their kids about porn?	How? What works, what doesn't? What resources?
6. Do you know of any useful resources about pornography?	Do you find them useful? Would parents benefit from more information?

Procedure

All participants took part in individual one-to-one interviews. Interviews were carried out by the first author, who is experienced in working delivering workshops and seminars to parents around adolescent sexual health. Interviews took place between April and May 2017 and lasted between 40 and 82 minutes. Parents were invited to contact the researcher if they had additional questions about participation. Once parents requested additional information about the study or asked to participate, they were sent a copy of the study information sheet which provided a brief overview of the types of questions that would be asked, and important information about anonymity and confidentiality, as well as voluntary participation. All

interviews took place on the university campus. Parents were provided with tea and coffee during the interview. This study was approved by the Research Ethics Committee at the university.

Analysis

The transcripts of fourteen interviews were analysed using thematic analysis, following Braun & Clarke's (2006) methodology. Analysis was based around the key research questions. The first stage involved data familiarization, this involved listening to each audio file and reporting a full verbatim account of the data. Data driven codes were then identified and recorded using N Vivo software (Castleberry, 2014). Overarching themes were identified, reviewed to ensure theme relevance, and finally themes were refined and subthemes created. Participant's data are presented with pseudonyms.

Results

Part 1. Prompting discussions about pornography

Pornography exposure. Eight parents shared stories about discovering their child has seen pornography. Parents of younger children more often presumed that their pornography exposure was accidental. Three reported their child accessed pornographic content via Internet 'pop-ups' "*He went on YouTube tutorial and the next thing... there is Minecraft woman lying on the table and they are naked and Minecraft men on top of them*" (Gill, son age 10, daughter 13). Others said that they had accidentally stumbled upon explicit content while searching online "*she landed on the Japanese porn website... And she saw porn*" (Joan, daughter age 11). The tone of parents of older children was that of passing comment about knowing about their child's use, acknowledging their intentional use "*I'd seen that he had been looking up stuff*" (Pam, son 13). For some parents such engagement with pornography was a significant contributor to the parents' distress. One father was particularly concerned by his daughter's (age 13) content choices, which he believed may be influenced by her difficult relationship with her mother "*some of the stuff that was on it was kind of, like 'mother goes down on daughter', 'mother showers daughter'*"

and you know, I kind of thought to myself, is there something to do with the mother” (Shane).

Concern following discovery. The discovery of their child’s pornography use or knowledge of the potential exposure to pornography was a cause for concern for all parents. This compelled some parents to talk to their child about pornography and for others to want to talk about pornography with their child. However, the success of the conversation as well as the messages conveyed by each parent depended on a number of factors; the gender of their child and perceptions regarding barriers to the conversation.

Gendered beliefs influence reaction. First, traditional beliefs about gender and sexual curiosity influenced parents’ responses to findings out about their child’s pornography engagement. Parents were generally more accepting of boys’ pornography use. Girls were more often assumed to be frightened by pornography and were often surprised by their teenage daughters’ desire to watch it. When parents discussed pornography with their sons they were more likely to talk in detail, for example, Gill responded to her son’s (age 10) pornography engagement by saying *“He was very curious. I had to explain what they were doing, I had to tell him that, you know, boys and girls have sex and this is how they do it and sometimes the boy is on top and sometimes the girl is on top (laughs).”*

Parents were more critical of their daughter’s pornography engagement and often responded more harshly to their use. Two mothers responded to finding out their daughters were watching porn by making them watch a documentary that highlights the negative side of the pornography industry. The excerpts indicate that mothers may worry that the portrayal of sex in pornography may glamorise the pornography industry and therefore feel the need to challenge such assumptions for their daughters. Joan thought it necessary to show her daughter a frightening documentary, illustrating the gravity she attached to her child’s pornography engagement by exposing her daughter to upsetting content with the intention of counteracting pornography messaging.

The first thing I made her do was sit down and watch some Netflix documentaries about girls who had been tempted into this sex industry and how they thought it was a really great idea but after three months they were broken” (Anne, daughter age 12).

“They were paedophile tracking these men down and they would go online pretending to be a child and you. This was a scary programme as hell. Inside I was dying but I made her watch it even though she was trying desperately hard not to watch it” (Joan, daughter age 11).

Barriers to conversations about pornography

Parents’ reactions manifested in two ways: direct reaction by making an effort to talk to their child about pornography, and also inaction, but concern. Parent inaction was most often reported and was largely attributed to having a lack of knowledge on how to talk about pornography with their child. For fathers, relational dynamics between themselves and their partners limited discussion. Direct action was seen less often and was stifled because of their child’s resistance to talking to their parent about pornography.

Resistance. Parents experienced many barriers when it came to talking openly with their children about porn. One father was prevented from talking about sex with his child by his partner (“*So she [wife] said that is my job... I would like to talk to her about it but I'm kind of just left a little outside the loop*”, (Don, daughter age 11, son age 9). Others were met with resistance when they attempted to talk to their child “*most times she just wouldn't want to know*” (Joan, daughter age 11), and that children might be unwilling to listen to parents regarding sex because they perceive them as being too old to understand the sexual lives of young people. “*What do you know you are so old you are nearly dead [laughs]*” (Joan, daughter age 11).

It’s hard to explain. Mostly, it was a lack of information about how to address pornography that prevented parents from discussing pornography with their children. Specifically, for many parents it was the explicit nature

of pornography that was difficult to explain to a child. For instance, one father struggled with trying to explain what he perceived to be the particularly extreme sexual nature of some pornographic content *“Some of the content would be too explicit for adults, let alone children, now how do I explain the concept behind this like”* (Don, daughter age 11, son age 9). Similarly, Shane felt that providing one definition of pornography did little to help explain it as a concept because of the variety in pornographic content that young people are exposed to *“You see porn could be two people making love or 10 guys in the room fucking the brains out of one woman, do you know what I mean... you are generalizing a lot.”* (Shane, daughter age 11).

Finding a balance. There were disjunctions between parents’ aspirations to talk to their child and the realities of children opening up and talking about sex. Although many did not discuss sex with their children, they believed their child would talk to them and ask questions about pornography if they needed to. Parents experienced conflicting feelings around talking about pornography with their child. On one hand they wanted to deter their child from watching pornography by discussing the risks of pornography engagement, however, many struggled to talk about pornography without stigmatising sexual exploration

“I didn't want to make sex dirty that was all the advice then I got online just don't make sex dirty because that will stick with them forever and then you can't undo that ” (Joan, daughter age 11).

“Do I say, this is like this is images of people having sex, or videos, but I don't want to him an impression that it is completely wrong because if that is something he chooses to do when he is old enough, I do not want to have it in the back of his head, being like its seedy, but then it is a little bit seedy. So, what is porn, like do you know.”
(Pam, sons age 9, 10 and 13)

It's not my place. There was consensus among parents that young people need to be educated about pornography, however, the information they believed was necessary to tell young people varied from parent to parent. Two of the fathers were less likely to believe that pre-teens should

learn about pornography “*They don't need to know that at the start*” (Don, daughter 11, son age 9), or that it was not the role of the parent to talk to their child about pornography. Jim thought that it was important for parents to talk to their kids about sex, but not necessarily to talk about pornography beyond raising awareness and acknowledging its existence, but by providing enough life skills so they can make healthy decisions about their future sexual lives “*You should be taught to be strong enough and confident in yourself that you can make the right choices*” (Jim, daughters age 11 and 13).

Teachers are not suited. Parents believed that their child’s school-based sex education was less effective when an existing teacher delivered the class. A number of factors contributed to this, including teacher embarrassment (“*I feel bad for the teachers as well because it is embarrassing for them*”, Pam, sons age 9, 10 and 13). Anne believed that there were issues with ensuring objectivity when school teachers delivered sex education. She believed that teachers have certain prejudices that influence the way they talk about sex. From her own children’s experience of having an external body come in to deliver sex education meant that people could open up more honestly as a different relationship can be established with an educator who is not known “*It’s good that they bring in an outside party because children are probably more reluctant to confide in somebody that they have to see every day. And they know they are going to disappear over the horizon after the 6 weeks course or over a week. They won’t have to look at her in the face in the morning if they put something really naughty on the secret message. (Haha)*” (Anne, son age 12).

Jim highlighted the value of a two-pronged approach to conversations, where schools prompted students to talk to their parents about different sexual health topics from a young age “*maybe the schools could prompt the children to have conversations with their parents when they go home about them issues*” (Jim, daughters age 11 and 13).

Facilitators

A combined responsibility. Five parents believed that it was primarily their role to provide sexual information, but a combination of school and parent-based information was most appropriate, particularly for more explicit conversations. One father preferred if the schools could provide more detailed information to teenagers about pornography, as going into detail made him feel uncomfortable *“I don’t want to be talking to my daughter was about pornography and people having orgies and all this kind of stuff or one woman and five men in the room and that kind of crap. There is a line and for me.”* (Shane, daughter age 11). Most parents felt there was value in both parents and educators providing information about porn. This approach ensured each child would get information about pornography from at least one source *“I think that it’s everyone’s responsibility, meaning the parents and the society, that they should be both equally responsible. So if the parent won’t talk about it then the teenager should have the option of making phone calls, anonymous but answers questions”* (Gill, sons age 11 and 13).

Strategies to support conversations. There were several different parenting styles and approaches to conversations identified. Parents acknowledged that different parenting styles are important to consider in the development of an educational resource for parents (*“Nothing is going to work across the board”*, Shane, daughter age 11). What remained consistent was that parents wanted to be able to send their kids to a resource that they know is safe and reliable so that they could allow their child to explore information about sex online: *“If you find it difficult to talk about certain topics, maybe allow them, allow the teenagers to go and find out for themselves from a resource given”* (Gill, sons age 11 and 13). Some parents recommended hardcopy resources for parents and online resources for children: *“Anything that is written on paper, I’m old. But I think it is just go online, that is their thing, that is how probably would work best* (Gill, sons age 11 and 13). These resources were believed to be particularly valuable for parents of children who are too embarrassed to ask their parents questions, or who would not let their parents talk to them about sex, as it

allows to share information without having to talk about it in person: *“Oh I do think that maybe a book is a good resource, especially for [son, age 13]... he is certainly too embarrassed to ask me questions”* (Pam, son age 13). Others wanted practical advice on how to answer questions about sex *“Somewhere where you can fire away questions, should I be worried about this, how can I do this, and someone with a hat on offering some expert feedback but it might also be nice for parents to feel supported by each other”* (Anne, son age 12).

Beliefs about porn literacy education for teenagers

Age and stage appropriate. All parents believed that people should be educated about pornography at a young age, however, parents’ interpretations of “young” varied greatly; some suggesting that young people should receive information about porn before they engage with it (*“At this stage so at 11 I think at this point the full works”*, Joan, daughter age 11), while others recommended providing more detailed information about pornography when a person may become sexually active (*“at the very start laying the foundation of 15, 16, 17 you know you can further the education by the time they're 18 and running around the place”*, Don, daughter age 11, son age 9). Others thought that porn education needs to be stage appropriate, but ultimately needed to be delivered before a child hits adolescence.

Three mothers believed there was a window of opportunity whereby parents could talk to their kids and their kids would listen (*“You’d probably do it before adolescence because once you hit adolescence you think you know it all anyway”*, Anne, son age 12). They believed that once young people develop into adolescence their peer group become the primary source of sexuality-related information: *“You have got to get as much in as you possibly can because you are not going to get it from 13 to 18 then you're done you have missed your window”* (Joan, daughter age 11). Many believed that education should take place overtime (*“I think that they should just start from third class and do some stuff fourth class and a bit fifth class and a bit you know just like maths every year you add something and it is*

just part of school”, Joan, daughter age 11). While another parent believed that it was unnecessary to provide too much information too early and that children should have their questions answered on a need-to-know basis “*I think that the limit should be, you know keeping with the curiosity of the child if they come up to you with questions*” (Don, daughter age 11, son age 9).

Five core recommendations for pornography education. Overall there were five core messages that were most commonly identified regarding parents beliefs about what teenagers needed to know about pornography. The following quotes are illustrative of repeated comments regarding these recommendations: (1) To acknowledge porn’s existence (“*make them aware of the word you don't have to expose them to it*”, Don, daughter age 11, son age 9), (2) acknowledge their child’s curiosity about pornography (*This is totally natural to do this stuff... I know you you’re curious about the act itself and maybe what it feels like and how it is*”, Shane, daughter age 11), (3) to create awareness of the pornography industry and its scripted nature (“*[They should be] Made aware that there probably is an industry, they’re well aware of the concept of acting so if they are made to realise that men and women receive money to act in a certain way then that is all that it is which is*”, Don, daughter age 11, son age 9), (4) the differences between fantasy and reality in how pornography portrays sex, with the aim to instil a message that although an individual may enjoy watching these behaviours, they should not be replicated in real life (“*I think a distinction is going to have to be made to them that there is a difference between reality and fantasy and that while it might be fun to engage in a fantasy and to look at how a fantasy can we play about the reality of it can be very, very different*”, Don, daughter age 11, son age 9). However, simply talking about the unrealistic nature of pornography was believed not to be enough and that young people should also be taught about the realities of sex: “*It can be disastrous as well. We have all had bad sex; you never have bad sex education well, you have bad sex education but never education about bad sex.*” (Anne, son age 12) Finally, parents believed that children and teenagers should be supported in asking questions

about pornography (“*you should be able to ask questions about porn and get accurate information about it*”, Gill, sons age 11 and 13).

Discussion

This is one of the first studies to explore how parents respond to their child’s pornography engagement but also explores parents’ beliefs about what they believe are appropriate topics for their child to learn about pornography. Conversations about pornography can be challenging for parents of pre-teens and teenagers. Responding to their child’s pornography engagement is a complex process, which is influenced by parents’ gendered beliefs about their child’s sexuality and interest in pornography, being accurately informed about pornography, and striving to achieve a balance between managing their negative beliefs about pornography and providing information that does not further stigmatise conversations about sex. Previous studies have demonstrated that parents experience difficulties discussing pornography with their children (Rothman et al., 2017). This is the first study which actively engages parents to explore how they can be supported in overcoming and challenging the barriers to talking about pornography with their children. In this study we found that parents approach conversations about pornography in different ways. Some feel well informed and confident in discussing pornography, some feel ill-informed and therefore unsure of how to start conversations, others believe that conversations about pornography are unnecessary until later adolescence or adulthood.

Our findings show that many parents believe that pornography engagement may pose a risk to the healthy development of their child, however, many feel unsure in how to appropriately address it. Findings show that a lack of parental knowledge is the main barrier to parent-child communication. Parents worried that they would say the wrong thing and inadvertently create fear associated with sexuality for their child. Lack of knowledge about their child’s motivation for pornography engagement and their content choices created a significant amount of distress for parents. Parents need more access to information regarding the motivating factors for youth pornography engagement. Indeed, it is well documented that

youth feel motivated to engage with pornography for a wide variety of reasons (Attwood, Smith & Barker, 2018; Smith, Barker & Attwood, 2015), most of which would not typically be understood as problematic. Providing parents with evidence-based resources which includes such information may help to alleviate some of the concerns that they have regarding their child's internet use and provide them with the confidence to discuss these topics.

Recent studies have also highlighted that parents can respond quite negatively to their child's pornography use, in some cases responding with physical violence (Rothman et al., 2017). The negative emotional impact of responding in such a manner may contribute to increased feelings of shame for young people around their sexual exploration and further block parent-child communication. Most parents were sensitive to this, but also struggled to achieve a balance in conveying the risks associated with pornography, without demonising the behaviour.

Our findings show that parents have the capacity to approach discussions on pornography in a mature and informed way, encouraging their child to understand the differences between porn sex and real world sex, and by advocating for porn literacy education in schools. However, it also highlights that many parents require more information about pornography in order to become confident in starting these conversations. This is one of the first papers to describe the emotional impacts of teenage pornography engagement on their parents, but expands the literature by showing how parents manage their emotions when discussing pornography, and actively control their reactions to their child's exposure, taking time to think about appropriate responses, contrary to findings by Rothman et al., (2017) who found that some parents lashed out in response to their child's pornography engagement.

Findings show that parental approaches to talking about pornography are influenced by a number of factors, including gendered beliefs about sexuality. Findings show that parents' beliefs about their sons and daughters pornography engagement differ. Parents on one hand were unsurprised by their sons' pornography engagement, however, remained

concerned about the impact that pornography would have on them regarding the replication of pornography-based behaviours and the acquisition of negative sexual scripts. Parents of daughters found it more difficult to acknowledge their daughters' interest in pornography and generally responded in a more critical way to their daughters' pornography use, including forcing them to watch documentaries which highlighted the darker sides of the pornography industry. This is in line with work by Gesser-Edelsburg & Arabia (2018) and Rothman, et al. (2017), who found that boys are generally afforded more sexual freedom related to pornography engagement, with parents being more likely to consider male pornography use as a normal behaviour. Parents may therefore be less likely to think that it is necessary to discuss pornography with their daughters or perceive their daughters' pornography use to be problematic.

Another important finding is that although parents often have similar concerns about the impact of pornography on their childrens' lives, many parents approach these conversations in different ways, illustrating that a one-size-fits-all approach to parent-child communication about pornography may not be effective. This indicates that parents likely need to be informed of different approaches that they can then choose and deem to be most effective or closely aligned with their parenting style. Different parenting techniques are important to consider when developing parental resources, as ignoring the fact that parents and children have unique relationships with each other their children may prevent parents from utilising generalised advice. This study provides some insight into the complexity of parent's communication goals and interaction styles regarding pornography. Our findings are supported by Family Systems Theory (Broderick, 1993), which acknowledges that characteristics that are unique to each person and family context are influential in shaping the parents ability to communicate with their child, and for the child to feel confident in communicating with their parents. However, additional work is required in this area, which concentrates on the experiences of teenagers, to further understand the parental approaches which are deemed most appropriate and effective.

Previous research has shown that parents begin talking about sex with their children when they believe that they are at an age where they start becoming sexually active. In the context of pornography, parents may be unaware that a majority of young people in Ireland first engage with pornography in childhood and early adolescence (Dawson, NicGabhainn, MacNeela, 2018). This could prevent parents from talking about pornography as they might believe that it is an unnecessary topic to discuss with younger age groups. This was echoed by our findings which showed that parents who knew that their child had watched pornography, believed that pornography education should begin at a younger age. In comparison to those who were unaware of their child's pornography viewing history. Raising awareness of the ubiquity of child and teenage pornography engagement may encourage parents to begin these discussions at an earlier time.

Limitations

A limitation of this study is that we relied only on parents' retrospective accounts of their experiences conversing with their children. Parents and children can have differing opinions about the quantity and quality of parent-child conversations about sex (Flores & Barroso, 2017). It was beyond the scope of the study to involve the children of these parents in the interview process. We also discussed internet pornography in general terms, parents' understanding and experiences with engagement with porn may vary greatly. This could account for different beliefs about the problematic qualities of youth pornography engagement. Future studies should explore parents' understanding of pornography, and perspectives about the impact of more inclusive, less violent and ethically produced pornography. However, there was also value in talking about pornography more generally, as even though parents reported different child experiences of viewing pornography, many held the same concerns. Parents' response to their child's engagement may not depend on the content that they see. For example, one father saw his daughter had searched for content containing inter-family sexual relations, another parent was concerned by her child watching Japanese Hentai pornography. Both parents conveyed the same

messages about pornography to their children. This could indicate that parents only feel a certain level of comfort in discussing pornography and that they may not feel equipped or desire to talk about pornography in greater detail.

Recommendations for future research

Additional research could help to capture if parents respond differently depending on the type of content that their child engages with. Longitudinal research could prove to be helpful in mapping parent's approaches to talking about pornography and assessing their child's future pornography exposure, content choices and the perceived realism of pornography. It is recommended that interventions that aim to support parent-child communications about pornography cater to individual differences and needs. Interventions which provide a variety of methods to approach conversations, using a number of techniques, including information for short and lengthy conversations, be available in both hard and softcopy format and provide information on how to talk to different age groups will have greater reach and utility. Additionally, such interventions will need to be evaluated to explore which areas of the interventions should be improved. It is also important to take the parents' context and personal experiences of sex education into account. This may be particularly important for parents who grew up in sexually conservative households and who had little to no discussions about sex in their childhood or even throughout their adults' lives. These parents are likely to require additional support to overcome their own discomforts around discussion sex before approaching conversations on potentially more uncomfortable or embarrassing topics, like pornography.

There is a need to support young people in navigating pornography and developing realistic and healthy expectations for sexual relationships. Porn literacy interventions in schools can support young people in a group setting to explore and critically appraise pornography messages (Dawson, NicGabhainn & Mac Neela, 2019). However, parents are uniquely positioned to talk about sex and pornography in an individualised and

private way. One-to-one conversations with trusted relatives may be a more comfortable means of exploring this topic for some young people which can afford greater honesty and exposing of vulnerabilities than working in a group setting. Classroom dynamics can hinder some young people in openly exploring sexual health topics. Parents want their child to develop into sexually healthy adults, however, many struggle to acknowledge their child's developing sexual curiosity. Outlining both schools and parents roles regarding porn literacy education can ensure that teenagers receive all of the information and develop the necessary skills to navigate and understand pornography and to make decisions about their sexual lives that reflect their own desires.

Conclusion

Despite previous research identifying that young people are accessing pornography in childhood and adolescence, and consistent negative media messaging about the effects of pornography on young people, parents still find it difficult to discuss pornography with their children. This research provides a comprehensive analysis of parents' beliefs about the influence of pornography on teenagers' lives, parents' desires for teenage pornography education and their recommendations to support parent-child conversations about pornography. Addressing the needs of parents in this area may improve the effectiveness of pornography literacy intervention, reduce pornography-related stigma and improve young people's experiences of first time sex.

General Discussion

Chapter Overview

This chapter provides an overview of the key findings across the studies and their contribution to the pornography research literature. The theoretical implications of this research will be discussed with regard to Wright's 3AM (Wright, 2011). In order to contextualise the findings in relation to the individual, interpersonal and cultural influences that affect porn literacy, a socio-ecological framework for porn literacy will be proposed. Recommendations for the development of porn literacy interventions for youth will be discussed with regard to the existing literature and frameworks for intervention development. Study limitations and recommendations for future research will be discussed for each study.

Summary of the overall findings

Building on a limited evidence base for devising porn literacy interventions, the findings provide a basis for identifying the needs of young people and parents with regard to knowledge and skills around pornography use. The picture that emerges is one of frequent use of pornography among young Irish adults, especially men, and engagement with pornography from a relatively young age. There was limited evidence to suggest that frequency of engagement was linked to acceptance of non-consenting pornography scenarios. The research also demonstrated that pornography provided many young people with information about sex.

Young adults were able to provide in depth suggestions and recommendations as to how porn literacy should be approached. This revolved around critical thinking and media consumption skills in addition to extended knowledge and understanding of positive sexual health. Parents are likely to be involved in promoting and embedding positive porn literacy education and intervention. Their understanding as evidenced in the research suggests there is a pressing need to empower parents with knowledge that addresses their feeling of uncertainty and danger with regard to pornography. This can enable parents to develop the skills and

approaches needed to talk about pornography with their children, in a way that is compatible with their parenting style.

In summary, the key findings from each study were that:

- The majority of students living in Ireland see pornography for the first time during late childhood and early adolescence. Young men engage with pornography more frequently than young women. Young adults report being motivated to engage with pornography most often for masturbation, but also for information about sex. Dissatisfaction with school-based sex education is not associated with using pornography for sexual information.
- More frequent pornography use is not associated with a preference for non-consensual pornographic content.
- Young adults learn about several aspects of sexuality from pornography, specifically, body aesthetic, sexual behaviour, and exploration of sexual fantasies.
- Young adult's recommendations for porn literacy include a focus on reducing shame around pornography use, as part of nine core concepts identified that include sexual consent, body image and sexual pleasure, and the promotion of critical thinking skills.
- Parents' views on pornography are characterised by uncertainty but tend toward a set of beliefs identifying porn as having a negative influence on young people's lives. Negative beliefs were particularly linked to gendered expectations, with stigma and danger especially associated with girls using pornography.
- Parents want to support porn literacy efforts with their children, but have had little or no exposure to supports to help them do this. They recommend different strategies that suit particular parenting styles.

Contribution of this research

The importance of porn literacy skills for young people is well documented (Albury, 2014; Attwood, 2011; Rothman et al., 2018). There is evidence to suggest that porn literacy interventions are effective at influencing youth perceptions about the utility of pornography as an educator, as well as its efficacy in challenging potential negative outcomes associated with pornography use (Rothman et al., 2018; van Oosten, 2017). However, the evidence base for the acquisition of porn literacy skills among youth requires further development. Furthermore, interventions are often developed based on adult beliefs about the appropriateness of intervention content for youth. It has been demonstrated that for sex education interventions to be successful, youth must play a key role in the development of such content (Buckingham, 2008). The studies presented here contribute to addressing this gap by engaging young people and parents in building an understanding of existing porn literacy and key needs for future intervention.

This research contributes to the pornography research literature in a number of ways. First, the findings expand upon our understanding of experiences of pornography use, contributing the first large-scale data from Irish pornography audiences. Study 1 contributed to broadening our understanding of pornography use trends by exploring patterns across an Irish sample. Study 1 also explores the commonly held belief that experiences of poor quality sex education in school lead young people to use pornography as an educational resource. The findings indicate that this is not the case. Instead, those who are generally more interested in acquiring additional information about sex are more likely to use pornography for these reasons. A key implication of this finding is that improving sex education in other settings may not contribute to the reduction of pornography use as a source of information.

Second, a primary concern of youth pornography use is that of the link between pornography and sexual violence. This area of research is continuously criticised among the research community for its methodological limitations, which fail to adequately assess an individual's

preference for non-consensual content. Study 2 contributes significantly to pornography measurement through the use of a vignette-based strategy that allows consensual and non-consensual pornography choices to be presented in an applied format modelled on typical pornography scripts. Our findings support those of Landripet, Busko, & Stuhlhofer (2019) who found a preference for violent pornography decreases over time, and contradicts the few who argue that a process of content progression exists, where youth seek out more extreme or violent content overtime, as they become increasingly desensitised to violence (Dines, 2010; Zillmann & Bryant, 1984).

A third contribution includes the quantitative assessment of the learning that young people associated with the use of pornography. Study 3 describes the development of a new measure that enables self-assessed learning to be quantified. Until now little was known about the educational value that large samples of young people associate with pornography. Obtaining greater clarity on this topic can help educators and academics to expand understandings of the utility and impact that young people associate with pornography use. Study 3 also provides information that can contribute to the improvement of sex education programmes by further highlighting and exploring key areas of interest for youth. The development of a new measure to assess the multiple aspects of learning from pornography show that individual's report greater learning specifically related to sexual behaviour, sexual exploration and body and genital image. These are topics largely omitted from sexual health interventions in Ireland (RSE Policy Guidelines, 1997). Although participants report learning from pornography about these constructs, this study did not explore participants' perceptions of the reliability of such information in the context of their own lives. Therefore, just because individuals report learning about sex from pornography, it does not mean that they believe pornography has educational value. Findings from Study 4 indicate that although young people may learn about certain factors from watching pornography, their overall assessment is of the poor quality of this information.

Previous research has highlighted the relationship between porn literacy and positive outcomes (Albury, 2014; Rothman et al., 2018; van Oosten, 2017). Yet, the evidence to support the development of porn literacy interventions has remained unclear. There is also a dearth of information regarding the necessary outcomes of porn literacy interventions. Previous research has suggested youth be informed about the risks of pornography engagement (Baker, 2016). Our findings from Study 4 align with others (e.g., Spisak, 2016) who argue that talking about pornography only in terms of risk perpetuates a cycle whereby youth feel ashamed about their pornography use. Our findings indicate that both parents and young people believe that reducing shame about watching pornography is key to having successful conversations about it, which in turn can support youth development and challenge potential negative implications of pornography engagement. Even though some parents found it difficult to acknowledge their child's interest in pornography, many recognised the importance of this approach. Therefore, parents need additional supports which provide them with practical tools to have conversations in this context.

Study 5 highlights that parental beliefs regarding the effects of pornography on their children are largely negative in an evaluative sense, but also are characterised by a high degree of uncertainty about what is involved in the pornography with which their children engage. Building from media depictions, parents sometimes assumed that extreme and corrupting forms of pornography were being consumed. The findings also indicate that parents believe that motivations for pornography use and associated outcomes were gendered – that pornography would be used differently depending on gender and that pornography use has different meanings and implications for each gender. This supports findings by Rothman and colleagues (2018) that parents have different beliefs about their daughters and sons regarding their sexual curiosity and desire to watch pornography. It also indicates that boys are afforded greater freedom regarding sexual exploration than their female counterparts. Previous research has highlighted that parents can provide useful information to their children regarding sexuality. For example, positive parent-child

communication can influence the child's confidence in discussing sexuality with their future partners (Flores & Barroso, 2017). However, research continues to show that parents are less likely to discuss topics such as sexual pleasure and pornography (Flores & Barroso, 2017). Considering that many parents expressed concern about pornography effects, they nevertheless appear to feel less able to critically discuss pornography use compared with other aspects of their children's sexual health.

Study 6 demonstrates that a lack of information on how to address pornography with their child is a key barrier to these conversations. Study 6 also demonstrates the potential for parents to have a positive role as part of an integrated approach to porn literacy. This positive role is complex; contextual factors appear to be important in determining how successful parent-child conversations would take place. Based on the findings of the qualitative research for this study, it is suggested that a single approach to such conversations may not work. The findings highlight how a combined approach of educators and parents can support youth in learning about pornography and facilitate the development of critical engagement skills. It is clear, however, that parents need additional support in this regard.

Theoretical Implications of this Research

Given the relatively novel introduction of porn literacy as a concept, it is important that any future interventions that address this topic are well informed by theory and founded on theoretical assumptions. The empirical studies carried out here provided important insights on the topics and approaches that porn literacy work should focus on, but this will need to be integrated with a theoretical underpinning. The key theoretical perspective introduced earlier in this thesis to provide support of this nature is Wright's (2011) *3AM*. The findings that emerge from the research do appear to be compatible with an outlook on porn literacy that draws on Wright's model. The study findings are also contextualised within a holistic framework for understanding the key interpersonal and cultural factors which impact upon the implementation porn literacy interventions and development of porn literacy skills.

Challenging the perceived realism of pornography was most often identified by participants in Study 4 and Study 6 as a means of challenging the impact of pornography on young peoples' sexual scripts. The learning reported by participants in Study 3 may satisfy a need to know what is involved in sex. Yet, in many cases will not be accurate or consistent with the tenets of the WHO (2006) multi-dimensional definition of sexual health. Based on the ₃AM, challenging perceived realism, and therefore the acquisition and application of scripts can occur through the following process. First, content factors including perceptions of plausibility of sexual encounters in pornography can be challenged in porn literacy by providing information about the production of pornography, more detailed information regarding real world sexual experiences, and different perspectives regarding the desirability of sexual behaviours. This can affect perceptions of the functional value and utility of pornography. This, in turn, can influence audience factors, such as motivation, and reduce individual need or desire to rely on pornography as a source of information (Wright, 2011). This is consistent with findings from Studies 4 and 5 that show parents and youth believe that youth perceptions about the reality and perceived utility of pornography should be challenged so that harmful scripts will not be replicated.

Accessibility factors, including ease of access and frequency of pornography use has been a cause for concern regarding the acquisition of harmful sexual scripts. Supporting the ₃AM model, our findings indicate that existing sexual scripts are influential regarding potential pornography content choices. Of primary concern to many parents and educators is the influence of pornography on aggressive behaviour and sexual violence perpetration. Although pornography use was indeed associated with being comfortable with all of the pornography vignette scenarios, individuals were no more likely to report comfort with the non-consensual scenes the more frequently they engaged with pornography. This is a positive finding, particularly as Study 1 suggests that many Irish youth regularly engage with pornography. Therefore, porn literacy interventions should not focus on reducing the amount of pornography that an individual engages with.

However, interventions may provide information and supports to young people who wish to reduce the amount of pornography that they consume.

The application of pornography-learned scripts is impacted by the rewards and punishments portrayed in response to behaviours seen in pornography, as well as audience factors including media dependency, and systematic processing skills including forethought and self-regulation. Through the discussion of pornography production and real world experience, porn literacy can challenge the application of sexual scripts portrayed in pornography. For example, pornography often features actors responding positively to sexual behaviours. This may influence the extent to which individuals perceive such behaviours as desirable. For example, a recent study found that men overestimate the extent to which women find it arousing to have men ejaculate on their faces (Fu, Hensel, Beckmeyer, Dodge & Herbenick, 2019). The authors argue that perceptions about the desirability of this behaviour is largely influenced by the frequent display of facial ejaculation in pornography. By providing information regarding the reality of these desires, porn literacy interventions can result in youth in having realistic expectations about sexual practices, as well as more enjoyable sexual experiences.

The application of pornography scripts also relies upon the extent to which an individual relies on media. It is argued that when information provided by other sources improves, media dependency decreases. Findings from Study 1 indicate that young people may engage with pornography in order to learn about sex regardless of the information they receive as part of sex education in schools. However, if a person obtains additional information from parents and porn literacy interventions, they may not have to rely on the information they obtain from media in their relationships. Reduced media dependency by providing alternative scripts also impacts upon a person's ability to control their behaviour. Having alternative scripts facilitates systematic processing of ones behaviour. By supporting the development of critical media engagement skills porn literacy can contribute to the development of such skills through increasing forethought and self-

regulation, through enhancing a deeper understanding about the range of experiences and beliefs related to pornography.

Implications for Porn Literacy Intervention Development

The findings from this thesis provide important insights into future porn literacy intervention development. Although pornography use among youth continues to be expressed by parents and educators as a concern for youth development. Few approaches have sought to challenge pornography messaging. This study set out to explore youth and parental recommendations for the development of porn literacy interventions. The findings support a media literacy approach based on transfer of information and critical thinking skills as a critical aspect of supporting youth porn literacy. The variety of experiences, beliefs and recommendations for learning through porn literacy highlighted by parents and young people indicate that a universal approach to porn literacy may be ineffective at supporting the range of individual experiences with pornography. A more contextual and need-specific approach can ensure that young people acquire knowledge and critical thinking skills they need to navigate their online sexual lives. In this sense, the more detailed, outcome-specific approach associated with health literacy interventions could ensure that future porn literacy interventions will meet user needs.

While Wright's 3AM model can help describe how a porn literacy intervention can address individual-level needs, this section of the discussion addresses how porn literacy programming will need to be situated within the complex ecology of sexual health where young people's sexual development takes place. The social ecological model can help to conceptualise the different factors which impact upon porn literacy at the cultural and individual level, as well as the interrelationships between them (Gagnon & Simon, 1973). In recent years, socio-ecological analyses have proved useful in making sense of approaches that affect youth health (Sallis, Owen & Fisher, 2015). Arising from the research findings in this thesis a socio-ecological framework of porn literacy is proposed as a vehicle to understand the individual, interpersonal and community factors that impact

on how porn literacy interventions for young people can be further developed.

Description of the Socio-ecological Framework for Porn Literacy

Micro, meso and macro influences on porn literacy are illustrated by three concentric semi-circles. Each semi-circle or layer, while having its own unique impact on porn literacy development, is not static and can influence its adjacent layer in a bidirectional manner. The innermost circle represents the “porn literate” individual who possesses sexual knowledge and critical pornography engagement skills. The second layer represents key relationships with regard to the development of these porn literacy skills; the role of educators and parents. The third layer represents national policy that impacts guidelines and legislation that shape how porn literacy initiatives are developed and implemented. Dashed lines represent bidirectional relationships between each layer, for example policy makers with educators, and educators with youth. Knowledge can be exchanged from policy makers to educators, and educators have the capacity to contribute to policy development.

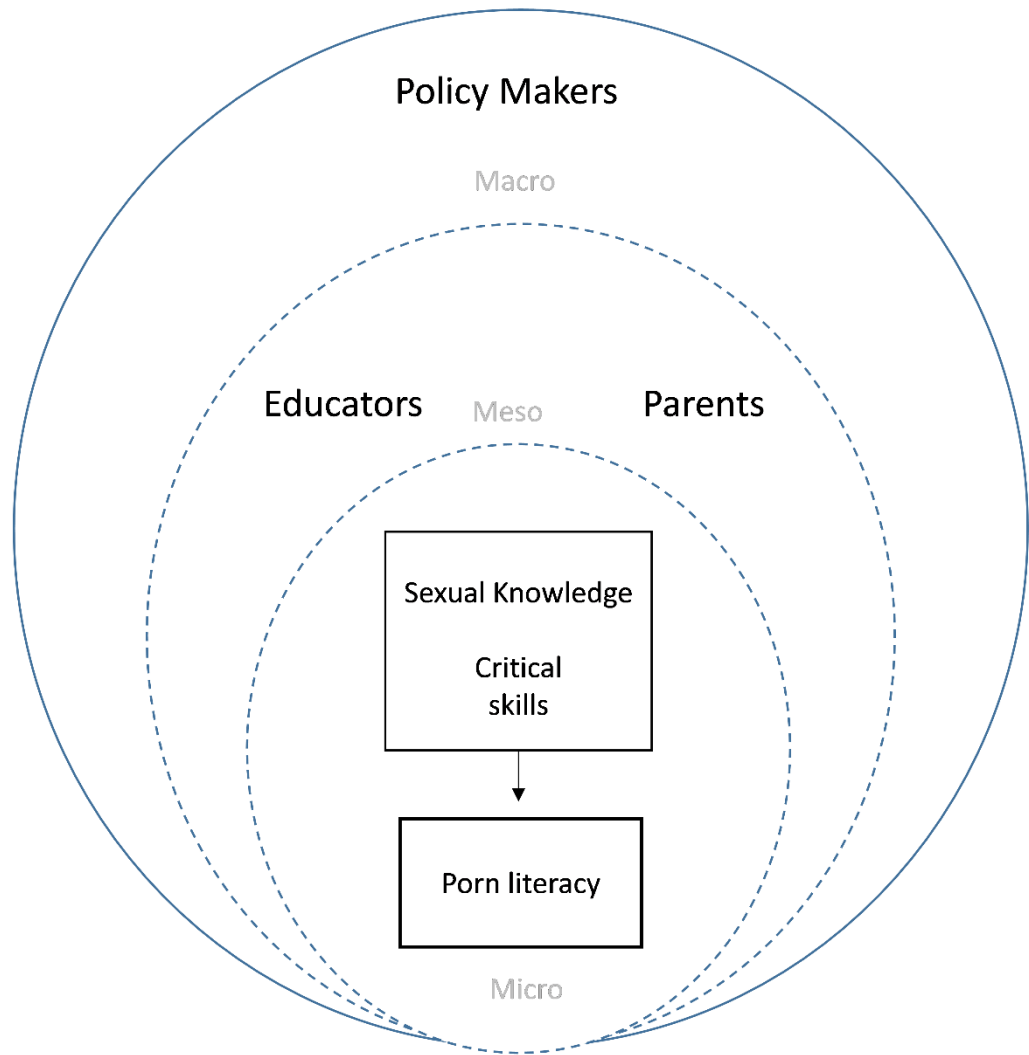


Figure 3. *Socio-ecological framework for porn literacy*

Micro level

The centre of the framework represents the porn literate young person who possesses sexual knowledge and critical pornography engagement skills. Porn literacy should begin with a discussion of the ubiquity of pornography and adolescent’s curiosity about sexuality should be acknowledged. However, before youth participate in porn literacy initiatives a strong base of sexual health knowledge is needed. At the micro level porn literacy interventions can utilise different strategies involving the

promotion of knowledge and critical engagement skills to understand and challenge the key components highlighted by the 3AM that impact upon the acquisition, activation and application of pornography scripts (Wright, 2011).

Knowledge. A good understanding of sexuality and sexual behaviour must precede participation in porn literacy interventions. Indeed, we cannot discuss the production, portrayal, and impact of pornography without having a comprehensive understanding of safe sex, sexual orientation, body aesthetic, sexual functioning, sexual pleasure, consent, sexual behaviour and the law. This information is crucial for young people to obtain so they have skills to distinguish between realistic and unrealistic outcomes related to these topics.

Critical engagement skills. All of the components from the widely adopted definition of media literacy, to “*access, analyse, evaluate and create messages in a variety of forms*” (Aufderheide, 1993, p. 6), may not be appropriate in the context of porn literacy for adolescents.

Access. Access in terms of non-sexual media literacy refers to the provision of media to all people (Livingstone, 2004). It is the unequal distribution of media access to individuals around the globe that contributes to inequality in education (Kellner, 2002). Access to pornography is not necessary for porn literacy. Unlike with other media forms, access to pornography is purposefully limited because of its content and the age restrictions assigned. Therefore, exposure to the phenomenon of interest in porn literacy – pornography – may be different for each individual. Individuals may directly access pornography through intentional or unintentional viewing, or indirectly access pornography through peer conversations, or media discussions in print, on television or online. Therefore, important distinctions need to be made regarding access (in the sense of direct or indirect exposure or influence) and use (in terms of purposeful engagement) in the context of porn literacy (Livingstone, 2004). Individuals can be supported in understanding the production and presentation of pornography without being directly exposed to it. This

would be helpful to enable young people to interpret or actively refute peer knowledge that is informed by pornography viewing. It is also important to note that, in this sense, porn literacy interventions will differ from other media literacy programmes as the explicit nature of pornography renders the content unsuitable to for consumption in a classroom setting.

Analysis. The development of “*an appreciation, perception, understanding and analysis of media texts*” (Federov, 2003, p. 12) is central to media literacy. In this context, porn literacy can facilitate youth to understand pornography production. Buckingham (1998) adapted Bazalgette’s (1989) work to develop a framework for developing media analytical skills that refer to media agencies, categories, technologies, languages, audiences and representations (Buckingham, 1998). This framework also has relevance to analytical skills obtained through porn literacy interventions.

First, the role of the pornography media agencies is important to explore in order to understand who is behind the production of pornography messaging. This is crucial to understanding the motivation behind production, working conditions, and ensuring accountability on the part of the pornography industry. Second, understanding pornography categories and means of categorisation is important regarding our comprehension of how people in pornography are depicted, and what this may lead people to think about people in these categories in wider society. How pornography represents different groups of people may impact understanding regarding the roles that women and men assume in sex, the relationships between such portrayals and the reality of peoples varied experiences, the portrayal and stereotyping of LGBT+ people, and the potential consequences of such portrayals (Buckingham, 1998).

Third, an understanding of pornography ‘technologies’ involves comprehension of what goes on ‘behind the scenes’, pornography as an industry and work environment, ethical and unethical conduct, including treatment of workers, agency and autonomy of practice, as well as industry attrition and retention. This also incorporates an understanding of innovative

technologies in pornography such as virtual reality pornography. Fourth, analysis of pornography content involves an understanding of the meaning and intention behind pornography messaging, and an understanding of language use in pornography and its implications. Finally, youth require an understanding of the development of pornographic material for, and its impact upon different pornography audiences. This includes knowing how pornography audiences are reached, content demand, and its reflection (or lack of) on wider social norms regarding sexuality. It also relates to how people make sense of pornography, and the range of experiences that might occur from viewing the same pornography material. It also includes an understanding of age restrictions, and sexual development, particularly about how pornography use at a younger age may influence beliefs or understanding about sexuality in comparison to that of an older person.

Evaluation. The critical understanding of pornography is part of the media literacy capacity to evaluate pornography as a media product. Evaluation of pornography in porn literacy may involve distinguishing between pornography representations of sexual activity and one's own personal sexual values and desires, as well as drawing distinctions personal perspectives and beliefs held about sexuality by parents and throughout the community. Evaluation also involves the capacity to identify ethically produced content, involving a critical awareness of the impact of consumer use and demand on the production of content. Porn literacy should support young people to question the "*authority, objectivity or quality*" of pornography in its depiction of the "*aesthetic, political and ideological*" (Livingstone, 2004, p. 7). This level of questioning is consistent with critical health literacy, as it raises awareness with a view to changing personal behaviour and challenging accepted norms. It raises questions for young people to resolve in relation to how pornography representations enmesh with cultural equality, ideology and values. This point also helps illustrate the choice that porn literacy intervention developers have in adopting a health literacy approach to seeing porn literacy as having the purpose of harm reduction versus a media literacy approach with the intention of autonomy and understanding (Buckingham, 1998).

Content Creation. Not all media literacy interventions involve the creation of media (Livingstone, 2004). There is evidence to support young peoples' increased understanding of media if they participate in media production themselves (Hobbs, 1998; Sefton-Green, 1999). However, porn literacy interventions will differ significantly in this regard from other media literacy aspirations, as minors should not be encouraged to produce their own content. However, content production, in the sense of sharing explicit images with partners and the non-consensual sharing of those images, and the legal implications of such, is important to discuss in this context. Through sexting and sharing pornography, young people are indeed involved in the production of sexually explicit media. Approaching this issue is important for porn literacy in supporting knowledge and skills young people need to become porn literate adults who could choose to participate in the production of pornography as adults. In this context, their foundation of literacy may help to enable greater access to ethically produced content, improve the lives of pornography performers, and contribute to positive sexual outcomes by producing pornography that is a valuable and reliable source of information about sexuality.

Meso level

In considering porn literacy interventions, it is critical to consider how and in what format porn literacy skills would be developed. In this sense, the key issue is one of feasibility of delivery of an intervention in one or more appropriate settings. For example, the implementation of porn literacy interventions at home and in school. Our findings show that parents and educators should fulfil different roles in this regard with schools providing more detailed information that parents may not be comfortable discussing with their children. Parents and educators play a key role in shaping of cultural scripts (Gagnon & Simon, 1973), as they provide guidelines regarding acceptable and non-acceptable behaviour. Although, cultural scripts do not always dictate the behaviour a young person will engage in, they can provide clear guidance on moral standards that affect the application of pornography scripts (Wright, 2011).

Parents. Most parents do not want their child to have access to pornography (Family Online Safety Institute, 2014; Livingstone & Helsper, 2008). However, most parents also believe in the value of the internet as a learning tool in their children's lives (Buckingham, 2002; Livingstone & Bober, 2006). Balancing unwanted and wanted outcomes, as evidenced by this research, is a challenge for parents. Particularly as children obtain sophisticated expertise in media use. To support positive sexual health development and to counteract potentially negative learning from pornography parents indicated that, if supported, they would feel comfortable contributing to the development of their child's porn literacy skills. This role included acknowledging the child's curiosity about pornography, and awareness of pornography. This was believed by participants in Study 4 and Study 6 to be paramount to reducing shame and embarrassment and facilitating future discussions about sexuality. Parents required guidance to discuss distinctions between sex in porn and sex in real life, the pornography industry and its scripted nature, and knowledge of how to provide support their child through any negative experiences with pornography. The one-to-one dynamic of parent-child conversations about pornography has value as parents can provide information that will not be influenced by their peer group. They can also provide supports that are beyond the remit of the school, like imparting their morals and values regarding sex and pornography unto their children.

Educators. Porn literacy could be incorporated into the wider RSE curriculum in school and be delivered by teachers and external sexual health education organisations. A core element of porn literacy is the facilitation of critical thinking skills. Allowing youth to explore and understand a variety of pornography beliefs and experiences is key to this process. The school context facilitates group discussions and sharing of opinions, therefore supporting the development of critical thinking skills. Because of the variety of pornography that is accessible to youth this approach ensures that young people have the foundational skills to navigate any types of content they engage with, as well as becoming more ethical consumers. This research identifies reducing shame, supporting critical thinking, and exploring

several topics as primarily important in promoting porn literacy. Among the core topics identified, both parents and young people articulated conflicting beliefs about the positive and negative outcomes associated with each concept. These discussion points provide the necessary basis to explore the health supporting aspects of pornography use as well as the potential negative implications.

The implementation of general media literacy skills teaching in schools will also support youth in learning and using these skills throughout their early lives, which can then be developed in a sexual context through porn literacy. Only by supporting youth to understand others' perspectives can they develop an understanding of pornography that goes beyond their own experience. This can help people to reflect on how their values and decisions may affect their future partners. Unlike with parents, educators should provide objective information that is not impacted upon by the values or morals of the facilitator. To be effective, educators must have a thorough understanding of the experiences, motivators and impact of pornography on young people's lives. It is important for teachers and parents to know that it is normal for adolescent boys and girls to be curious about both sex and pornography use in order to challenge stereotypical roles that are often maintained by educators and practitioners (Palludan, 2007; Einarsdottir, 2008). Therefore, teacher training needs to be supported in this area and funding be made available to support external organisations to cover additional content that may fall outside of the remit (or comfort) of the school teacher. In addition, online interventions, as well as one-on-one parent discussion, allow youth to discuss and learn about pornography in their own time and in private. These techniques are also low-cost, and can feasibly be incorporated into existing sex education programmes.

Nevertheless, in the case of both the home environment and the schools setting, it should be acknowledged that there is currently very little development of the skills and capacity that would be required to implement porn literacy interventions. While both settings are important parts of the ecology that afford the potential to be supportive learning environments about pornography, there are preparatory steps required prior to introduction

of porn literacy interventions. In general, the comfort, skills, and knowledge of parents and teachers require a good deal more support before they are in a position to use the potential of their position in the sexual health ecology of young people to support porn literacy.

Macro

One important step to support the development of the network of preparedness of parents and schools is to access resources and support for porn literacy interventions at the level of policy, through government agencies, the media and in societal discourse more generally. Taking a socio-ecological approach, there needs to be acceptance and support at the macro level in order for porn literacy intervention to become accepted and supported. Considering the age of which many Irish youth first engage with pornography, policy initiatives should strive to implement porn literacy interventions in early adolescence. Such interventions should accompany and be a mainstream component of comprehensive sexuality education.

Recommendations for Policy. Responsibilities regarding porn literacy and pornography education must be apportioned across educators, parents, and adolescents themselves. A challenge to the successful distribution and implementation of these roles rests upon the degree of knowledge and confidence that an individual possesses and beliefs about their own capacity to fulfil such roles. Policy that emphasises porn literacy training and the development of resources for parents and educators is vital to achieving this. The challenges faced by parents in addressing pornography suggests that parents need additional support to start these conversations. Parents are often overlooked in this regard. However, parents support for porn literacy is essential to successful implementation in schools. Supporting educators and parents to approach porn literacy with young people can create an environment that fosters and supports current and future conversations, not only about pornography, but also about sexuality more generally.

Recommendations for Intervention Developers

Conceptual foundation. The conceptual foundation and definition for porn literacy should be clearly outlined by intervention developers. This is necessary to understand the aims and remit of the intervention, as well as evaluation strategies and anticipated outcomes (Potter & Thai, 2019). In the context of general media literacy, several definitions exist, however, porn literacy is relatively new, and our understanding of what porn literacy is, or could be, continues to develop. Using a standard definition of porn literacy is therefore important and is crucial to establishing content validity. Validity is essential for determining the quality of the intervention through research (Chaffee, 1991). In other words, how well a measure captures and effectively assesses all aspects of a concept, in this case, porn literacy. As it stands, we cannot conduct meta-analyses of porn literacy interventions because there is no shared meaning as to what porn literacy aims to achieve. For example, many interventions aim to increase critical thinking skills, however, critical thinking in the context of porn literacy, has been conceptualised as increasing scepticism, broadening perspectives, as well as changing beliefs (DeFur, 2014, Rothman et al., 2018). Therefore, there is a need for clarity regarding which components are being assessed and what they mean.

Tests of porn literacy effectiveness can explore each component of the definition, indeed educators may choose to focus on one element of the definition in the development of their programmes. This ensures that porn literacy interventions can be evaluated across countries and youth groups, and provide information about which components of interventions are most and least effective. To achieve this each of the key constructs in the definition must be defined, and each domain within that construct defined too (Chaffee, 1991). For example porn literacy may be broadly defined as the promotion of two constructs: skills and knowledge. Skill domains relate to media literacy and critical consumption, and may include analysis, understanding, evaluation, or, in the case of adults, content creation. Knowledge may refer to general sexual health, pornography production, pornography content, pornography research and its impact, the law, and

other health literacy concerns or behavioural outcomes associated with pornography use. Each of these components must be defined and elaborated upon. For example, evaluations may therefore seek to explore whether participating in porn literacy interventions leads to individuals rejecting harmful behaviours that are portrayed in mainstream pornography, and adopting the positive communication skills of talking and mutuality relevant to consent – i.e. consistent with the WHO sexual health dimensions.

Empowerment not persuasion. Porn literacy in the general population of youth should not be about changing beliefs from one ‘unacceptable’ or undesirable belief to an ‘acceptable’ one (Potter & Thai, 2019). Evaluation strategies should therefore endeavour to explore “*divergence rather than convergence*” (Potter & Thai, 2019, p. 53). Interventions should support individuals to think for themselves, and come to their own conclusions, rather than measuring the extent to which an individual’s beliefs have been changed. A common critique of general media literacy interventions is that empowerment language such as “enhance critical thinking skills” is often used, however, interventions more often exhibit intervention design decisions that reflect that of persuasion (Potter & Thai, 2019). Components of both empowerment and persuasion approaches can be utilised in porn literacy. However, intervention developers must be clear about which components they aim to address, and how.

Regarding persuasion it is important for youth to understand the unacceptable nature of non-consensual sex, for example, and intervention facilitators should be clear about the unacceptable nature of non-consensual sex in the ‘real world’. As such, another outcome that interventions designers may aim to achieve is reduced beliefs about the acceptability of non-consensual sexual depictions in pornography. One might be compelled to try to convince young people that such portrayals are “bad” and deter them from watching this type of content. However, individuals should be empowered to understand sexual nuances with regard to violence and providing opportunities to explore negative and positive dimensions of sexual aggression. This may include the discussion of particular examples or

context in which aggression is acceptable and when it is not. In this instance, this could involve recognition that, in isolation, individual BDSM practices or “rough sex” could be defined as violent. Yet there should be agreement between sexual partners about the level of aggression they feel comfortable with (Hébert & Weaver, 2015). This also provides opportunities for young people to explore the importance of sexual communication and consent, sexual responsibility, sexual safety, respect and resilience, identifying coercive, non-consensual and illegal sexual practices, and the identification of content in which pornography performers are treated well. Evaluations in this context may therefore seek to explore individual understandings of violence and aggression, sexual communication skills, capacity to differentiate between rape or sexual violence and aggressive, but consensual sex, as well as and the legal implications of rape and sexual violence.

Porn literacy should facilitate the development of knowledge and skills to increase confidence and abilities in critiquing pornography, not accepting the portrayal of sex in pornography as a standard or necessary to have as part of a fulfilling or satisfying sexual relationship. Thus, successful porn literacy interventions will highlight a range of opinions, supported by evidence and logic, not how many people agree or disagree with a particular point of view (Potter & Thai, 2019). Such skills will empower youth to determine which pornography messages are useful, which are problematic, and to make decisions about their sexual lives that match their own values and better meet their personal and relational needs. As such, youth may look to pornography to gain ideas about new sexual practices, however, they will have the skills to evaluate whether they want to try a behaviour and understand the implications of the behaviour. They will know how to conduct the behaviour in a safe way, have the skills to communicate their desire to replicate it, and understand and accept their partners decision to accept or decline an invitation to replicate it.

Defining pornography. Pornography is not a primitive concept (Potter & Thai, 2019; Chaffee, 1991). In other words, there may not be a common meaning among individuals as to what pornography means. An

example of this among scholars is that many definitions that have been used over the past decade to define pornography in the research literature. Individual motivations for pornography use, experiences with pornography, beliefs about pornography, and sources of pornography content differ (Attwood et al., 2018; Smith et al., 2015). Therefore, in order to avoid assumptions about the meaning of pornography among young people, a definition of pornography must be provided at the outset of interventions. Definitions may be broad but should be based on research evidence regarding understanding of the concept of pornography among young people (or the target group). Recently, scholars have recommended that definitions of pornography should be distinguished from personal content that has been shared non-consensually, and must acknowledge the context of pornography use (Ashton, McDonald & Kirkman, 2019). Ashton et al (2019) propose the following definition “*Material deemed sexual, given the context, that has the primary intention of sexually arousing the consumer and is produced and distributed with the consent of all persons involved*” (p. 2) Similarly, Kohut (2014) highlights how young people’s understanding of pornography centres around the depiction of sexual behaviour and nudity. Definitions and operationalisations should align with such understanding.

Defining porn literacy. Porn literacy, like media literacy is also not a primitive concept (Potter & Thai, 2019; Chaffee, 1991). Therefore, definitions of porn literacy must be presented. Interventions may cover certain components of any definition, however, they should be clear about which components they aim to address. Adapted from several health literacy and media theorists’ definitions (Buckingham, 2008; Nutbeam, 2000) we present the following definition of porn literacy for adolescents “*Porn literacy contributes to positive sexual health outcomes and encompasses an understanding of and capacity to analyse and evaluate pornography content*”. As the field of porn literacy research develops, porn literacy intervention developers and evaluators should make evidence-informed judgements about the value of all elements of porn literacy initiatives. For example, Study 3 highlights the perceived educational value of pornography regarding knowledge about sexual behaviour and body aesthetic, as well as

pornography as a means of exploring one's sexual preferences. Porn literacy may therefore pay particular attention to these topics because of the perceived 'usefulness' of pornography regarding sexual knowledge acquisition with regard to these topics.

Porn literacy and Healthy Sexual Development

Aspirations for porn literacy can support the fifteen domains for positive sexual development identified by McKee and colleagues (2010) in a number of ways. First, porn literacy can facilitate the development of critical understanding related to the portrayal of violence and coercion and an understanding of the complexity of sexual consent. In this context, it may also facilitate the development of an understanding of one's own boundaries, and skills in communicating such boundaries with their partner, resilience in face of rejection, and varied perspectives related to the acceptability of different sexual behaviours. Porn literacy can also signpost supports for individuals who feel that pornography use is having a negative impact on themselves or their partners. Porn literacy can influence ethical consumption of pornography, enable people to identify verified, authorised and ethical content, where actors decide which behaviours they choose to do on screen, are paid the same regardless of their race, gender, sexual orientation or ethnicity.

Knowledge and skills acquired through porn literacy can contribute to a lifelong learning process, whereby individuals obtain a deeper understanding of their own sexual values, and that of wider societies. This can help increase individual sexual confidence through knowledge, and facilitate communication skills not only with sexual partners, but also with health professionals, increasing STI testing and earlier reporting of sexual difficulties. Indeed, there is some evidence to show that sexual health promotion interventions are capable of fulfilling these goals (Mavedzenge, Doyle & Ross, 2011; Paul-Ebhohimhen, Poobalan & Van Teijlingen, 2008). Porn literacy can facilitate an awareness that sex can be pleasurable, but also that it does not have to be, increase knowledge regarding sexual functioning, and that sexual curiosity, experimentation and enjoyment are not shameful (McKee et al., 2010; World Health Organization, 2006). Porn literacy can

also foster a deeper understanding that parental and societal values may differ significantly between cultures and families, supporting inter-generational understanding (Okami, Olmstead & Abramson, 1997).

Participation in porn literacy initiatives will support youth to “develop and express an ethical orientation to sex” (Lamb, 2010, p. 82). This would involve having the capacity to understand the ethical positions that their values and choices reflect, as well as how their decisions affect not only themselves, but also their partners. In this context, porn literacy can support positive youth development and an understanding of the rights that youth possess as sexual citizens. This will foster an understanding of equitable treatment in relationships and may reduce discriminations based on sexual and gender identities. Through such discussions, youth can be supported to critique moralities presented in pornography but also in the wider media (Lamb, 2010). These skills have the potential to influence not only what young people decide they want to do in their sexual lives and how to communicate that with their partner(s), but what constitutes ethical behaviour, the capacity to identify whether ethical and equitable views toward sexuality are reflected in societal values. As a result, youth may feel driven to engage with their community to improve outcomes for other youth.

Recommendations for Future Research

The findings highlighted in this research, open up several questions worthy of further investigation. Study 1 is the first to quantitatively assess the link between satisfaction with school-based sex education and the use of pornography for educational purposes. It is important to note that a majority of participants reported being unsatisfied with their sex education in school. This link should be further explored among a more diverse population of youth who have more positive experiences of sex education, possibly in other jurisdictions. Future studies should also endeavour to explore a broader range of contexts in which young people acquire information about sex and sexuality.

The new measurement tool developed in Study 2 should be assessed as a proxy for actual pornography viewing. Scripted versions of existing

pornography videos should be developed to see if pornography vignettes can be used in place of pornography to assess pornography content choices. More detailed written vignettes should also be developed to assess whether subtle differences identified by the reader contribute to a change in their comfort or preference for these vignettes.

The newly developed SIPS scale should be further assessed for construct validity among other samples. The measure should be used to further explore the perceived quality of sexual information provided by pornography. The SIPS should also be used to assess the relationship between learning about sex from pornography and outcomes related to personal and interpersonal relationship satisfaction, body and genital self-image, sexual knowledge and confidence. This may be particularly the case among LGBT+ youth who regularly report that pornography acts as a useful source of information regarding their sexual identity formation (Arrington-Sanders et al., 2015).

The proposed model for porn literacy identified in this research should be used for intervention development and evaluation. Longitudinal research which explores what individuals learn about pornography, sexuality and the critical literacy skills acquired is need. The role of parents in educating youth about pornography should be further investigated to understand parent and child experiences of these conversations. In addition, educational resources developed to support parents in talking about pornography with their children should be evaluated. Researchers need to develop measures to evaluate future porn literacy interventions. This may involve adapting existing measures of critical thinking. Such a process may be part of a staged evaluative approach where individual knowledge is assessed first, and then how that knowledge contributes to increased analysis, understanding and evaluation skills. Evaluation efforts must be clear about whether they seek to assess effectiveness of new skills through actual testing the critical thinking skills or through an individual's belief about their capacity to think critically. Indeed, if an individual is not confident in their ability to think critically, critique media, or communicate with their partners they may be less likely to do so (Bandura, 2009).

Individual beliefs about their own abilities may also enhance youth engagement in the curriculum and their desire to learn. However, the two are not the same and should be separately assessed as such. The challenge of assessing actual performance of skills may be greater, requiring additional time, resources and expertise.

Study Limitations

Several strengths and limitations of this research warrant discussion. The methodological limitations of quantitative methods used in this research are of importance. Throughout the quantitative studies, convenience samples of university students were recruited. Education level, economic circumstances, degree of sexual experience, and voluntary participation are among some of the primary reasons why the findings based on these data may not be representative of other young people (Henrich, Heine & Norenzayan, 2010). However, third level education is also extremely common in Ireland, with a large majority of school leavers enrolling in third level education (Byrne, 2018). In addition, the findings are unlikely to be reflective of older adults in Ireland for a number of reasons. Ireland is a country with a sexually conservative past. In 1998 a cross-national comparative study of attitudes towards sexuality showed that once religion was controlled, Irish public opinion regarding sexual expression moved closer to the norms across the UK and USA (Scott, 1998). Today, as religious affiliations in Ireland continue to dissipate, while large proportions of Americans, for example, retain religious ties the representativeness of our findings may differ more between Irish and American youth, but become more similar to those on mainland Europe who exhibit more sexually liberal beliefs. This is likely to limit the representativeness of our findings to more sexually conservative populations. Youth today are more likely to have had access to pornography throughout adolescence, and have grown up in a time where pornography use is more socially acceptable than in the past (Carroll, Padilla-Walker, Nelson, Olson & Madsen, 2008). In addition, youth are less likely to have strong ties to religion, which may shape sexual beliefs and attitudes towards pornography. Although efforts were made to include a greater proportion of LGBT+ youth in some of the qualitative work, the

quantitative studies were comprised of predominantly heterosexual-identified youth. Pornography use patterns and experiences should be explored among larger samples of LGBT+ youth as the findings identified here may not be reflective of their experiences. In addition, an even smaller percentage of non-binary and transgender identified youth participated and this research has not been able to highlight issues that are specific to those groups.

Participants provided self-report answers and relied on subjective interpretations and therefore may have interpreted the response options differently. Studies 1 and 4 also relied on participants retrospective accounts. We cannot validate this information with an objective measure at the current point in time. Nor can we guarantee that the suggestions made will be reflective of all the porn literacy educational needs of adolescents. This will need to be explored in future studies. The current research also relied upon strict definitions of pornography use. Pornographic magazines and other non-Internet-based sexual material were not considered. The inclusion of more traditional pornography, such as magazines or erotic novels, may have altered the findings.

The study of sensitive topics comes with its challenges. This raises measurement difficulties and issues regarding the social desirability of participant's responses, particularly in qualitative research. The participatory method employed in Study 4 helps to alleviate some concerns about social desirability, as it provides a platform for youth to anonymously provide their data. The researchers background in sex education may have influenced parents discussions by being more forthcoming, or it may also have prevented parents from sharing their opinions. In addition, because this study was conducted in Ireland, parent's responses may not be generalisable across parents from more liberal countries. A strength of this research is the relatively large and diverse sample of youth involved in the qualitative research. To the best of the authors' knowledge this is the first study to provide a youth-centred, evidence-based approach to the development of porn literacy interventions. However, given that the study was qualitative and participation was voluntary, the findings from Studies 4, 5 and 6 cannot

be generalised. Researcher subjectivity or bias can also be introduced during qualitative data analysis. The participatory component of the research mitigated against this as the participants themselves produced, analysed and presented their own data. Themes identified during analysis of Studies 4, 5 and 6 may have been influenced by researcher subjectivity. However, efforts were consistently made to avoid this.

Conclusion

Despite the prevalence of concerns about youth pornography engagement, educational efforts regarding pornography are underinvestigated. Pornography use is prevalent among young people. There is therefore a need to support positive youth sexual development in a world where pornography has become an important part of youth sexual socialisation. The impact of pornography on the sexual learning of young people is poorly understood. Utilising a variety of methodologies, this research endeavoured to explore how youth can best be supported in understanding and navigating online pornography. Results show that an integrated, hierarchical approach to youth-centred porn literacy in school and at home may be most effective.

Parents highlighted that a primary barrier to parent-child conversations was their own lack of information about pornography and how to appropriately address the topic. Parent recommendations to support parent-child conversations centred on having practical information about how and when to start conversations, what to say and how to provide support to their child. The influence of pornography on young people's learning about sex highlighted how pornography is a contributor to young people's knowledge, particularly regarding body aesthetic and sexual behaviour, but that it also provides a means for youth to explore their sexual fantasies. Positive and negative outcomes associated with pornography use were highlighted both by the young people and parents who participated in this study. These findings highlight how porn literacy should therefore strive to support youth who have a variety of experiences and support parents to talk about pornography with their child at home. The research also illuminates key targets for sexual health interventions and provides

important insights into the experiences of pornography use among young people living in Ireland.

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Appendices

Appendix A – Student email invitation (Study 1 and Study 2)

Dear student, my name is Kate Dawson. I am a PhD student with the School of Psychology. I am conducting sexual health research around porn, sexual consent and sex education. I am inviting students who are over the age of 18 to take part in my research by filling out this anonymous online survey.

In this questionnaire you will be asked to read short, sexually explicit porn scenes, answer questions about your sexual history, sex education and attitudes toward sexual experiences. Please be advised that some questions or porn scenes described may cause some participants distress. You can withdraw your participation at any time and can skip any question that you do not want to answer.

Please contact me at the email address below if you would like some more information about the study.

<https://www.surveymonkey.com/r/PS7JWSY>

Thank you,

Kate

Email: kate.dawson@nuigalway.ie

Appendix B - Student information sheet (Study 1 and Study 2)

Purpose of the project

This research is being done as part of my PhD. I want to look at the relationship between porn, sex education and sexual consent.

What will you be asked to do?

If you decide to participate in this project you will be asked to complete an anonymous online survey. You will be asked to read short, sexually explicit, written porn scenes. You will also be asked to answer questions about your previous sex education and to respond to questions around attitudes to sexual communication and consent. Your participation is completely voluntary. You may participate to your level of comfort and can stop at any time.

What are the risks?

Participation is completely voluntary. You can skip any questions that you do not want to answer and can stop at any time. Written non-consensual porn scene will feature within this questionnaire. It is possible that some

people may be distressed by reading these scenarios. We will provide Information on college support services for you just in case.

What are the benefits?

At the moment we don't know very much about porn and the reasons that people watch it. So if you take part this will help to answer some of these important questions about pornography.

All information collected will be used only for my research and will be kept confidential. There will be no connection to you specifically in the results or in future publications of the results. Your responses will be kept confidential and will only be accessible by the researcher.

Withdrawing from the study

The data that you submit (by selecting submit at the end of the page) will be used in research for analysis. Information that is not submitted will not be used in analysis.

What if you have questions?

If you have any question regarding this project and/or survey, please contact me Kate Dawson, or my academic supervisor - Dr. Pádraig MacNeela.

Kate Dawson – kate.dawson@nuigalway.ie

Dr. Pádraig MacNeela – padraig.macneela@nuigalway.ie

Appendix C – Pornography Vignettes (Study 2)

Participants were asked to read each of the scenes below and report how comfortable they would feel in watching the porn scene described using the following rating scale:

Very uncomfortable

Uncomfortable

Neither comfortable nor uncomfortable

Comfortable

Very comfortable

Chris and Sarah (Non-consensual manual sex scene)

Chris is a friend of Sarah's brother, Rob. One evening the three are watching TV. Rob gets up and leaves the room to take a phone call. Chris looks at Sarah, moves closer to her and leans in to kiss her. Sarah laughs and pushes him away playfully. Chris starts to rub Sarah's thigh, takes her hand and moves it towards his crotch. Sarah blushes.

Nick and Alex (Non-consensual vaginal sex scene)

In this scene Nick has invited Alex back to his apartment. Nick goes to the kitchen to make two cups of coffee. When he returns to the living room, Alex is lying naked on the sofa. 'What are you doing', Nick asks, seeming

slightly shocked. She begins to unbuckle Nick's belt and stroke his penis until he gets an erection. She guides him by the arm, down onto the sofa and straddles his lap, slipping his penis inside her vagina. 'I don't know if we should do this', says Nick.

Samanta and Dan (Consensual digital sex scene)

In this porn scene, Samantha and Dan are alone in a bedroom. They start kissing and Dan begins to run his hand up Samantha's thigh; she smiles at him and giggles. Dan whispers in her ear that he wants to touch her body. Samantha nods her head. Dan continues to open her trousers and inserts his finger into her vagina. "That feels really good", murmurs Samantha.

Dan and Abby (Consensual oral sex scene)

In this porn scene, Daniel and Abby are passionately kissing in a bedroom. Abby pulls Daniel's belt, undoing the buckle and buttons, pulling his erection out of his trousers. 'Do you like that', Abby asks. 'I do', he replies. 'Do you want me to keep going, then', ask Abby. Daniel nods. She puts his penis inside her mouth and gives him oral sex.

Rebecca and Jack (Consensual vaginal sex scene)

In this porn scene Rebecca and Jack are watching a movie, on the sofa. Jack begins to caress Rebecca's thigh. She smiles, leans in, and pulls him closely to her, while opening her legs. Jack raises her skirt and notices that she is not wearing any underwear. Jack removes his trousers. He has an erection. Rebecca guides Jack's penis slowly inside her vagina.

Jess and Tom (Non-consensual digital sex scene)

In this porn scene Jessica and Tom are sitting on a sofa, flirting. Jessica begins to run her hand over Tom's chest, kisses him deeply and moves her hand down further and strokes his penis, through his trousers. Tom seems hesitant, "I'm not in the mood", but Jessica continues to kiss him and slides her hand inside his boxer shorts and pulls his penis out. Despite his protestations, Tom continues to get an erection.

Dee and Jack (Non-consensual oral sex scene)

In this porn scene, Dee and Jack are naked in a bedroom. Dee is kneeling on the ground, sucking Jack's penis. Jack then reaches down and winding her hair around his fingers, pulls Dee off her knees, pushing her backward on to the bed. Jack kneels down in front of her. Dee is hesitant, 'Actually...' Dee says, but before she could object, Jack puts his face in between her thighs and kisses her vagina. Jack pulls back, looks at Dee and smiles, saying, 'That was so nice, I've wanted to do that for such a long time'.

Beth and Sandra (Non-consensual oral sex scene)

In this porn scene, Beth and Sandra are standing at the front door of an apartment block. Both are acting flirtatious. Beth pulls Sandra in through the door and upstairs to her bedroom. 'I've never gone this far with a girl before', says Sandra. 'Don't worry, I'll show you what to do', Beth replies. Beth kisses Sandra, widening her mouth and pushing her tongue into Sandra's mouth. 'Can we slow down for a second', says Sandra. Beth smiles, 'Trust me, I know what I'm doing'. She summons Sandra to the bed, climbs on top of her and sits on Sandra's face.

Kelly & Matt (Non-consensual anal sex scene)

In this scene, Kelly and Matt are naked in a hotel room. Kelly is sitting on top of Matt, straddling his penis. 'What would you like to do to me', Kelly asks. Without answering, he pulls out, flips her onto her stomach, and pushes his penis inside her anus. Kelly lets out an aching moan, catching her breath in her throat. Matt, putting his hands on Kelly's hips, thrusts harder, saying, 'you feel so good'.

Matt and Sarah (Non-consensual vaginal sex scene)

Matt and Sarah are in bed. They begin to kiss, nuzzling into each other's necks. Without saying anything, Matt quickly pulls her on top of him and pushes his penis inside her vagina. Sarah gasps, digging her nails into his skin, 'Ouch!', Sarah shouts. Matt laughs and pulls her closer to him.

The following vignettes were categorised as representing scenes in which the depiction of sexual consent was unclear and were not included in the analysis.

Maria and Tom (Unclear vaginal sex scene)

Maria has hired Tom to fix a fault in her kitchen. As Tom is working, Maria tiptoes up behind him, slipping her arms around his body and runs her hand down his chest. Tom quickly turns around, 'What do you think you are doing', he asks. Maria turns around, pushing her backside into his crotch. Tom pushes Maria's jeans down around her hips and slips his penis inside her anus. "Keep going?" he asked. She murmured her approval.

Max and Meghan (Unclear anal sex scene)

In this scene Max and Meghan are in the shower together, washing each other's bodies. Max reaches down, grabbing Meghan's thigh, pulling her toward him. Meghan moans, pressing her lips to his. Max, kissing her fiercely, holds both Meghan's arms behind her back. Meghan, without any determination, moans and tries to tug free. Max, then bending her forward, pushes his penis inside of her vagina, with forceful thrusts.

Appendix D - Student email invitation (Study 3)

Subject: What do we learn from porn – a survey

Text: Dear student, my name is Kate Dawson. I am a PhD student in the school of psychology. I am conducting sexual health research, which seeks to understand what people have learned about sex from pornography. I am inviting students who are over the age of 18 to take part in my research by filling out this anonymous online survey. Please be advised that most of the questions are about sex or pornography and may cause some participants distress. An information sheet, which includes all necessary information about participating in this study, is presented on the first page of the questionnaire. Please read this information carefully.

Support service information will be provided to all participants.

Here is the link to the survey:

<https://www.surveymonkey.com/r/HLVNSX3>

Please contact me at the email address below if you would like some more information about the study.

Thank you,

Kate

Email: kate.dawson@nuigalway.ie

Appendix E - Study information sheet (Study 3)

Purpose of the project

This research is being done as part of my PhD in Child and Youth Research. The aim is to explore what people learn about sex from watching porn.

What will you be asked to do?

If you decide to participate in this project you will be asked to complete an anonymous online survey. Your participation is completely voluntary. You may participate to your level of comfort.

What are the risks?

Participation is completely voluntary. You can participate to your own level of comfort and can leave at any time. Statements about explicit sexual behaviours will be presented in this study. You can withdraw from the study at any time. Information on college support services will be provided in the event that you were to be distressed by any of the issues discussed.

What are the benefits?

At the moment we don't know very much about what people learn about sex from porn. So if you take part this will help to answer some of these important questions about pornography. The findings of this study will help to develop a porn education intervention that will be rolled out as part of sex education classes in schools.

All information collected will be used only for my research and will be kept confidential. There will be no connection to you specifically in the results or in future publications of the results. . Your responses will be kept confidential and will only be accessible by the researcher.

Withdrawing from the study

If you decide that you want to withdraw from the research during the time that you are completing the questionnaire, the data that you have not submitted will not be used in the research. The data that you submit (by selecting submit at the end of the page) will be used in research for analysis.

What if you have questions?

If you have any question regarding this project and/or survey, please contact me, Kate Dawson, or my academic Supervisor - Dr. Pádraig MacNeela.

Kate Dawson - K.Dawson2@nuigalway.ie

Dr. Pádraig MacNeela – padraig.macneela@nuigalway.ie

Appendix F - Statement of Informed Consent (Study 3)

Ticking the box below shows that:

- you have read and understand the information provided
- you are above the age of 18
- you agree to take part in this project

• You know that you can withdraw from the study at any time

Yes, I consent to participating in this study. I understand that I can participate to my own level of comfort, can stop at any time I want, and that all the information I provide will be anonymous

Thank you for participating in this study.

Appendix G – Subscale item mean scores by gender (Study 3)

Table 5. Female and Male Subscale Items mean and Standard Deviation Scores

Items	Female		Male	
	M	SD	M	SD
Subscale 1 (Sexual Behaviour)				
How to act sexy in bed	2.21	1.10	2.12	1.02
How to please a sexual partner	2.61	1.08	2.58	1.01
How to sexually communicate using body language	2.15	1.01	2.15	1.06
About what is expected of a person when having sex	2.42	1.10	2.41	1.03
What women should do during sex	2.28	1.05	2.17	.10
How to interact with a partner during sex	2.34	1.06	2.36	1.02
About how to look hot in bed	2.19	1.16	2.19	1.13
How to ‘talk dirty’	2.44	1.17	2.52	1.17
How to make a sexual partner have an orgasm	2.46	1.08	2.41	1.05
How to have good sex	2.11	1.03	2.29	1.07
How to ‘turn on’ a sexual partner	2.47	1.03	2.40	1.02
How to make someone orgasm	2.41	1.10	2.56	1.09
What men should do during sex	2.10	1.05	2.41	1.06
How people interact with one another during sex	2.39	1.04	2.41	.98
How to do popular sexual behaviours	2.55	1.13	2.51	1.09
About heterosexual sexual behaviours	2.95	1.12	2.80	1.07
How to communicate verbally during sex	1.94	1.05	1.90	1.01
About different sexual positions	3.14	1.05	3.27	1.00
About foreplay	2.49	1.14	2.80	1.10
About things I’d like to try with my partner	2.82	1.01	2.97	1.14
How bodies function during sex (*sex can refer to any degree of sexual intimacy or behaviour)	2.46	1.03	2.62	1.02
Where things go during sex	2.53	1.20	2.64	1.14
Subscale 2 (Sexual safety)				
How to ask for sexual consent from my partner	1.32	.79	1.49	.88
How to give sexual consent to my partner	1.40	.88	1.58	.94
How to feel physically safe	1.24	.67	1.42	.83
The emotional aspects of sex	1.29	.70	1.63	.97
About the use of condoms	1.45	.89	1.80	1.13
Why people have sex	1.75	1.01	2.00	1.11

Attitudes surrounding condom use	1.64	1.01	1.78	1.01
Subscale 3 (Sexual Exploration)				
About different fetishes	2.54	1.19	2.85	1.16
About different sexual fantasies	2.66	1.18	2.96	1.10
About fetish communities	2.10	1.24	2.34	1.31
About dominance and/or submission	2.79	1.21	2.65	1.14
About things I didn't know would turn me on	2.89	1.16	2.94	1.09
About new things that turn me on	3.03	1.14	3.15	1.08
How unusual my desires/fantasies are	2.00	1.17	2.36	1.167
Subscale 4 (Transgender Sexuality)				
How transgender people have sex	1.19	.65	1.31	.84
How transgender persons behave during sex	1.16	.58	1.26	.67
What naked transgender persons' bodies look like	1.30	.76	1.53	.95
What sexual behaviours transgender persons engage in	1.18	.57	1.29	.74
Subscale 5 (Anal Sex)				
Penetration of anus by finger(s)	1.94	1.07	2.43	1.22
About anal sex	2.27	1.20	2.87	1.178
About anal fisting	1.47	.98	1.92	1.24
About anal rimming	1.50	.97	2.13	1.23
Subscale 6 (Body Aesthetic)				
What breasts look like	2.55	1.29	3.02	1.22
What naked bodies look like	2.95	1.17	3.35	1.22
What genitals look like	2.99	1.19	3.09	1.08
About vulva appearance (what the outside of the vagina looks like)	2.62	1.28	2.92	1.14
Subscale 7 (Intersex Persons Sex)				
About intersex person's orgasms	1.17	.61	1.31	.80
About oral sex on intersex genitals	1.31	.81	1.50	1.04
What naked intersex persons' bodies look like	1.34	.88	1.63	1.12
How intersex persons behave during sex	1.35	.81	1.54	1.03
Subscale 8 (Same-sex Sex)				
About same sex sexual positions	2.37	1.20	2.38	1.33
About same sex sexual behaviours	2.34	1.16	2.17	1.17
The different roles people take during same sex encounters	2.27	1.16	2.10	1.14
Phrases related to LGBT+ people	1.40	.82	1.59	1.00
Subscale 9 (Female Sexual Pleasure)				
Performing oral sex on female genitals	2.21	1.20	2.67	1.15

Squirting/vaginal ejaculation	2.14	1.20	2.37	1.18
How to make a partner 'squirt'	1.55	.98	1.96	1.14

Appendix H - Email invitation (Study 4)

Dear students,

My name is Kate Dawson. I am a PhD student with the Child and Family Research Centre. I am conducting sexual health research around using pornography as sex education. I am inviting 20-25 students, between the ages of 18-21 to take part in a focus group. All views are welcome, no matter what your experience with porn, is. No porn will be shown and no one will be asked to share any personal stories.

The focus group will last approximately 2 hours and will involve working both individually and in small groups to explore questions about mainstream pornography, in general terms, the reasons that people use it and what kind of education young people might need about porn. The focus group will involve a brief discussion, which will be audio recorded.

It will take place in the School of Psychology, NUIG, on Wednesday, the 22nd of February, from 11-1. Refreshments and a light lunch will be provided. **Please contact me at the email address below if you are interested in participating.**

Thank you,

Kate

Email: kate.dawson@nuigalway.ie

Appendix I - Student information sheet (Study 4)

Purpose of the project

This research is being done as part of my PhD in Child and Youth Research, at the School of Psychology, NUI Galway. The aim is to explore participant's beliefs around porn use and what information about porn should be made available to adolescents.

We are looking for a variety of people to participate in this research. All views are welcome, no matter what your experience with porn, is. No porn will be shown and no one will be asked to share any personal stories.

What will you be asked to do?

If you decide to participate in this project, you will be asked to attend a focus group, where you will be asked to work individually and then in small groups.

What are the risks?

Participation is completely voluntary. You do not have to take part in every part of the focus group and you can leave at any time. A group contract will be established at the beginning of the research process. This is to ensure that everyone agrees that any information shared during the duration of the study is completely confidential and should not be discussed later. Information on college support services will be provided in the event that you were to be distressed by any of the issues raised.

What are the benefits?

At the moment we don't know very much about what young people in Ireland think of pornography and its place in how young people learn about sex. So if you take part this will help to answer some of these important questions about pornography. The findings of this study will help us to develop a questionnaire which will explore pornography use in Ireland.

All information collected will be used only for my research and will be kept confidential. There will be no connection to you specifically in the results or in future publications of the results.

What if you have questions?

If you have any question regarding this project, please contact me, Kate Dawson, or my academic Supervisors - Dr. Pádraig MacNeela and Prof. Saoirse Nic Gabhainn at the following email addresses:

kate.dawson@nuigalway.ie padraig.macneela@nuigalway.ie
Saoirse.nicgabhainn@nuigalway.ie

Appendix J – Participant consent form (Study 4)



Participant Consent Form

Study Number:

Participant Identification Number:

What should young people learn about as part of pornography education workshops?

Researcher: Kate Dawson

Please initial box

1. I confirm that I have read the participant information sheet for the above study and have had the opportunity to ask questions.
2. I am satisfied that I understand the information provided and have had enough time to consider the information.
3. I understand that my participation is voluntary and that I am free to withdraw from the study at any time, without giving any reason.
4. I agree to take part in the above study.

Date

Signature of Participant

Name of Person taking consent
(if different from researcher)

Date

Appendix K - Participant information sheet (Study 5 and Study 6)

Participant information sheet

Purpose of the project

This research is being done as part of my PhD in Child and Youth Research, in the school of Psychology. The purpose of this study is to understand the family communication resources within the home, barriers to communication and necessary supports, in relation to pornography use.

We are looking for parents to participate in interviews, to explore the following questions:

1. What are parents' thoughts about sex education?
2. Do parents think that adolescents should be educated about porn?
3. What information do parents believe their children should know about porn?
4. How can parents be supported in having discussions about porn with their children?

What will you be asked to do?

If you decide to participate in this project, you will be asked to attend an interview, where you will be asked to answer questions, related to the aforementioned topics. Your participation is completely voluntary, you do not have to answer any questions that you do not feel comfortable in answering.

What are the risks?

Participation is completely voluntary. You can participate to your own level of comfort and can leave at any time. Information on support services will be provided in the event that you were to be distressed by any of the issues discussed.

What are the benefits?

At the moment many parents feel unsupported to having successful conversations about sex and relationships with their child. If you take part in this research, you will help us to develop a pornography educational intervention for teenagers, which may be rolled out in secondary schools, and we hope may protect them against any negative aspects of pornography exposure. Your participation will also help us to develop an evidence-based resource pack for parents, on how to talk to your child about sex, relationships and pornography.

All information collected will be used only for my research and will be kept confidential. There will be no connection to you specifically in the results or in future publications of the results.

What if you have questions?

If you have any question regarding this project and/or survey, please contact me, Kate Dawson, or my academic Supervisors - Dr. Pádraig MacNeela and Prof. Saoirse Nic Gabhainn

Kate Dawson - K.Dawson2@nuigalway.ie

Dr. Pádraig MacNeela – padraig.macneela@nuigalway.ie

Prof. Saoirse Nic Gabhainn – Saoirse.nicgabhainn@nuigalway.ie

Galway city counselling services

Galway Counselling Service (Salthill) - 086 872 0390

Oranmore Counselling Centre - 087 783 7892

Counselling Galway (Dyke road) - 086 823 1670

Appendix L - Participant consent form (Study 5 and Study 6)



Participant Consent Form

Study Number:

Participant Identification Number:

An Exploration of parents thoughts about pornography exposure, barriers and necessary supports to parent-child communication.

Researcher: Kate Dawson

Please initial box

- 5. I confirm that I have read the participant information sheet for the above study and have had the opportunity to ask questions.
- 6. I am satisfied that I understand the information provided and have had enough time to consider the information.
- 7. I understand that my participation is voluntary and that I am free to withdraw from the study at any time, without giving any reason.
- 8. I agree to take part in the above study.

Date

Signature of Participant

Name of Person taking consent
(if different from researcher)

Date