

Impact of Early Exposure to Online Pornography
On Problematic Pornography Use and Sexual Consent Attitudes

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Submitted in partial fulfilment of the requirements of the BA Hons in Psychology
at Dublin Business School, School of Arts, Dublin.

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March 2019

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Declaration

Declaration

'I declare that this thesis that I have submitted to Dublin Business School for the award of BA (Hons) Psychology is the result of my own investigations, except where otherwise stated, where it is clearly acknowledged by references. Furthermore, this work has not been submitted for any other degree.'

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Acknowledgements

I would like to thank all participants who took the time to participate in my research project. A special mention to my wonderful son Aidan Christopher, and Aidan Snr. To my adoring parents, Alfie & Ann for their continuous loving support, to my brothers Joseph, Alfred, Gerard, Hugh. To my dear friends, Rosemary, Claire, Finian, who encouraged by studies and my DBS friends Aoife, Laura, Sarah, Sean, Madeline and Katrina. I would also like to thank my supervisor, Dr Lucie Corcoran for her assistance, and academic support during the past few months. To my lecturers, who inspired my efforts over the past four years, I am truly grateful.

ABSTRACT

Research suggests that children as young as eight are viewing online pornography, earlier than they receive primary school sex education, with potential risks of trauma, sexist role modelling, negative sexual consent attitudes, compulsive use, and viewing hard/torture porn. This study hypothesized that early exposure to online pornography (≤ 18 years) predicts more problematic pornography use and maladaptive sexual consent attitudes in later adulthood than exposure at ≥ 19 years, or never; and that this impact is stronger in males. A cross-sectional quantitative online survey of 74 adults (31 males, 43 females, aged 18-54), included the self-report Problematic Pornography Use Scale, and Sexual Consent Scale–Revised. Early exposure predicted higher problematic pornography use, but not sexual consent attitudes. Early viewers were predominantly male, aged 18-24, viewed online porn most frequently; 43% felt it influenced their sexual consent attitudes and behaviour. The findings endorse including online porn literacy in primary school sex education.

1.Introduction

Online pornography/porn is defined as sexually explicit material depicting engagement in sexual activities such as masturbation, oral sex, vaginal or anal penetrative sex, with the intent to elicit sexual arousal in the viewer (Peter & Valkenburg, 2016). The online porn industry has risen since the mid-1990s, as has availability of extremely explicit sexual content (Goodson, McCormick & Evans, 2000; Rothman, Ahlia, Christensen, Paruk, Alder & Daley, 2018). Exponential growth of the internet-smartphone has given users unprecedented access to online pornographic material, changing the way children and early adolescents encounter and consume sexual content (Doornwaard, van den Eijnden, Baams, Vanwesenbeeck & ter Bogt, 2016). The implications of early sexualisation via online porn are not fully understood yet, but combine concerns for both child viewers' sexual education, and their sexual consent attitudes and behaviour in later adulthood; particularly given recent media coverage of alleged rape trials focused on establishing 'sexual consent' (Irish Independent, 2018). This issue has relevance for many sub-fields of psychology, including developmental, educational, social, cognitive, clinical, counselling, forensic, and health psychology.

Studies suggest that children as young as eight in Ireland are viewing online pornography, earlier than they receive primary school sex education. This can cause trauma in young children; soft porn websites can link them to hard/torture porn websites, and parents and teachers do not always know what children are viewing online. They concluded that online porn literacy needs to be included in primary school sex education (Dawson, Nic Gabhainn & McNella, 2019; Sinković, Štulhofer, & Božić, 2013). Of additional concern is what children learn from online pornography about sexual consent. Children report feeling shock and disgust when they first view online pornography, but after repeated exposure, feelings and thoughts become normalised (Martellozzo, Monaghan, Adler, Davidson, Leyva & Horvath, 2017).

Children and early adolescents risk developing early maladaptive beliefs about human sexuality, sexual norms and gender role expectations (Dawson et al., 2019; Wright & Randall, 2012).

1.1 Gender Issues in Pornography Use

National University of Ireland Galway (NUIG) research conducted by Dawson et al., (2019) found that Irish males are the youngest viewers of online porn in the Western world, reporting higher frequencies in viewing patterns, and individualised motivations for viewing porn. Previous research also found that boys have earlier first exposure and higher consumption of online pornography, before girls (Davis, Carrotte, Hellard, Temple-Smith & Lim, 2017; Harper & Hodgins, 2016). Klaassen & Peter (2015) presented evidence that viewing pornography depicts male domination over females, making boys more likely to objectify and seek power and control over females to conform to sexist male norms (Kühn & Galliant, 2014). Further research suggests that more boys than girls think that pornography has taught them about relationships and safe sex, and more boys than girls want to imitate what they see in online pornography (Martellozzo, et al., 2017). This study also reports that over 59% of boys as opposed to 25% of girls actively searched for online pornography (Martellozzo et al., 2017). Previous research supports gender differences towards viewing habits and attitudes and behaviours towards online pornography and if left unchallenged, these false narratives can impact on gender balanced dynamics within sexual relationships (Perry, 2016).

This study will examine whether gender will influence problematic pornography use scores (main effect of gender); and if gender will influence the effect of age exposed to online pornography on problematic pornography use scores with males showing higher problematic scores than females in all groups (interaction effect of gender X group). The study will further examine if gender will influence sexual consent scores (main effect of gender); and if gender will influence the effect of age exposed to online pornography on sexual consent scores, with

males showing more maladaptive sexual consent scores than females in all groups (interaction effect of gender X group).

1.2 Current Primary School Sex Education

Studies suggest that relationship and sexual education at primary school-level is increasingly important, however the current format is seen as outdated (McKee, 2010). As children's accessibility to smartphone technology grows (Doornwaard et al., 2016) so too does the potential risk of early exposure to explicit online sexual content. Children seek effective sex educational resources where issues around pornography, sexual consent, and appropriate sexual behaviour are explained and openly discussed, empowering them to become porn literate (Dawson et al., 2019). Porn literacy is defined as a framework for distinguishing between fantasy and reality, where young people can critically appraise and understand the content they are viewing (Hutchings, 2017, p. 292). Young people who value equality, practice empathy, understand appropriate use of pornography, and sexual consent are more likely to become disconcerting consumers of media, and reject disrespectful and non-consensual behaviours (Manning, 2018).

The current Relationship and Sexual Education (RSE) policy guidelines for Irish primary schools were set in 1997 by the Department of Education. Currently, primary school sex education in Ireland does not include online porn literacy (Dawson et al., (2019). A study by Martellozzo et al. (2017) of over 1001 (11-16 year olds) in the UK report children don't just want the biology of sex, although awkward, they seek a more relevant relationship and sexual health education to include discussions about the effects of viewing online pornography, that could help them to deal with the behaviours and feelings associated with porn. A recent study by Dawson, Nic Gabhainn & MacNella (2018) of over 1,380 Irish students (aged 18-24 years), found 70% of participants reported dissatisfaction with their sexual education, and believe that

porn literacy education should coincide with first engagement with online access, be age and stage appropriate. The aim is not to demonise pornography, which is legal, indeed, recent research reports both positive and negative effects of its use (Klaassen & Peter, 2015; Kohut, Baer & Watts, 2016) but of importance is to understand its biopsychosocial impact.

1.3 Current Trends: Risky Sexual Behaviour

Research by Wright and Randall (2012) found higher incidents of unprotected sex, sexual engagement with multiple partners, and increased participation in risky sexual behaviour's leaving this age group vulnerable to contracting sexually transmitted diseases (STI's), unwanted pregnancy, sexual injury, assault or rape (Wright & Randall, 2012). Provisional data released by the Health Protection Surveillance Centre (HPSC, 2018) reported a 6% increase in the number of STI's, which represents over 11,078 new cases in 2018. The Health Service Executive (HSE, 2018) recorded over 141 newly diagnosed cases of STI's among the 15-24 age group. The Executive Director of HIV Ireland, Niall Mulligan suggests this increase could be due to a greater public awareness of STI's. However, he also acknowledged that inadequate sexual education in schools is a key contributing factor (The Journal.ie, 2018).

In addition to contracting STI's, early exposure of children to online pornography may influence culturally normative psychological developmental processes resulting in problematic pornography use and maladaptive sexual consent attitudes in early or later adulthood (Wright & Randall, 2012). Indeed, studies report that males aged 12-24 years believe it is normal to coerce a female into having sex (Klaassen & Peters, 2015; Kühn & Galliant, 2014; Manning, 2018). Consistent research suggests there has been an increase in early exposure (i.e., <18 years of age) to online pornography (Davis et al., 2017; Martellozzo et al., 2017). Moreover,

online pornography is seen as having a critical influence on the sexual socialisation of children and early adolescents (Dawson et al., 2019).

1.4 Increasingly Early Exposure to Online Pornography

Martellozzo et al., (2017) research for The National Society for the Prevention of Cruelty to Children (NSPCC) found over 28% of 11-12 year olds had voluntarily viewed online pornography. Cross-sectional research by Harper and Hodgins (2016) found intentional first viewing of pornography at age 13 for males, and age 16 for females. Latest research supports a reduced age of first accidental/intentional viewing of online pornography and that access to smartphones is driving this trend (Dawson et al., 2019).

Prior to the internet, mediums for accessing pornography included magazines, books, videos, all of which involved walking into retail shops and purchasing or renting sexually explicit material, or via mail order (Ford, Durtschi & Franklin, 2012). In 2017, it was recorded that over 3.42 million Irish residents owned an internet smartphone (Statista.com, 2018). The largest provider of online pornography 'PornHub', reported that 67% of their users accessed porn from their smartphones, representing a 5% increase from 2016 (Pornhub.com, 2018). Cyber Safe Ireland (2018) published annual report findings and noted in 2018 two thirds of 8-10 year olds owned a smart phone, furthermore, this age group play online games with an age rating of over 18 years, and a fifth of 12 year olds were spending over 4 hours a day with access to their smartphone. The current digital age of consent in Ireland is 16, as determined by the General Data Protection Regulation in 2018, meaning children cannot sign up to online services before age 16 without consent from their parents. However, children as young as age seven access the internet without adult permission or supervision (Mascheroni & Cuman, 2014). O'Neill and Dinh (2015) report that half of all 9-10 year old children are active users of online technology, and as they transition to adolescence this number increases to 92%. Many

children/adolescents are more digitally-savvy than their caregivers/teachers, and parents report they don't always know what their children are viewing online (Dawson et al., 2019). Without appropriate supervision or education this potentially leaves children vulnerable to early exposure to online pornography and developing problematic use. This study hypothesis that early exposure to online pornography will predict higher problematic pornography use than later exposure or never exposed to porn.

1.5 Problematic Pornography Use

Access to online pornography boomed in the 1990's (Goodson et al., 2000) and one of the largest providers of online porn, PornHub report they had over 87.8 billion viewings per second in 2017 (PornHub, 2018). The porn industry is estimated to be worth over \$97 billion dollars, some viewings of "soft porn" are free, however, fees apply for viewing some sexual content. Debate arises when trying to define problematic pornography use, however, Kor, Zilcha-Mano, Fogel, Mikulincer, Reid & Potenza, (2014) suggest it is characterised by hypersexual activity, compulsive viewing, lack of or poor impulse control, and Brand, Laier, Pawlikowski, Schächtle, Schöler & Altstötter-Gleich, (2011) note that individuals with problematic porn use share similar addictive behaviours as gamblers, sex and drug addicts.

Much of porn is designed to evoke sexual fantasy (Peter & Valkenburg, 2016), however depiction of sexual content is more extreme on pornography sites. The degree to which children and adolescents are exposed to online pornography is on a spectrum of explicitness, ranging from somewhat explicit (e.g., women in underwear) to explicit (e.g., topless or naked women) to more explicit (e.g., video footage of close shots of the genital areas) (Rothman et al., 2018). Many porn websites are designed to increase the opportunity for viewers to accidentally or intentionally seek to experience the "dark net," which depicts extremely explicit sexual material, sexual violence, gang rapes, paraphilia, child and animal sexual abuse, and where boundaries go beyond the cognitive and developmental stages of children, early

adolescents and many adults (Rothman et al., 2018). Unintentional viewing of such material may cause distress, but may lead some early viewers to develop a fascination for extreme sex practices and maladaptive sexual beliefs (Wright & Randall, 2012).

The NSPCC report that 50% of males aged 11-16 thought the pornographic material they viewed was realistic (Martellozzo et al., 2017). Consequently, when asked how they felt when they first viewed pornography, 27% reported feelings of shock, 24% were confused, 23% were disgusted and 21% felt nervous, however, interestingly after repeated exposure to online porn they felt less shocked, less negative, less anxious and less disgusted (Martellozzo et al., 2017). In the absence of appropriate sex education in school, children and adolescents who are not yet porn literate (Dawson et al., 2019) may be exposed to developing problematic pornography related behaviours. The effects of viewing online porn will be measured using the self-report Problematic Pornography Use Scale (PPUS), developed by Kor et al. (2014), which measures four disaggregated components of problematic porn use: distress and functional problems, excessive use, control difficulties, and use for escape/avoid negative emotions. The participants will take a retrospective approach when answering the questionnaire to assess their problematic pornography use to see if early exposure to online pornography did have an impact.

1.6 Online Porn Sexual Scripts and Role Modelling

Klaassen and Peters (2015) report discrepancies in pornography studies concerning the positive and negative effects of viewing pornography. They suggest that pornography negatively portrays specific gender roles (sexual scripts such as male domination and female submission and objectification). Conflicting evidence by Kohut et al., (2016) report that for those who viewed pornography a year previously, held more egalitarian views.

Social learning theory (Bandura, 1986) posits that new patterns of behaviour can be learned through direct experience, and most human behaviour is learned vicariously by observing the interplay between the actions and consequences of the individual's actions. This process often unfolds within the immediate environment. However, "extensive modelling in the symbolic environment of the mass media" can also have a significant impact, due to its reach and power in shaping young people's images of reality (Bandura, 2001, p.126). Due to inadequate sexual education programmes in schools (McKee, 2010), pornography becomes an important sexual script for many young men and women (Sun, Bridges, Johnson & Ezzell, 2016). Research by Wright (2012) suggests pornography can leave young people at risk of developing faulty sexual scripts towards casual unprotected sex.

A key stage in affective and cognitive development (Piaget, 1936), early exposure to pornography leaves adolescents with potentially false narratives of human sexuality, and could negatively influence their ideas of how the dynamics within a loving relationship operates (Perry, 2016). Pornographic stereotypical portrayal of the objectified female role, leaves young males displaying increasing sexual insensitivity towards sexual partners (Kühn & Galliant, 2014), and one in four people aged 12-24 years believe it is normal to coerce a girl into having sex (Manning, 2018). Research suggests that early exposure to pornography leads to an increase in casual attitudes to sex, unprotected sex, and risky sexual behaviours (Wright, 2012). In addition, it highlights the importance of potential sexual health implications associated with negative aspects of early exposure to online pornography (Hald, Smolenski & Rosser, 2013). This study postulates that early exposure to online pornography (<18 years) predicts more maladaptive sexual consent attitudes and behaviours than later exposed or never exposed group.

1.7 Positive characteristics of Pornography

In addition to the negative consequences of viewing online pornography, research reveals some positive aspects for young people. Young people report that traditional sex education programmes in schools are outdated (Dawson et al., 2018; McKee, 2010) and in an effort to feed their sexual curiosity, they resort to viewing online pornography as a source of education and information (Doornwaard et al, 2016). However, Dawson et al, (2018) reports that dissatisfaction with school sex education is not associated with viewing online pornography for information. McKee (2012) found that young people view pornography for entertainment, reporting that it delayed their first sexual experience, and provided a 'safe space' to explore their bodies and confirm their sexual identity (Davis et al., 2017; Dube, 2000). To understand sex and pornography and distinguish between sexual fantasy and reality, young people need to contextualise what they are seeing from a personal and sociological perspective (Manning, 2018).

Safe engagement with explicit sexual narratives are a crucial element of literacy across pornography and media platforms. An example of this is bondage, dominance, submission, sadomasochism (BDSM) (Dawson et al., 2019). BDSM provides opportunities to explore communication and sexual consent between partners, sharing mutual respect and responsibility (Hébert & Weaver, 2015; Kingkade, 2016). Pornography is often used to incite pleasure, however in contrast to BDSM, pornography is centred on male pleasure, often depicting non-consensual sex, or violent sexual assaults and dominance over the female partner (Rothman et al., 2018). Such sexual narratives can lead to normalising male sexual violence towards women, and has the potential for viewers to develop a fetish for this form of arousal (Manning, 2018). These pornographic sexual narratives are also informing young people's experience towards relationships. Consequently research would suggest, in the absence of a framework for

porn literacy and safe exploration of sexual communication and consent, if left unchallenged, these false narratives of sexual attitudes and behaviours can be subjectively misinterpreted (Manning, 2018).

1.8 Issue of Sexual Consent

In 2017, the issue of sexual consent received increased global attention due to the “Me Too” movement, and here in Ireland, marches were held in protest over the verdict of a high profile sports players rape allegation court case. The Dublin Rape Crisis Centre (DRCC: 2016) issued a report citing two worrying and perhaps interlinked trends for young people. First, increased levels of sexual pressure, coercion or violence; and second, growing concern around what constitutes sexual consent in relation to sexual behaviour. The DRCC (2016) proposed that pornography influences the level of sexual behaviour which is deemed acceptable or appropriate. Although widely discussed, our understanding of sexual consent as a construct is further complicated by the lack of a clear operational and legal definition. Research by Cowling and Reynolds (2004) suggest it is further complicated by association in the context of sexual assault or rape in public discourse, and not considered in the context beyond non-consent sex. Definitions vary widely depending on the jurisdiction and/or organisation (Beres, 2014; Muehlenhard, Humphreys, Jozkowski & Peterson, 2016) but most legal sources and scholars agree that an individual must consent freely without force or coercion to the sexual activity (Muehlenhard et al., 2016). Under the current legal definition, two main components are considered, firstly is the individual competent to give their consent, and secondly how consent is communicated prior/during sexual activity (Beres, 2014). This study will investigate if early exposure to online pornography (<18 years) predicts more maladaptive sexual consent attitudes than later exposure or never groups.

Sexual consent attitudes will be measured using the self-report Sexual Consent Scale-Revised (SCS-R), developed by Humphreys & Brousseau (2010), which measures individual attitudes, behaviours and beliefs concerning how sexual consent will be negotiated among sexual partners. Four of five SCS-R subscales were included in this study: (lack of) perceived behaviour control, attitude to establishing sexual consent and subjective norms all pertain to determine behavioural intent i.e. how a person perceives their ability to perform certain behaviours (Ajzen, 1991). Indirect behavioural approach to consent is how consent is communicated between partners i.e. verbal / non-verbal. Due to the sensitive nature of some questions an anonymous online survey methodology was selected to gather confidential data.

1.9 Aim and Rationale for the Current Study

As avid users of online technology, smartphones have provided children and early adolescents with unprecedented access to online pornographic material, presenting concerns over some potential adverse ramifications (Mitchell, Kinkelhor & Wolak, 2003). As research is suggesting, children as young as eight are viewing online pornography, earlier than they receive primary school sex education (Dawson, Nic Gabhainn & McNella, 2019; Sinković et al., 2013). The implications of early sexual sexualisation on problematic pornography use, and maladaptive sexual consent attitudes in later adulthood (≥ 19 years) is under-researched, and would inform primary school sex-education interventions. Additionally, the implications of early exposure to online pornography on relationships and sexuality in adulthood (≥ 19 years) is not yet fully understood, and of particular concern is what children are learning from pornography about sexual consent, which is often imperceptible in online porn.

There has been limited research assessing the impact of age first viewing online porn, which may differ between children/teens, young adults, and those who never viewed online porn. The aim of this study is to address this gap in the literature by comparing three groups,

based on when they first viewed online pornography (i.e., (1) Early: ≤ 18 years; (2) Later: ≥ 19 years, or (3) never), on their problematic porn use and sexual consent attitudes in adulthood.

1.9 Hypotheses

- H1: Early exposure to online porn (age ≤ 18 years) predicts higher PPUS problematic pornography use scores than later exposure (age ≥ 19) or never.
- H2: Early exposure to online porn (age ≤ 18) predicts more maladaptive SCS-R sexual consent attitudes than later exposure (age ≥ 19) or never.
- H3: PPUS scores will be higher in males than females (main effect of gender), and males will report higher PPUS scores than females (interaction effect of gender X group).
- H4: Males will have more maladaptive SCS-R sexual consent attitudes (main effect of gender); with more maladaptive SCS-R scores in males than females (interaction effect of gender X group).
- H5: There will be a different pattern of correlations between the PPUS and SCS-R scales in each exposure group (i.e., early/late/never viewed online porn).
- H6: Perceived impact of viewing online porn before age 18 (yes-group) predicts higher PPUS scores and maladaptive SCS-R scores.

2. METHOD

2.1 Participants

Participation in this study was voluntary, with no financial remuneration. The target sample were sexually active adults aged 18+ years, of any gender, nationality, ethnicity, sexual orientation, and relationship status. Participants were advised that the survey would take approximately 9 minutes to complete. The sample were recruited using non-random purposive sampling via the Dublin Business School Moodle research forum link, and a survey invitation was also posted on the researcher's social media accounts (Facebook, Messenger, WhatsApp, and Instagram). Additional snowball sampling was utilized by inviting participants to share the online survey link on their social media platforms. Participants were advised that by completing and submitting the online survey, they were consenting to participate (Appendix A). The survey achieved a sample of 74 participants (58% females, 42% males), mean age 33 (SD=8.84) (age range: 18-54 years). Participants were assigned into three naturally occurring groups, based on self-reporting when they first viewed online pornography aged: (1) ≤ 18 years, (2) 19+ years, or (3) never.

2.2 Design

The study employed a quantitative cross-sectional online survey methodology, whereby digital questionnaires were distributed through a link on www.surveymonkey.com. The independent variables were Groups (i.e., early, later, or never exposed to online pornography), age and gender. The naturally occurring Groups were based on participants' responses. The nine dependent variables were problematic pornography use (total, distress and functional problems, excessive use, control difficulties, use for escape/avoid negative emotions), and sexual consent attitudes and behaviours (perceived behavioural control, attitudes to establishing consent, indirect behavioural approach, consent norms) psychometric scale scores.

2.3 Measures

The questionnaire (Appendix B, C & D) included two standardised psychometric scales and eight demographic and pornography viewing habits questions, which were designed to obtain sample characteristics, and compare demographic profile and pornography viewing habits between Groups.

Demographic Questions: Four demographic questions (Appendix B) measured participants' gender, age (in years), relationship status, and if primary school sex education received was effective (response format: yes/no/not received).

Pornography viewing Habits: Four questions (Appendix B) measured if participants' ever viewed online porn (response: yes/no); frequency of viewing online pornography in a typical week (response: never to everyday), age (in years) when first exposed to online pornography, and if viewing online pornography before age 18 had any impact on their thoughts or behaviours in relation to sexual consent (response: yes/no).

2.3.1 Problematic Pornography Use

The 12-item self-report Problematic Pornography Use Scale (PPUS) developed by Kor et al, 2014) (Appendix D) measured total problematic pornography use, and four disaggregated components on a 6-point Likert scale (0=never to 5=almost always true) including (1) Distress and Functional problems (e.g., *“using pornography has created significant problems in my personal relationships with other people, in social situations, at work or in other important aspects of my life”*); (2) Excessive Use (e.g., *“I use pornographic materials to escape my grief or to free myself from negative feelings”*); (3) Control Difficulties (e.g., *“I keep on watching pornographic materials even when I intend to stop”*); and (4) Use for escape/avoid negative

emotions (e.g., *“I watch pornographic material when I am despondent”*). Each scale was scored by summing the scores across relevant items, with higher scores indicating more problematic pornography use. Kor et al. (2014) found the PPUS had excellent high reliability internal consistency (Cronbach’s Alpha), ($\alpha=.92$), including distress and functional problems ($\alpha=.91$), excessive use ($\alpha=.86$), control difficulties ($\alpha=.75$), and use for escape/avoid negative emotions ($\alpha=.93$).

2.3.2 Sexual Consent

The 39-item self-report Sexual Consent Scale-Revised (SCS-R) (Appendix C) developed by Humphreys & Brousseau, (2010) measured participants’ attitude, beliefs, and behaviours concerning how sexual consent should, and is negotiated between sexual partners. The SCS-R measured 35 items from four subscales on a 7-point Likert type scale (1=strongly disagree to 7=strongly agree, as follows: (1) (lack of) Perceived Behavioural Control (PBC), e.g., *“I would have difficulty asking for consent because it would spoil the mood”*; (2) Attitude toward Establishing Consent (AEC), e.g., *“I feel that sexual consent should always be obtained before the start of any sexual activity”*; (3) Indirect Behavioural Approach (IBA) to consent (i.e., sexual indirect consent behaviours), e.g., *“Typically I communicate sexual consent to my partner by using nonverbal signals and body language”*; and (4) Sexual consent norms (CN) *“I believe it is enough to ask for consent at the start of a sexual encounter”*. After reverse scoring 5 items, composite scores are obtained by averaging scores across the items in each subscale, higher means on each subscale would indicate greater beliefs and attitudes, and behaviours towards consent. Humphreys & Brousseau (2010) found the SCS-R scale had high reliability internal consistency (Cronbach’s Alpha), including PBC ($\alpha=.86$), AEC ($\alpha=.84$), IBA ($\alpha=.78$), and CN ($\alpha=.76$).

2.4 Procedure

The survey data was collected from October 2018 to January 2019. After clicking www.surveymonkey.com participants were directed to an introduction page (Appendix A) which debriefed participants about the study purpose (to explore viewing habits of online pornography and examine current attitudinal trends in relation to seeking sexual consent). Participants were advised that the study was being conducted as part of an examination, it would take approximately 9 minutes to complete, and provided the researcher's and supervisors contact details. The participants were informed that they need to be 18+ years of age, and sexually active to participate, and had the right to withdraw from the study (Appendix A), however once they had submitted the survey they could no longer withdraw. Due to sensitive nature of some survey questions, examples were provided on the information (Appendix A) to ease any potential distress and telephone numbers and email addresses of support organisations were provided on the Thank you sheet (Appendix E). Participants' were advised that their submission indicated informed consent (Appendix A). There were no mandatory questions. Participants' were reminded that as the questionnaire was anonymous and confidential; an honest response would be welcomed. The participants' data was stored confidentially on a zip file and will be destroyed after one year (Appendix A).

2.5 Ethical Considerations

The study gained ethical approval from the Ethics Board in Dublin Business School and adhered to the Psychological Society of Ireland Code of Ethics (PSI) (2011) and four core principles of Respect, Competence, Responsibility and Integrity (PSI, 2011). The study considered the four core principles and assessed risk of harm for participants and researcher as low. However due to the sensitive nature of some of the questions, participants were advised of this on the information page (Appendix A) and some examples of questions were given to

prepare the participants. Contact details for support agencies were also provided on the Thank You page (Appendix E), as was the contact details of the researcher and supervisor. The study fully debriefed the participants on informed consent, voluntary participation, the right to withdraw, confidentiality and anonymity. Reassurances were provided that the anonymous data would be safely stored on a zip drive and destroyed after one year period.

2.6 Data Analysis

The survey data were downloaded from www.surveymonkey.com to Microsoft Excel, for data prep, then imported into IBM SPSS Statistics (version 25) for statistical analysis. Statistical significance was defined as $p < .05$. The data were checked for missing values and errors. The PPUS and SCS-R scales were computed following scale scoring instructions. Reliability (internal consistency) of scales and were assessed using Cronbach's alpha. Alphas $\geq .7$ to $.9$ indicate acceptable reliability. To compare exposure groups, the continuous variable 'age first viewed online pornography' was recoded into the categorical variable 'Groups' with three levels (i.e., Early: ≤ 18 years; Later: 19+ years, and Never). Descriptive statistics were generated (mean, standard deviation, skewness, kurtosis, plots) to assess normality of all distributions, defined as skewness < 1 , kurtosis < 3 (Field, 2009). Sample characteristics were obtained using frequency count and percentage. Crosstabs with Pearson Chi-square test profiled exposure groups, to determine if they differ significantly in gender, age group, primary sex education, relationship status, or frequency viewing online porn. Hypotheses were tested using parametric statistics.

Hypotheses 1 and 2 were tested using one-way between-groups analysis of variance (ANOVA). The independent variable was exposure-Groups. The dependent variables were the five PPUS scales (H1) and four SCS-R scales (H2).

Hypothesis 3 was tested using two-way factorial ANOVA to test main and interaction effects of Group and Gender on PPUS total scores. Factor 1 was Group (i.e., early \leq age 18/late 19+ years/never). Factor 2 was Gender.

Hypothesis 4 was tested using two-way MANOVA to test main and interaction effects of Group and Gender on the four SCS-R subscales. Factor 1 was exposure-Group. Factor 2 was Gender. MANOVA was appropriate for testing multiple related dependent variables.

Hypothesis 5 was tested using Pearson correlation to examine inter-correlations between all PPUS and SCS-R scales in the total sample, and comparing exposure-groups [using SPSS command: Data, Split File, Compare Groups based on exposure-Groups].

Hypothesis 6 was tested using crosstabs with Pearson Chi-square test, and one-way between-groups ANOVA, to determine if perceived impact predicts PPUS and SCS-R scores.

3. Results

Table 1 presents descriptive statistics and reliability for all scales used in this study, and Table 2 presents sample characteristics for the total sample (N=74) and three exposure-groups. All scales showed high reliability (alphas of .7 to .9). On average, the sample reported low problematic porn use (mean score 18.41 out of a max score of 60); moderate perceived behavioural control, a positive attitude to establishing sexual consent, and favoured an indirect behavioural approach to sexual consent.

Table 1

Descriptive statistics and reliability

Scale	Reliability (α)	Mean	SD	Skewness	Kurtosis
<i>PPUS Scales:</i>					
Total Problematic Porn Use	.953	18.41	10.71	2.92	10.30
Distress and functional problems	.762	4.07	2.26	2.92	10.97
Excessive use	.892	5.21	3.34	2.21	5.20
Control difficulties	.930	4.32	2.96	3.26	11.83
Use for escape/avoid negative emotions	.919	4.82	3.28	2.41	5.89
<i>SCS-R Scales:</i>					
(lack of) Perceived behavioural control	.905	3.12	1.51	0.319	-0.853
(Positive) attitude to establishing consent	.858	5.26	1.08	-0.659	0.260
Indirect behavioural approach	.793	5.10	1.27	-0.617	-0.298
Consent norms	.755	4.33	1.22	-0.135	-0.505

Note: α = Cronbach's alpha (reliability internal consistency).

PPUS total scale range: 0-60; PPUS subscales scale range: 0-5, higher scores indicate more problematic porn use. SCS-R subscale range: 1-7, lower scores indicate maladaptive sexual consent attitudes.

Table 2

Sample characteristics (n, %) using crosstabs with Pearson Chi-square (X2) test

Variable	Category		COMPARISON GROUPS				X2	df	p
			Total (n=74)	Early (n=35)	Later (n=24)	Never (n=12)			
Gender	Female	n	43	15	17	11	12.5	2	
		%	58%	39%	71%	92%			
	Male	n	31	23	7	1			
		%	42%	61%	29%	8%			
Age Group	18-24 years	n	11	9	2	0	20.2	6	.002
		%	15%	24%	8%	0%			
	25-34 years	n	35	23	7	5			
		%	47%	61%	29%	42%			
	35-44 years	n	20	6	9	5			
		%	27%	16%	38%	42%			
45-54 years	n	8	0	6	2				
	%	11%	0%	25%	17%				
Relationship status	Single	n	18	10	5	3	12.8	8	.116
		%	24%	26%	21%	25%			
	Married	n	16	4	6	6			
		%	22%	11%	25%	50%			
	Exclusive	n	30	17	10	3			
		%	41%	45%	42%	25%			
Casual	n	9	7	2	0				
	%	12%	18%	8%	0%				
Polyamorous	n	1	0	1	0				
	%	1%	0%	4%	0%				
Was primary sex education effective?	Did not receive	n	12	5	6	1	3.41	4	.492
		%	16%	13%	25%	8%			
	Yes	n	12	8	2	2			
		%	16%	21%	8%	17%			
No	n	50	25	16	9				
	%	68%	66%	67%	75%				
In an average week, how frequently do you view online porn?	Never	n	27	6	9	12	33.5	8	.001
		%	36%	16%	38%	100%			
	<Once a week	n	21	13	8	0			
		%	28%	34%	33%	0%			
	1-2 times a week	n	10	5	5	0			
		%	14%	13%	21%	0%			
	3-6 times a week	n	11	9	2	0			
		%	15%	24%	8%	0%			
Everyday	n	5	5	0	0				
	%	7%	13%	0%	0%				
Any impact of viewing online porn before age 18?	Did not view	n	36	0	24	12	71.0	4	.001
		%	51%	0%	100%	100%			
	Yes	n	15	15	0	0			
		%	21%	43%	0%	0%			
	No	n	20	20	0	0			
		%	28%	57%	0%	0%			

Table 2 shows the early-exposure group were predominantly male, $X^2(6)=20.28$, $p=.002$, youngest age group, $X^2(2)=12.57$, $p=.002$, and viewed online pornography most frequently (3-7 days per week). In contrast, The Later-exposure group were predominantly female, older, viewed online porn less frequently. The Never-exposed group were predominantly female, mature ages, married, and none of these were in casual relationships.

Effectiveness of Primary School Sex Education

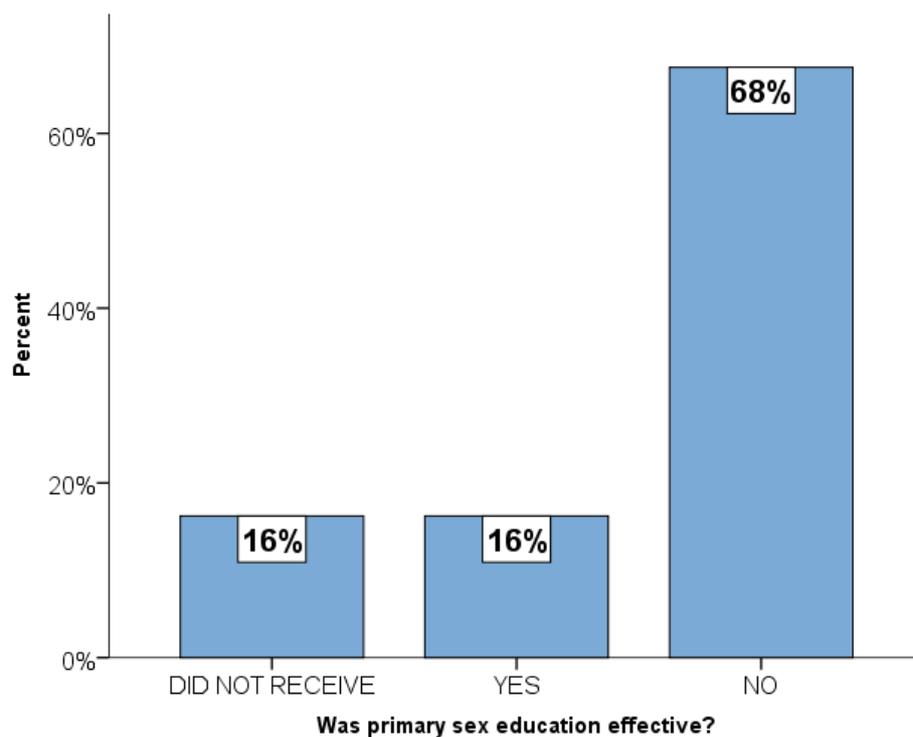


Figure 1. Perceived effectiveness of primary school sex education (%).

Figure 1 shows that 60 participants (81%) received primary school sex education, but of these, 68% felt it was ineffective, including the majority of participants across all groups (Table 2).

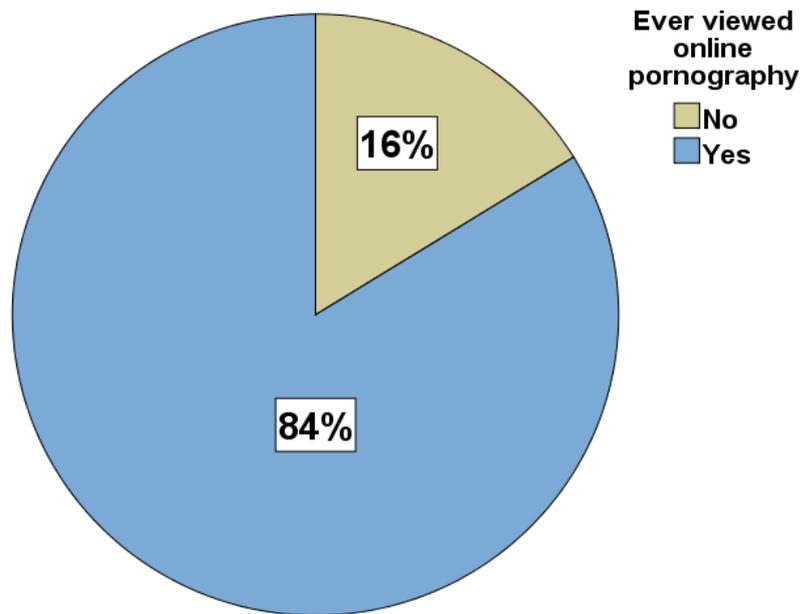
Online Pornography Use

Figure 2. Breakdown of the sample by how many ever viewed online pornography (%).

Figure 2 shows that 84% of the participants (n=62) had ever viewed online pornography.

The data below show the earliest age that a participant first viewed online porn was aged 10 (male participant). Males typically first viewed online porn at age 13-14; and girls at age 16.

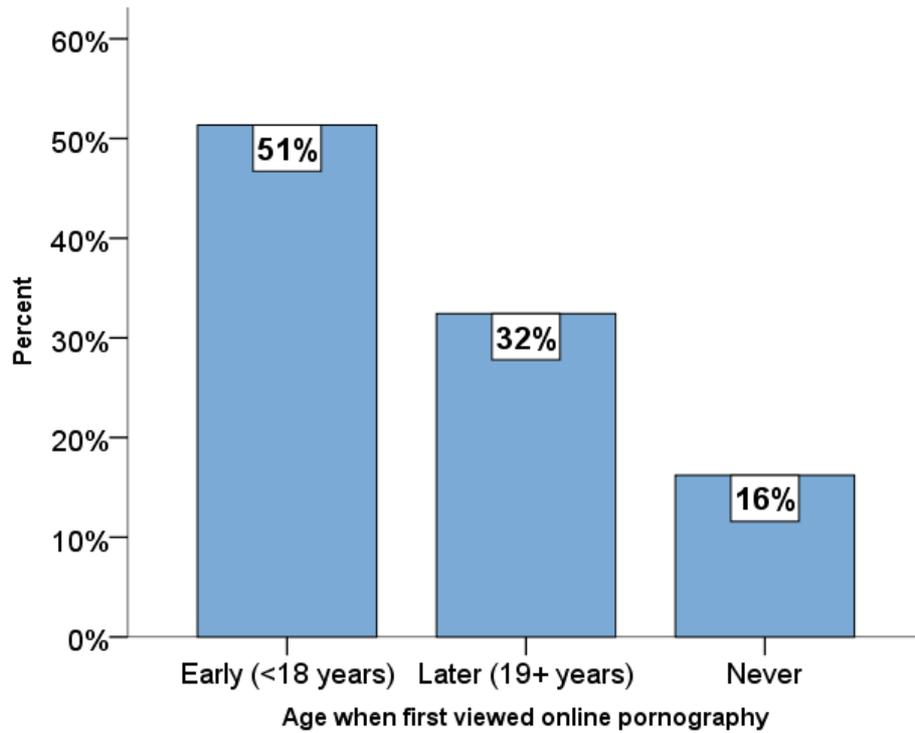


Figure 3. Breakdown of the study sample by age when first viewed online porn (%).

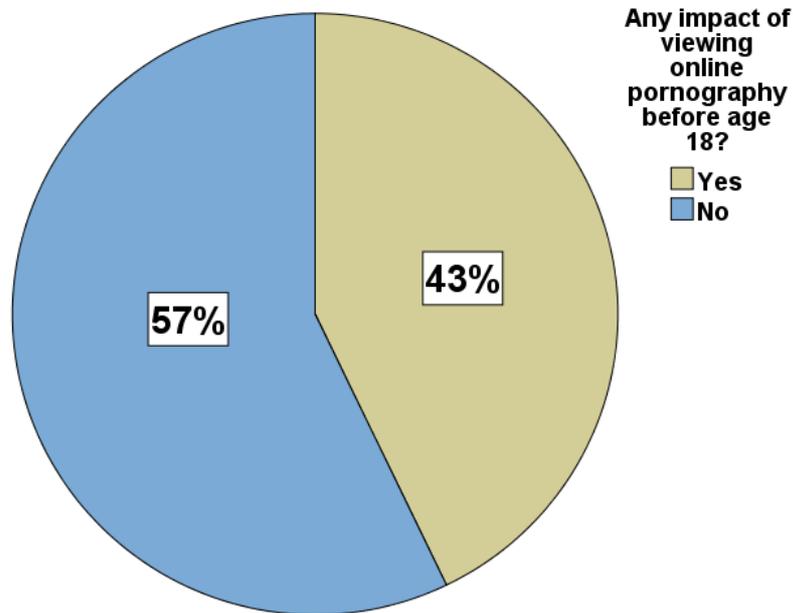


Figure 4. Perceived impact among those who first viewed online porn before age 18 (%).

Figure 4 shows 57% of those who first viewed online porn before age 18 felt it had no impact on their sexual consent attitudes; whereas 43% of them feel it did have an impact.

Inferential Statistics: Hypothesis Testing

Hypothesis 1: Early exposure to online pornography (age ≤ 18) predicts higher PPUS problematic pornography use scores in adults than later exposure (age ≥ 19) or never.

One-way ANOVA (Table 4) found a main effect of Group on mean scores for PPUS total, $F(2,70)=7.67$, $p=.001$, distress and functional problems, $F(2,70)=3.63$, $p=.040$, excessive use, $F(2,70)=7.70$, $p=.001$, control difficulties, $F(2,70)=5.41$, $p=.007$, and use for escape, $F(2,70)=7.67$, $p=.001$. Post hoc Tukey comparisons revealed the early-exposure group reported significantly higher total PPUS, excessive use, control difficulties, and use for escape, at $p<.05$; the early and later groups reported higher distress and functional problems than the never group, at $p<.05$. See Figure 5. The null hypothesis is rejected.

Table 3

H1: One-way ANOVA comparing PPUS problematic porn use between exposure groups

PPUS Variables	Exposure-Groups	N	Mean	SD	F	p
Total problematic pornography use	Early	38	22.66	13.22	7.67	.001
	Later	23	14.70	3.70		
	Never	12	12.08	0.90		
Distress and functional problems	Early	38	4.66	2.82	3.36	.040
	Later	23	3.70	1.29		
	Never	12	2.92	0.67		
Excessive use	Early	38	6.53	4.00	7.70	.001
	Later	23	4.09	1.73		
	Never	12	3.17	0.39		
Control difficulties	Early	38	5.34	3.81	5.41	.007
	Later	23	3.30	0.63		
	Never	12	3.00	0.00		
Use for escape/avoid negative emotions	Early	38	6.13	4.02	7.67	.001
	Later	23	3.61	1.27		
	Never	12	3.00	0.00		

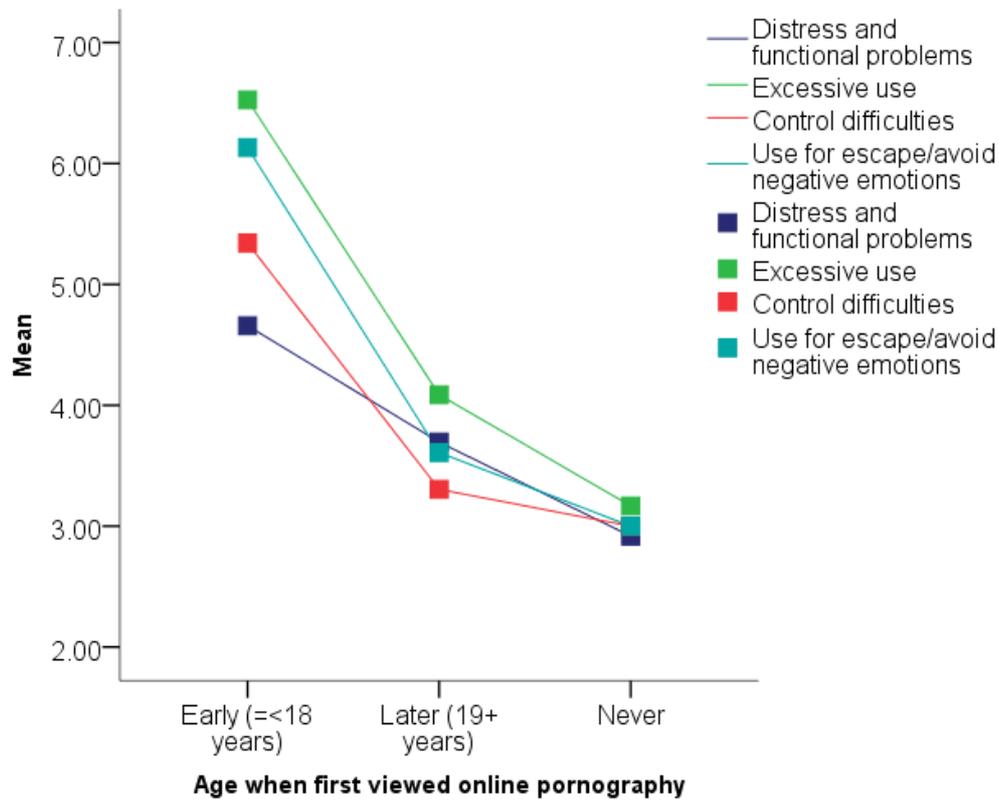


Figure 5. H1: Mean PPUS problematic pornography use scores between exposure groups.

Hypothesis 2: Early-exposure to online pornography (age ≤ 18) predicts more maladaptive SCS-R sexual consent attitudes than later-exposed (age ≥ 19) or never.

One-way between-groups ANOVA (Table 4) found no main effect of Group on perceived behavioural control, $F(2,70)=.781$, $p=.462$, attitude to establishing sexual consent, $F(2,70)=.272$, $p=.111$, indirect behavioural approach, $F(2,70)=.440$, $p=.646$, or consent norms $F(2,70)=1.02$, $p=.368$. See Figure 6. The null hypothesis is accepted.

Table 4

One-way ANOVA comparing sexual consent attitudes between exposure-groups

SCS-R Variables	Exposure-Groups	N	Mean	SD	<i>F</i>	<i>p</i>
Perceived behavioural control	Early	38	3.32	1.56	0.78	.462
	Later	23	2.82	1.44		
	Never	12	3.06	1.54		
Attitude to establishing sexual consent	Early	38	5.00	1.14	2.27	.111
	Later	23	5.52	0.98		
	Never	12	5.56	0.97		
Indirect behavioural approach	Early	38	5.23	1.30	0.44	.646
	Later	23	4.91	1.38		
	Never	12	5.06	0.92		
Consent norms	Early	38	4.53	1.31	1.01	.368
	Later	23	4.12	1.05		
	Never	12	4.12	1.23		

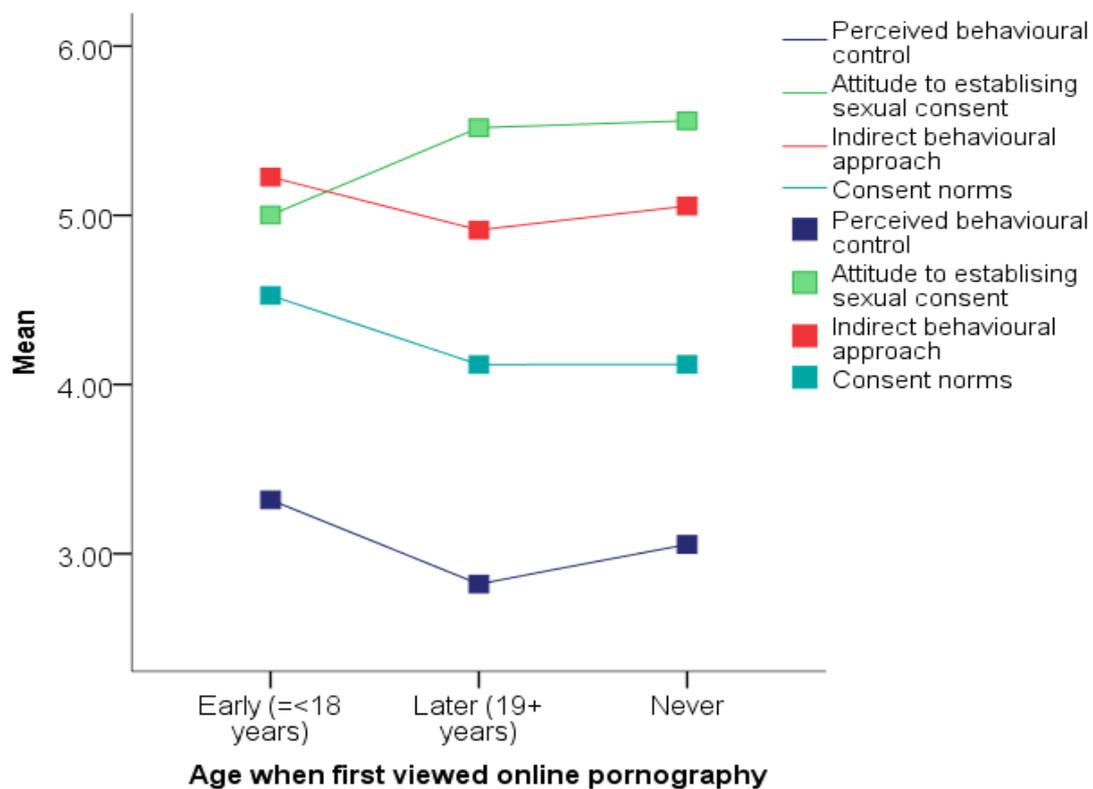


Figure 6. Mean SCS-R sexual attitudes scores between exposure-groups.

Hypothesis 3: PPUS scores will be higher in males than females (main effect of gender), and males will report higher PPUS scores than females (interaction effect of gender X group).

Two-way factorial ANOVA found a main effect of group, $F(2,67)=3.72$, $p=.030$. Post hoc Tukey comparisons revealed the early-exposure group had significantly lower PPUS total (Estimated Marginal Mean [EMM]=21.56, SE=1.54), than later group (EMM=15.28, SE=2.20), and never group (EMM=12.50, SE=4.84). No main effect of gender, $F(1,67)=1.57$, $p=.214$, suggests mean PPUS total scores were similar between females (EMM=14.13, SE=1.44) and males (EMM=18.76, SE=3.99). Nointeraction effect, $F(2,67)=1.34$, $p=.267$, shows males and females had similar PPUS total scores, regardless of age exposed to online porn: early (females EMM=16.33, SE=2.93; males EMM=26.78, SE=1.93), later (females EMM=14.06, SE=2.25; males EMM=16.50, SE=3.78), and never (females EMM=12.00, SE=2.79; males EMM=13.00, SE=9.26). See Figure 7. The null hypothesis is accepted.

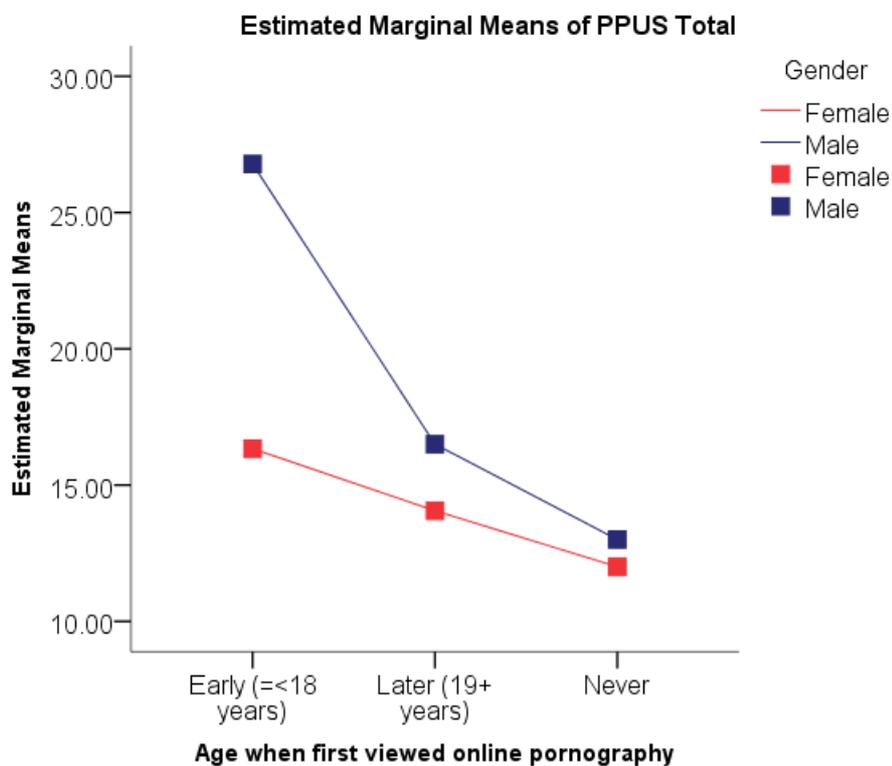


Figure 7. H3: Estimated marginal means for PPUS total scores, Group X Gender

Hypothesis 4: Males will have more maladaptive SCS-R sexual consent attitudes (main effect of gender); with more maladaptive SCS-R scores in males than females (interaction effect).

A two-way Factorial MANOVA tested main and interaction effects of Group and Gender on four related SCS-R subscales. Box's test of equality of covariance matrices was significant, Box's M=69.64, $F(40,2341.95)=1.42$, $p=.042$. There was no main effect of Group, Wilk's Lambda=.895, $F(8,128)=.912$, $p=.508$; or Gender, Wilk's Lambda=.951, $F(4,64)=.828$, $p=.512$; and no interaction effect of GroupXGender, Wilk's Lambda=.942, $F(8,128)=.486$, $p=.864$. Figures 8 to 11 illustrate mean SCS-R subscale scores by Group and Gender. The null hypothesis is accepted.

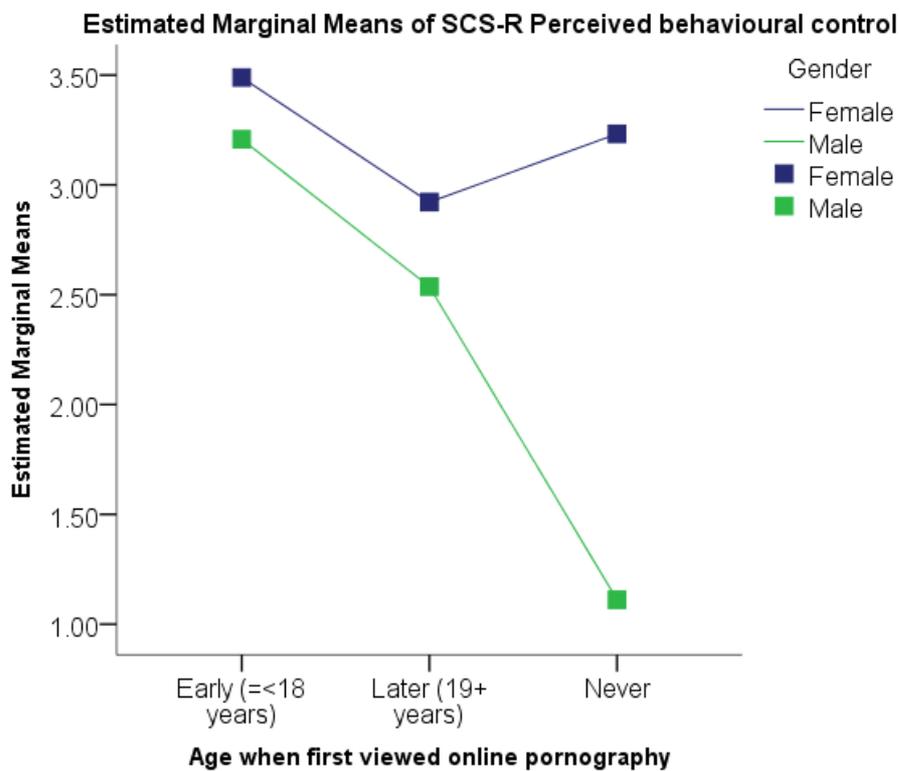


Figure 8. H4: Estimated marginal means for perceived behavioural control, Group X Gender.

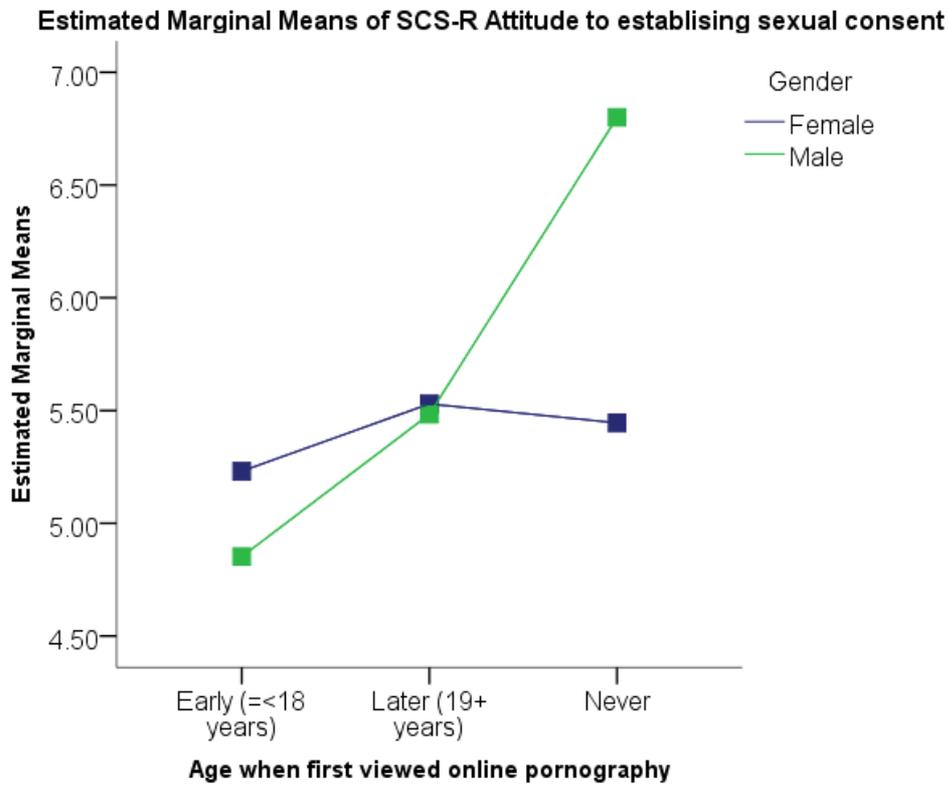


Figure 9. H4: Estimated marginal means for establishing sexual consent, Group X Gender.

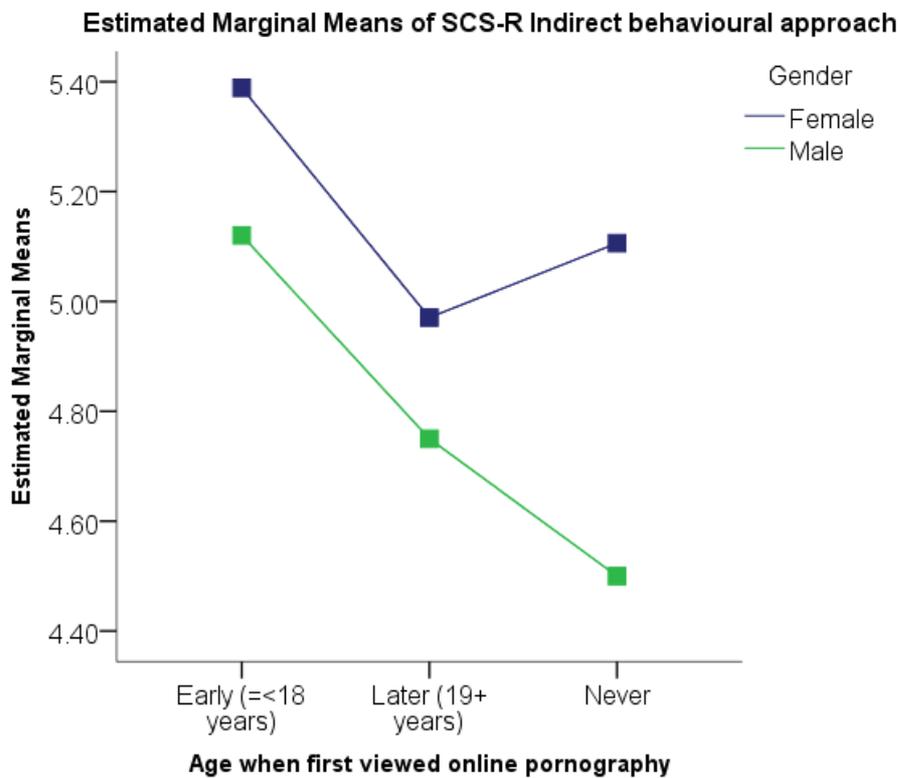


Figure 10. H4: Estimated marginal means of indirect behavioural approach, Group X Gender.

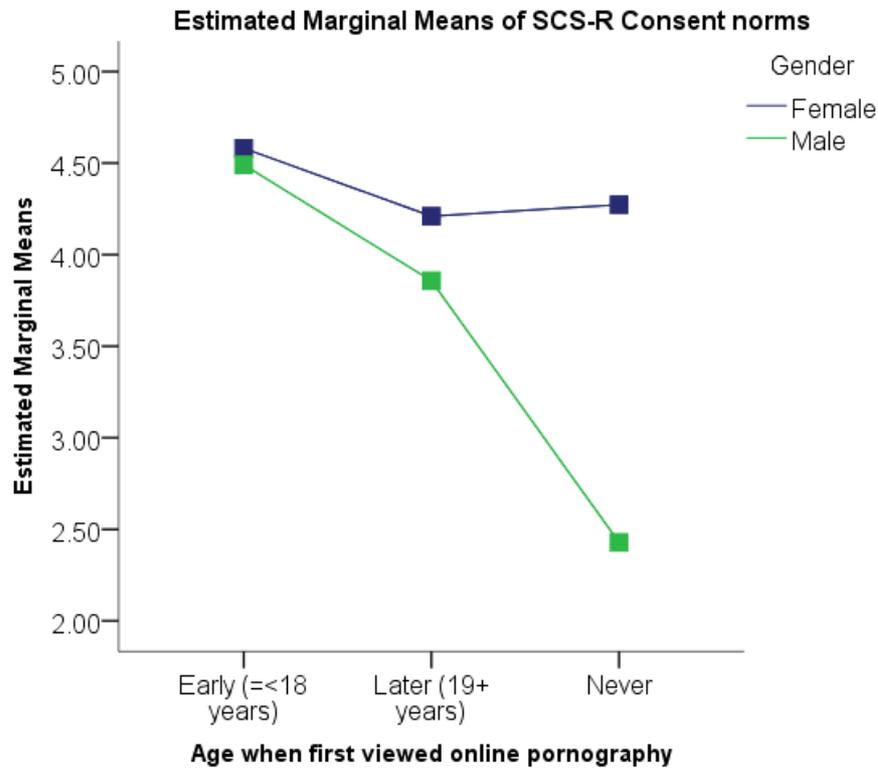


Figure 11. H4: Estimated marginal means for consent norms, Group X Gender

Hypothesis 5: There will be a different pattern of correlations between the PPUS and SCS-R scales in each exposure group (i.e., early/late/never viewed online porn).

The correlations (Table 5) shows 10 significant correlations in the full sample at $p < .01$ to $p < .05$. When comparing exposure-groups, almost identical correlations are seen only in the early-exposure group, with higher total problematic porn use was associated with lack of perceived behavioural control, $r(38) = .435$, $p = .006$, less positive attitudes to establishing sexual consent, $r(38) = -.337$, $p = .038$, favouring an indirect behavioural approach to establishing sexual consent, $r(38) = .332$, $p = .042$, but was uncorrelated with sexual consent norms, $r(38) = .106$, $p = .528$. The null hypothesis is rejected.

Table 5

H5: Pearson correlations between all PPUS and SCS-R scales, in the total sample (N=74) and comparing groups

Groups	PPUS Variables	SCS-R Sexual Consent Attitudes Variables			
		PBC	AEC	IBA	CN
Total sample (N=74)	PPUS Total	.308**	-.327**	.245*	.117
	Distress and functional problems	.225	-.318**	.183	.013
	Excessive use	.291*	-.361**	.276*	.089
	Control difficulties	.340**	-.293*	.265*	.110
	Use for escape/avoid negative emotions	.249*	-.216	.153	.183
Early group (n=38)	PPUS Total	.435**	-.337*	.332*	.106
	Distress and functional problems	.378*	-.407*	.308	-.024
	Excessive use	.390*	-.343*	.334*	.080
	Control difficulties	.457**	-.305	.358*	.091
	Use for escape/avoid negative emotions	.343*	-.192	.203	.198
Later group (n=23)	PPUS Total	-.300	.008	-.093	-.252
	Distress and functional problems	-.351	.148	-.219	-.091
	Excessive use	-.065	-.265	.162	-.216
	Control difficulties	-.331	.167	-.219	-.289
	Use for escape/avoid negative emotions	-.262	.149	-.159	-.202
Never group (n=12)	PPUS Total	.047	.067	-.170	-.138
	Distress and functional problems	.034	.022	-.066	-.050
	Excessive use	.051	.117	-.281	-.234
	Control difficulties	. ^c	. ^c	. ^c	. ^c
	Use for escape/avoid negative emotions	. ^c	. ^c	. ^c	. ^c

Note: PBC=Perceived behavioural control, AEC=Attitudes to establishing sexual consent, IBA=Indirect behavioural approach, CN=consent norms.

** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).

b. Cannot be computed because at least one of the variables is constant.

Hypothesis 6: Perceived impact of viewing online porn before age 18 (yes-group) predicts higher PPUS scores and maladaptive SCS-R scores.

A one way ANOVA (Table 6) found the Yes group had higher PPUS and SCS-R mean scores, followed by No group, then Did Not View group. The early group had significantly higher PPUS scores than other groups, but SCS-R subscale scores did not differ between exposure-groups.

Table 6

H6: One-way ANOVA impact of viewing online porn \leq age 18 on PPUS and SCS-R scores

Variables	Any impact of viewing online pornography before age 18?	N	Mean	SD	F	df	p
PPUS Total	Did not view	35	13.80	3.27	11.98	2,67	.001
	Yes	15	27.93	17.62			
	No	20	20.00	8.30			
PPUS Distress and functional problems	Did not view	35	3.43	1.17	6.78	2,67	.002
	Yes	15	5.80	3.76			
	No	20	3.85	1.66			
PPUS Excessive use	Did not view	35	3.77	1.48	10.76	2,67	.001
	Yes	15	7.93	5.28			
	No	20	5.90	2.67			
PPUS Control difficulties	Did not view	35	3.20	0.53	8.74	2,67	.001
	Yes	15	6.67	5.41			
	No	20	4.70	2.00			
PPUS Use for escape/avoid negative emotions	Did not view	35	3.40	1.06	11.22	2,67	.001
	Yes	15	7.53	4.67			
	No	20	5.55	3.46			
SCS-R Perceived behavioural control	Did not view	35	2.90	1.45	2.63	2,67	.079
	Yes	15	3.94	1.52			
	No	20	3.07	1.52			
SCS-R Attitude to actively establishing sexual consent	Did not view	35	5.53	0.96	3.05	2,67	.054
	Yes	15	4.75	1.09			
	No	20	5.15	1.16			
SCS-R Indirect behavioural approach	Did not view	35	4.96	1.23	0.63	2,67	.533
	Yes	15	5.41	1.20			
	No	20	5.07	1.47			
SCS-R Consent norms	Did not view	35	4.12	1.10	1.19	2,67	.309
	Yes	15	4.59	1.02			
	No	20	4.55	1.52			

4. Discussion

This section provides a discussion of the major findings of this study, possible explanations for these findings, how they relate to previous research, methodological limitations and strengths of this study, implications for theory, policy, and practice, and suggestions for future research.

4.1 Aim of Research

As online living and learning has become embedded in the lives of children, smartphones have afforded unprecedented access to online pornographic material, research suggests concerns for potential adverse ramifications (Mitchell et al., 2003). Recently published research in 2019 reports that children as young as eight have accidentally or voluntarily viewed online pornography prior to receiving primary school sex education (Dawson et al., 2018). The implications of early sexualisation of children on problematic pornography use or developing maladaptive sexual consent attitudes in adulthood are under researched. Additionally, which is under researched is to see if there are any implications due to early exposure to pornography on relationships or sexuality and of particular concern is what children are learning about sexual consent, which is often imperceptible in online porn.

The aim of the study is to expand on previous research by retrospectively comparing the impact of age first viewed online pornography, categorised as: (1) Early: ≤ 18 years; (2) Later: ≥ 19 years, or (3) never, on problematic porn use and sexual consent attitudes. The main hypothesis for this study examined if early exposure to online pornography (< 18 years) predicted higher problematic pornography use, and maladaptive sexual consent attitudes in adulthood (Later: ≥ 19). It examined to see if these effects were stronger in males, and if there will be different patterns of relationships between problematic

pornography use and sexual consent attitudes scale scores depending on age first viewed online porn, to inform primary sex-education interventions.

4.2 Summary of Findings

The survey findings provide strong evidence, based on 74 participants retrospective self-report data, that when children view online porn before age 18, this can have a detrimental impact in adulthood on their ability to self-regulate pornography use. The typical profile of those who first viewed online porn before 18 years of age, were male, younger, and were currently viewing online porn frequently (3-7 days per week), and report problematic pornography use. This early group feel that viewing online porn before age 18 had no impact on their sexual consent attitudes and behaviour, which these study findings do support, as their mean scores on four SCS-R scales were similar to the later and never groups. Only those participants in the early group who now report higher problematic pornography use, also report maladaptive sexual consent attitudes and behaviours, including lack of perceived behavioural control, and less positive attitudes to actively establishing sexual consent, as correlations showed.

Hypothesis 1: Early exposure to online pornography (age ≤ 18) predicts higher PPUS problematic pornography use scores in adults than later exposure (≥ 19) years or never.

This study found there was a significant impact of early exposure predicting higher total problematic pornography use. Hypothesis 1 is supported as participants who first viewed online pornography before 18 years of age, did report higher scores for problematic use, excessive use, control difficulties, and use for escape/avoidance, than the participants who viewed online pornography after 19 years or never. The findings from this study support previous research by confirming that online porn literacy needs to be included in primary school sex education (Dawson et al., 2019; Štulhofer et al., 2013).

Hypothesis 2: Early exposure to online pornography (age ≤ 18) predicts more maladaptive SCS-R sexual consent attitudes than later exposure (≥ 19) years or never.

This study found there was no main effect of early exposure to online pornography on adults sexual consent attitudes, Hypothesis 2 was not supported as participants appear to have similar sexual consent attitudes and behaviour mean scores on each of the four subscales, perceived behavioural control, attitude to establishing consent, indirect behavioural control, and consent norms, regardless of when they first viewed online pornography or never. This finding could support discrepancies in pornography studies by Klaassen and Peters (2015) who reports there are both negative and positive effects to viewing pornography.

Hypothesis 3: PPUS scores will be higher in males than females (main effect of gender); and gender will influence the effect of age exposed to online pornography, with males showing higher PPUS scores than females in all groups (interaction effect of gender X group).

This study found a significant main effect of group and reveals that the early group had significantly lower PPUS totals than the later and never group. There was a non-significant effect of gender, indicating that males and females had similar PPUS total scores regardless of age when they first viewed online pornography. Hypothesis 3 is not supported as gender did not influence the impact of age of exposure on problematic pornography use.

Hypothesis 4: Males will have more maladaptive SCS-R scores (main effect of gender); and gender will influence the effect of age exposed to online pornography, with more maladaptive SCS-R scores in males than females, in all groups (interaction effect of gender X group).

This study found no main interaction effects of group and gender on the SCS-R scores, indicating that any group differences in sexual attitudes and behaviour, were not

influenced by gender. Hypotheses 4 was not supported as gender did not influence the impact of age of exposure on sexual consent attitudes, and males did not show more maladaptive SCS-R scores than females. As no effect was found of gender was found in H4 and H5 this lack of impact conflicts previous research by stating that males are more prevalent attitudes and behaviours towards risky sexual behaviour (Kühn & Galliant, 2014).

Hypothesis 5: There will be a different pattern of correlations between the PPUS and SCS-R scales in each exposure group (i.e., early/late/never viewed pornography).

This study found support for hypothesis 5, as when comparing groups there was a different pattern of relationships between the PPUS and SCS-R variables, indicating that among individuals who viewed online pornography before age 18, who now report problematic pornography use, tend to have maladaptive sexual consent attitudes, and behaviours. In contrast, this was not an issue for those who viewed pornography at 19+ years, or who never viewed. These relationships were only found in the early exposure group, and indicated that when such individuals had problematic pornography use, this was associated with a lack of perceived behavioural control, and less positive attitudes to establishing sexual consent.

Hypothesis 6 results revealed that participants in the early group who answered the Question, if they felt their exposure to online porn before age 18 had an impact (Yes/No), this was supported. The Yes group were predominantly male, from the youngest age group (18-24 years), and reported significantly higher PPUS scores (including distress, excess use, control difficulties, use for escape), and least positive attitudes to establishing sexual consent. This was followed by lower corresponding scores in the Later exposure group, and lowest scores in the Never group. This finding is important, as it shows that when adults say early exposure to online porn had an impact, analysis of their PPUS and SCS-R scores objectively supports

this. This finding also suggests that participants answered honestly in this survey, as self-reported perceived impact corresponds with actual impact found in each group. These findings show support for previous research suggestions that children and adolescents are at risk of developing problematic pornography use and maladaptive sexual consent attitudes (Dawson et al., 2019; Kor et al., 2014; Martellozzo et al., 2017; Wright & Randall, 2012).

4.3 Limitations

There were some limitations to this study and the first relates to the sample of participants. It was a small non-random sample size with 74 participants with unequal sample sizes in each group/age, and the age range was broad (18-54) as some participants may not have had access to online pornography content when they were 18 and under. A larger sample of 18-35 years would be preferable. Due to the sensitive nature of the study and privacy around issues of pornography use and attitudes towards sexual consent, snowball sampling was restricted as participants were reluctant to share the link on personal social media accounts.

A second limitation is the lack of depth to some of the Questions asked. There was limited focus on primary sex education effectiveness, the study could have asked more probing questions to discover WHY it was/was not effective. The Perceived impact of viewing online pornography before 18 years of age? A follow up question could have asked the participants WHAT the impact was, and WHETHER it was positive, negative or mixed. The assumption is it was negative, however, it could have been positive, as research reports motivations for viewing online pornography are highly individualised (Dawson et al., 2019).

Thirdly, asking participants to recall when they first viewed online pornography is a limitation for this study, as memories can be incorrect, therefore potentially providing some inaccurate findings. However, due to the sensitive nature of the topics raised in this questionnaire employing an adult population was ethically appropriate (PSI, 2011).

4.4 Strengths

A first key strength of this study is the findings, although concerning, that early exposure to online pornography predicts higher problematic pornography use in adults than the later exposed or never group. This finding supports previous research that children are viewing online pornography as early as ten, prior to receiving primary sex education (Dawson et al., 2019; Sinković et al, 2013) and this finding can inform school sex-education interventions.

Secondly, findings from this study report that early exposure to online pornography has not lead all participants to have maladaptive sexual consent attitudes or behaviours which were similar to the later and never groups. The findings also suggest that sexual attitudes are influenced by other unknown factors not measured in this study, such as culture, which itself can be influenced by parents, religious doctrine, media, pop stars, dating partners and or peers interactions.

A third strength was all 74 participants completed the online questionnaire, due to the anonymous and confidential approach of the questionnaire participants were encouraged to honestly engage with the questions, providing a thought provoking opportunity to reflect on their pornography consumption patterns and sexual consent attitudes, beliefs and behaviours. Support numbers were provided in accordance with the PSI (2011) guidelines for any participants who wished to seek help or support.

4.5 Future Research

Further research recommendations would be to firstly replicate this study by including the limitations of the current study. To aim for a larger heterogenous sample, to include questions of sexual orientations, and detailed questions about personal motivations or influencers for

viewing online pornography in order to further explore the impacts. As the current study reports findings that were significant for early exposure to online pornography predicting higher problematic pornography use. It may be warranted for the NSPCC in Ireland to replicate the UK's NSPCC quantitative and qualitative study which recruited 1001 children between the ages of 11-16 (Martellezzo et al., 2017). As Dawson et al., (2019) reports Irish males are the youngest viewers of online pornography in the Western World, this warrants a further large scale investigation with a younger sample, and possibility a longitudinal study to explore the impact of ever changing boundaries/directions of explicit pornography and its impact on problematic use in young viewers. Although this will raise ethical concerns, the benefit of such studies will provide greater understanding into the relationship between childrens early exposure to online pornography and problematic pornography use and maladaptive sexual consent attitudes and behaviours and inform sex education interventions.

4.6 Implications and Applications

The data findings from this study has implications for children, parents, teachers, schools and society as a whole. In a study of over 1,380 Irish students by Dawson et al., (2019) report that porn literacy education should coincide with first engagement to online access, it should be age and stage appropriate, be focused on relationship and sexual health education. It should include discussions about the effects of viewing online pornography, which could help deal with any negative feelings or behaviours associated with pornography use (Dawson et al., 2019) before it can become problematic. This study reports findings that the early group participants perceived pornography to be having an impact on them, therefore listening and reacting to what young people are saying on this topic is valuable and important.

Creating and developing a Porn Aware/ Porn Literate health awareness campaigns that is gender, sexual orientation, age and stage appropriate to target children, parents and

teachers of 5th and 6th class pupils to include education about pornography. This intervention could be developed in partnership with a major mobile provider to provide online links to information and education for children, parents, teachers, should they find themselves with questions or concerns over the content they have viewed. Training specialised sex educational facilitators/counsellors to implement Porn Aware /Porn Literate programmes to schools, parents, and teachers, would be essential for the successful implementation to support positive mainstream discussions of such sensitive topics.

4.7 Conclusion

This study hypothesized that early exposure to online pornography would predict higher problematic pornography use and maladaptive sexual consent attitudes in adulthood, and this impact would be stronger in males. The findings from this research study supports this prediction, and as it is not a case of “if” but “when” children will be accidentally or voluntarily exposed to online pornography. Educational interventions are increasingly important to limit the development of problematic pornography use and maladaptive consent attitudes in adulthood.

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APPENDICES

Appendix A - Information Sheet and Informed Consent

My name is Regina McGuinness and I am conducting research in Department of Psychology in Dublin Business School for BA Psychology thesis, into viewing habits of online pornography, examining current attitude and trends in relation to sexual consent. This research is being conducted as part of my studies, it will be submitted for examination, and findings will be shared at an academic poster conference. In order to participate you must be **over 18 years of age**, and **sexually active**, your participation is greatly appreciated.

You are invited to take part in this study and participation involves completing the attached online **anonymous** questionnaire which should take no more than 9 mins to complete. The questionnaire asks some sensitive questions in relation to online viewing habits and thoughts around sexual consent, and may cause distress to some participants. One example would be *"I believe that sexual intercourse is the only sexual activity that requires explicit verbal consent"*, and a second example would be *"In an average week how often do you view online pornography?"*, although sensitive in nature, it is important to note that these questions have been used in previous research. Should you feel distressed, we have provided support numbers for your convenience on the thank you sheet at the end of this survey.

We would like to assure you that the survey is completely voluntary, you are not obliged to take part, and your participation is **anonymous** and **confidential**. You can also **withdraw from the survey at any time** before submitting your answers. All data will be securely stored on a zip drive and protected by a password coded computer device, and destroyed after a one year period. As the survey is **anonymous**, once the questionnaire has been submitted, it will be impossible to withdraw from the survey as the responses cannot be attributed to any one person.

It is important to understand that by completing and submitting the online survey, you are consenting to participate in the study.

Should you require any further information about the research, please contact

Regina McGuinness, or my Supervisor.

Thank you for taking the time to complete this survey.

Appendix B - Basic Information

Demographic Questions: Please answer each question

1. What is your sex?
 - a. Male
 - b. Female

2. What age are you?
 - a. Dropdown box to add in age

3. Have you ever engaged in viewing online pornography?
 - a. Yes
 - b. No

4. What is your current relationship status?
 - a. Single
 - b. Married
 - c. In an exclusive relationship
 - d. Casually Dating
 - e. Other

Appendix B – Continued

5. In an average week how frequently do you view Pornography?
 - a. Less than once a week
 - b. 1-2 Times a Week
 - c. 3-6 Times a Week
 - d. Every day
 - e. Never

6. What age were you when you first viewed online pornography?
 - a. Drop down box to add in age

7. Do you feel your primary school sex education was effective?
 - a. Yes
 - b. No
 - c. Did not receive sex education in primary school

8. If you viewed pornography before 18 years of age, do you feel it impacted on your attitudes and behaviours in relation to seeking sexual consent?
 - a. Yes
 - b. No
 - c. I did not watch pornography before 18 years of age

Appendix C – Sexual Consent Scale – Revised (SCS-R) (Humphreys & Brousseau, 2010)

The following section will ask you questions about your feelings and thoughts towards sexual consent. As the survey is anonymous and confidential please feel free to indicate your response between 1 – 7 with 1 meaning Strongly Disagree and 7 meaning Strongly Agree.

Subscale 1: Perceived Behavioural Control (11 questions)

1. I would have difficulty asking for consent because it would spoil the mood
2. I am worried that my partner might think I'm weird or strange if I asked for sexual consent before starting any sexual activity?
3. I would have difficulty asking for consent because it doesn't really fit with how I like to engage in sexual activity.
4. I would worry that if other people knew I asked for sexual consent before starting sexual activity, that they would think I was weird or strange.
5. I think that verbally asking for sexual consent is awkward
6. I have not asked for sexual consent (or given my consent) at times because I felt that it might backfire and I wouldn't end up having sex
7. I believe that verbally asking for sexual consent reduces the pleasure of the encounter
8. I would have a hard time verbalising my consent in a sexual encounter because I am too shy.
9. I feel confident that I could ask for consent from a new sexual partner (R)
10. I would not want to ask a partner for sexual consent because it would remind me that I am sexually active
11. I feel confident that I could ask for consent from my partner (R)

Subscale 2: Positive attitude toward establishing consent (11 Questions)

1. I feel that sexual consent should always be obtained before the start of any sexual activity
2. I believe that asking for sexual consent is in my best interest because it reduces any misinterpretations that might arise
3. I think it is equally important to obtain sexual consent in all relationships regardless of whether or not they have had sex before
4. I feel that verbally asking for sexual consent should occur before proceeding with any sexual activity
5. When initiating sexual activity, I believe that one should always assume they do not have sexual consent
6. I believe that it is just as necessary to obtain consent for genital fondling as it is for sexual intercourse
7. Most people that I care about feel that asking for sexual consent is something I should do

8. I think that consent should be asked before any kind of sexual behaviour, including kissing and petting
9. I feel it is the responsibility of both partners to make sure sexual consent is established before sexual activity begins
10. Before making sexual advances, I think that one should assume “no” until there is clear indication to proceed
11. Not asking for sexual consent some of the time is okay (R)

Subscale 3: Indirect behaviour approach to consent (6 Questions)

1. Typically I communicate sexual consent to my partner using nonverbal signals and body language
2. It is easy to accurately read my current (or most recent) partner’s nonverbal signals as indicating consent or non-consent to sexual activity
3. Typically I ask for consent by making a sexual advance and waiting for a reaction, so I know whether or not to continue
4. I don’t have to ask or give my partner sexual consent because my partner knows me well enough
5. I don’t have to ask or give my partner sexual consent because I have a lot of trust in my partner to “do the right thing”
6. I always verbally ask for consent before I initiate a sexual encounter [R]

Subscale 4: Sexual Consent Norms (7 Questions)

1. I think that obtaining sexual consent is more necessary in a new relationship than in a committed relationship
2. I think that obtaining sexual consent is more necessary in a casual sexual encounter than in a committed relationship
3. I believe that the need for asking for sexual consent decreases as the length of an intimate relationship increases
4. I believe it is enough to ask for consent at the beginning of a sexual encounter
5. I believe that sexual intercourse is the only sexual activity that requires explicit verbal consent
6. I believe that partners are less likely to ask for sexual consent the longer they are in a relationship.
7. If consent for sexual intercourse is established, petting and fondling can be assumed.

Appendix D – Problematic Pornography Use Scale (PPUS) (Kor et al., 2014)

The following section will ask you questions relating to your feelings and use of pornography. As the survey is anonymous, please feel free to indicate your response between 0 to 5 with 0 meaning Never True and 5 meaning Almost Always True.

Factor 1: Distress and Functional Problems (3 Items)

1. Using pornography has created significant problems in my personal relationships with other people, in social situations, at work or in other important aspects of my life
2. I risked or put in jeopardy a significant relationship, place of employment, educational or career opportunity because of the use of pornographic material.
3. I continued using pornography despite the danger of harming myself physically (for example: difficulty getting an erection due to extensive use, difficulty reaching an orgasm in ways that do not include pornography)

Factor 2: Excessive Use (3 Items)

4. I often think about pornography
5. I spend too much time being involved in thoughts about pornography
6. I spend too much time planning to and using pornography

Factor 3: Control Difficulties (3 Items)

7. I feel I cannot stop watching pornography
8. I have been unsuccessful in my efforts to reduce or control the frequency I use pornography in my life
9. I keep on watching pornographic materials even though I intend to stop

Factor 4: Use for escape/avoid negative emotions (3 Items)

10. I use pornographic materials to escape my grief or to free myself from negative feelings
11. I watch pornographic materials when am feeling despondent
12. I have used pornography while experiencing unpleasant or difficult feelings (for example: depression, sorrow, anxiety, boredom, restlessness, shame or nervousness).

Appendix E – Thank You Sheet and Support Information

Thank you for your participation in this study, we greatly appreciate your contribution. Your information is confidential and anonymous. Should you wish to seek support in relation to any of the issues raised from participating in this study, please call,

Aware **1800 80 48 48** or email supportmail@aware.ie . Monday to Sunday 10am -10pm

The Samaritans call Freephone: **116 123** or email jo@samaritans.ie

The Dublin Rape Crisis Centre **1 800 77 888** National 24-Hour Helpline.

Thank you for completing.