The relationship between consumption of pornography and sexual pleasure: results of a mixed method systematic review

Alan McKee¹, Katerina Litsou, Paul Byron¹ and Roger Ingham²

¹Faculty of Arts and Social Sciences, University of Technology Sydney, 235 Jones St,

Ultimo, NSW 2007

²Centre for Sexual Heath Research, School of Psychology, University of Southampton,

Southampton SO17 1BJ, UK

Emails

Alan.McKee@uts.edu.au

A-M.Litsou@soton.ac.uk

Paul.Byron@uts.edu.au

Roger.Ingham@soton.ac.uk

ORCID:

Alan McKee 0000-0003-0577-2061

Katerina Litsou 0000-0002-1632-8946

Paul Byron 0000-0001-6591-3060

Roger Ingham 0000-0001-7964-413X

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Abstract

A systematic review of literature on the relationship between consumption of pornography and sexual pleasure found two approaches. One examines masturbatory pleasure produced by engagement with pornography and finds that both men and women take pleasure from pornography consumption (although for women in particular this can create conflicting reactions). A second, more dominant, approach investigates whether pornography consumption is associated with subsequent sexual pleasure with a partner. It is notable that even in a sample of articles curated to understand pleasure, there is more research into satisfaction than pleasure and, in particular, relationship satisfaction.

Keywords: pleasure; interdisciplinary research; satisfaction; systematic review

Introduction

This article reports on a mixed method systematic review of academic research published between January 2000 and December 2017 about the relationship between the consumption of pornography and sexual pleasure. The data emerge from a project that seeks to understand the relationship between the consumption of pornography and aspects of sexual health. Sexual health is defined as

a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health 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. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled (World Health Organization 2006, 5)

The project team is interdisciplinary including researchers from Film and Television, Psychology and Media and Cultural Studies. The interdisciplinary nature of the team means that the systematic review can embrace relevant academic research from disciplines across both the humanities and the social sciences and make generically-sensitive interpretations of articles that use different conceptual frameworks, methods, and understandings of what constitute data and arguments.

Reviews of the literature on pornography and pleasure

Previous reviews of academic research on the relationship between the consumption of pornography and aspects of sexual health have not focused specifically on sexual pleasure. Harkness, Mullan, and Blaszcynski (2015) undertook a broad-ranging systematic review of the association between pornography use and sexual risk behaviours in adult consumers. In total, they analysed seventeen studies and found mixed results, with some studies finding correlations between some forms of pornography consumption and some aspects of risky sexual practice. In relation to sexual pleasure, we note that they regarded 'casual sexual behavior' as a form of risky sexual practice. Duffy, Dawson and Nair (2016) conducted a systematic review of academic research on self-perceived pornography addiction. They reviewed ten eligible

papers finding that people who perceived themselves to be addicted to pornography regarded this as having a negative impact on their lives. They also found this to be true for partners of people who considered themselves to be addicted to pornography. Reported negative effects included worry, loss of confidence, increase in shame, reduction in well-being, breakdown of relationships, sexual problems and perceived rejection.

Ashton, McDonald, and Kirkman (2018) conducted a qualitative systematic review of women's experiences of pornography, finding twenty-two articles. They found a variety of results; some women reported a feeling of inadequacy when judging their own bodies against those in pornography, while others reported that the variety of bodies in pornography made them feel normal. Some studies reported female participants saying they were aroused by pornography. Women who did not use pornography themselves but whose partners did, reported feelings of disconnection and loss of intimacy. Conversely, women who used pornography with a partner reported increased intimacy. Some women reported a connection between men's consumption of pornography and later non-consensual sex acts. The systematic review and meta-analysis undertaken by Grubbs et al focused on pornography problems due to moral incongruence. They reviewed manuscripts that assessed relationships between pornography problems and either religiousness or moral incongruence – that is, 'the experience of engaging in activities that violate one's deeply held moral values' (Grubbs et al. 2019, 398) identifying twelve studies. They found a link between religiousness and moral incongruence around pornography use. They also found that moral incongruence about pornography consumption is related to self-perceived pornography addiction.

These studies provide useful models for undertaking a systematic review of the academic literature on the relationship between pornography consumption and aspects of sexual health, albeit the key words used and the data bases scrutinised varied somewhat across studies. No previous research has, however, conducted a systematic review on the relationship between the consumption of pornography and sexual pleasure - this being a central aspect of sexual health, as per the WHO definition used in this study.

The current project operationalised sexual health through the fifteen domains of Healthy Sexual Development (HSD) proposed by McKee et al (2010). This approach was

developed by authors from a range of academic disciplines across the humanities and social sciences; it avoids heteronormativity by refusing to name or imply minority sexual acts or forms of relationships as 'unhealthy' (McNeill 2013) and provides a series of relatively clearly delineated domains of sexual health whose relationship to the consumption of pornography can be investigated by applying them to experimental and cross-sectional studies.

The present study

This article is one of a series presenting the results of systematic reviews of research into the relationship between consumption of pornography and relevant domains of HSD; it considers the 'Sex can be pleasurable' domain. We chose to undertake a systematic literature review (Ressing, Blettner, and Klug 2009, 457) rather than a formal meta-analysis as there does not yet exist a stable set of questions, definitions, and processes for data-gathering about the relationship between the consumption of pornography and domains of HSD that would allow direct comparison across studies. As Richters argues, it is only possible to conduct a formal meta-analysis in an area where researchers 'more or less agree about the meaning of the terms they use' (1997, 214) and, as Attwood and Smith have warned, we must be wary of the unproven idea that

research instigated and undertaken for varying purposes and within disparate academic disciplines can be aggregated to produce similar and substantiating conclusions (Attwood and Smith 2010, 175).

Rather, a process such as a systematic review that is sensitive to the ways in which different academic disciplines produce and report on data is vital when working across a range of disciplines that are not typically brought into conversation with each other.

This article presents two phases of the research. In the first, the process by which the authors involved others in prioritising the perceived importance of domains is described. This is followed by a report of the data arising from the first of the systematic reviews carried out on what was regarded by the Delphi panel as one of the most important of the fifteen domains.

Preliminary work and the Delphi Panel

Initially, an Advisory Group was recruited comprising six leading professors from a range of disciplines across the Social Sciences and Humanities, selected for their expertise in healthy sexual development and/or representations of sexuality. These included researchers in Paediatrics, Epidemiology, Adolescent Medicine, Sexual and Reproductive Health, Cultural Studies, and Feminist Media Studies. They were asked to provide names of 'key pornography researchers around the world' to form a Delphi panel. Fifty-seven researchers were suggested by at least one of the Group members; the Advisory Group and Delphi Panel members are listed in McKee et al (2019).

The authors contacted each of these fifty-seven and invited them to take part. Forty-nine responded, with forty-four agreeing to take part in the survey and thirty-eight completing the survey (67% of those invited). The panel included researchers from a wide range of disciplines, including psychology, communication studies, cultural studies, media studies, human geography, history, literary studies, film studies, gender studies, cultural anthropology, sociology and public health. A survey instrument was developed which asked the following question for each of the fifteen domains of HSD: 'How important do you think this domain is in understanding the relationship between pornography and its audiences/users/consumers etc?' on a Likert scale from Very Important to Completely Unimportant. Participants were also asked to suggest the most important databases for finding academic research about these relationships, and to suggest search terms for identifying this literature. The instrument was reviewed by the project Advisory Group and the research team and revised based on their suggestions prior to being distributed.

The members of the Delphi panel agreed that all fifteen domains of HSD were *very* or *somewhat important* for researchers interested in understanding the consumption of pornography. In terms of importance, they ranked them in the following order:

- 1. Competence in mediated sexuality
- 2. Awareness and acceptance that sex can be pleasurable
- 3. Open communication
- 4. Self-Acceptance
- 5. An understanding of consent
- 6. Sexual agency
- 7. An understanding of safety

- 8. Lifelong learning
- 9. Education about biological aspects of sex
- 10. Public/private boundaries
- 11. Understanding of parental and social values
- 12. Relationship skills
- 13. Sexual development should not be coercive or joyless
- 14. Freedom from unwanted activity
- 15. Resilience

The Delphi panel members also provided details about which databases to search. The search was conducted on ProQuest, EBSCO, Scopus and JSTOR, which between them include all the databases nominated more than once, with the exception of Google Scholar because this does not permit keyword searches (full details provided in the Search and Analysis protocol -

https://figshare.com/articles/dataset/Search_and_Analysis_Protocol/12955052).

Method

The researchers conducted a systematic review, searching all relevant peer-reviewed journal articles published between January 2000 and December 2017. The search terms included all of those suggested by two or more of the panel members: (porn* OR "sexually explicit material" OR "visual sexual stimuli") AND (pleasur* OR fun OR satisfaction OR arousal OR orgasm OR recreational OR permissive OR desire OR "role play" OR fantas*).

A search log template was created for inputting the search terms to ensure consistency in approach. Two members of the research team independently searched the four databases.

The two members of the research team who performed the database searches each created a list containing all the articles that emerged from their searches. After removing all duplicates, lists were compared to ensure consistency. The abstract of each article was then independently reviewed in order to identify which were relevant to the study, using the following exclusion criteria:

> was not a peer reviewed article

- > did not offer original qualitative or quantitative data about the consumption of pornography and the relevant domain of HSD
- ➤ did offer original qualitative or quantitative data but in relation to another domain of HSD and not the one in focus (in this case sexual pleasure)
- ➤ the full article was not in English
- ➤ the article was not centrally about pornography consumption and the relevant domain of HSD

The two coding researchers liaised closely during this process. For cases in which agreement could not be reached they brought the discussion to the whole group for a decision. This produced a final list of articles that addressed the relationship between the consumption of pornography and sexual pleasure. This yielded sixty-eight articles.

Two forms of analysis were used; a light touch content analysis and thematic analysis (Braun and Clarke 2006). In order to facilitate the latter a spreadsheet was created to allow coding of information about research design, methods and the content of the articles. Articles were coded into this spreadsheet independently by two members of the research team using the Search and Analysis protocol. In order to check for interrater reliability, coding was conducted in batches of ten-to-fifteen articles and then Cohen's kappa statistic was calculated for each researcher's results for each batch. If kappa was below 0.61, as recommended by McHugh (2012), the researchers then reviewed and discussed differences, reached agreement on the coding, and then continued with the next batch of articles. This process continued until a kappa of at least 0.61 was reached for all criteria that would be coded in the analysis. For categories where it was not possible to reach a kappa of 0.61, these codes were excluded on the basis that they appeared to be too subjective (again, the full details of this process are available in the Search and Analysis protocol).

Upon deciding which categories should be eliminated and having reached over 0.61 agreement for each remaining category, the researchers independently proceeded to code all the remaining articles for this domain. The research team then carried out a thematic analysis to identify the patterns within the research related to pornography and this particular domain of HSD. Researchers independently read the articles, using an inductive approach to identify the key 'themes' in each domain (Braun and Clarke 2006, 83), with the coding sheet allowing researchers to easily identify relevant articles

for analysis. The team of researchers then discussed the possible themes identified and, over the course of several discussions, agreement was reached about the most important themes to emerge and explore further. Because the team was interdisciplinary, particular attention was paid to the differences between the ways in which articles from social sciences and humanities disciplines engaged with the themes.

Results

Domains for analysis and numbers of articles

The initial search, after removing duplicates, returned 524 articles. Of these, 430 were excluded after screening of title and abstract and a further twenty-six were excluded after the full texts were screened. In the end sixty-eight articles were identified as providing relevant data about the relationship between the consumption of pornography and sexual pleasure and were thus included for thematic analysis (a table with details of all analysed article is available at https://figshare.com/articles/dataset/Complete_list_of_68_articles_reviewed_for_analy sis_of_pornography_and_pleasure/12955064).

The journals in which most of the articles were published were *Archives of Sexual Behavior* (N=8), *Journal of Sex Research* (N=3) *Sex Roles* (N=3) and *Sexologies* (N=3), each of which publishes articles mainly using methods of data gathering and analysis derived from social psychology; and *Porn Studies* (N=7) and *Sexualities* (N=3) which mainly publish articles that employ humanities-based research methods. Initial coding revealed that, of the sixty-eight papers coded, fifty-eight reported on data collected from a single point in time. Six papers reported data collected at more than one time point, and four were based on experimental designs. Data were mostly collected through surveys only (N=45) with eleven using interviews and/or focus groups. A minority of articles (N=7) used mixed methods. Most of the articles (N=42) reported correlations or regressions. Ten of the articles *explicitly* claimed that pornography *causes* changes in other variables despite the fact the data do not support this claim. Another twenty-three *implied* causality, again without appropriate data; implied causality was measured through article references to terms including the 'effect', 'impact', or 'influence' of pornography. Thirty-five articles (around half the sample) avoided inappropriately

claiming or implying causality. To clarify the logic of this analysis: whereas 'the correlation of risky sexual practices with pornography consumption' means the same as 'the correlation of pornography consumption with risky sexual practices', it is not true that 'the impact of pornography consumption on risky sexual practices' means the same thing as 'the impact of risky sexual practices on pornography consumption'. The language of 'impact' implies a unidirectional causal relationship.

The analysis identified two key themes: the first relates to pleasure and the second to satisfaction. We report first on the theme of pleasure as that is the focus of this article, although the theme of satisfaction was more dominant in the sample.

Pleasure

Two main subthemes in discussion about pornography and pleasure emerged. One subtheme is about masturbatory pleasure resulting from the use of pornography. This research tends to take different forms in the humanities articles reviewed compared with the articles from the social sciences. In the former, there is more engagement with pornography consumers about what pornography they use, why they use it and how that feels. This research presents more context and information from consumers about conflicted feelings in regard to their use of pornography. This approach seeks to understand the ways in which consumers make sense of the material they view. The research shows that most consumers take sexual pleasure from their consumption of pornography:

speaking to the pleasurable aspect of consuming pornography, and in addition to sexual gratification, some participants [young men with non-exclusive sexual orientations] also discussed the importance of 'quality' in their usage. For example, Rory said, 'I will think, "I'm going to find a good video and take a little more time with this and get some release and feel good about that (McCormack and Wignall 2017, 983, Sociology, Media and Cultural Studies)¹

The research also suggests that sexual pleasure may have some relationship with the development of sexual agencyⁱⁱ:

Ava also noted how her consumption of online pornography helped her to focus on her own sexual pleasure and to put her own sexual needs first. She explained, consuming SEM [Sexually Explicit Material] online helps her to remember 'my

own pleasure is actually of paramount importance' (McKeown, Parry, and Light 2018, 347, Recreation and Leisure Studies, History and Politics).

This can also be related to the development of sexual identities; researchers found that 'gay-identifying research participants perceive pornography as a personally validated avenue to pleasure' (Goh 2017, 455, Arts and Social Sciences).

The articles also reported that, while consumers take pleasure from the consumption of pornography, this can be conflicted, especially amongst women. Several articles, from social sciences and humanities, noted a tension between the sexual pleasure that women take from pornography and wider cultural discourses:

Although Julia acknowledges the pleasurable sexual stimulation that pornography offers, she strives to restrict her personal porn use, as it clashes with the accepted cultural script of being 'a good girl'. It seems that awareness of these cultural scripts causes more distress to Julia than the actual pornographic content she consumes (Spišák 2017, 365, Media Studies)

Women's enjoyment of porn, in particular, poses ideological and aesthetic dilemmas ... their pleasures are difficult to reconcile with their reservations (Gurevich et al. 2017, 577, Psychology, Sexuality Hub: Integrating Feminist Theory).

The coders noted that articles in this subtheme tend to focus on women and gay men as consumers of pornography. By contrast, research with heterosexual men overwhelmingly presents their use of porn – and indeed we might say, heterosexual masculinity itself – as a risk. The sample includes no articles that seek to find out whether pornography can serve to increase heterosexual men's experience of sexual pleasure.

When articles from the social sciences do focus on masturbatory pleasure they tend to avoid the term 'pleasure' and instead talk about 'arousal'. These articles generally find that participants are 'aroused' by pornography (Lofgren-Martenson and Mansson 2010, Reid et al. 2011, Laier, Schulte, and Brand 2013), are more 'aroused' by pornography than by neutral films (Glascock 2005, Staley and Prause 2013), and that men are more 'aroused' by pornography than women (Glascock 2005, Lofgren-Martenson and Mansson 2010). They find pornography is 'used' for purposes including masturbation,

mood management, entertainment when bored, and as a contributor to sexual practice with a partner (Paul and Shim 2008, Sun et al. 2016).

A second subtheme – which is more prevalent in articles from the social sciences - is not about the (masturbatory) pleasure that results from consuming pornography, but is rather concerned about how the use of pornography is related to later (non-pornographic) sexual pleasure between people; that is to say, if someone uses pornography for masturbation, does this subsequently (or consequently) have an impact on their sexual pleasure with another person? Research falling within this subtheme takes a media effects approach (Bryant and Oliver 2008) to understand the relationship between pornography and pleasure and tends to position pleasure as a subfactor in relationship/marital satisfaction. These articles are discussed in more detail under the theme of 'Satisfaction' below.

It is of interest that some of the articles reviewed – primarily from the social sciences - see pleasure itself as risky, or even negative. We can see this, for example, in articles which view masturbation with suspicion:

Previous research illustrates that some pornography use may be 'autoerotic sexuality' where one has a sexual experience through masturbation. These autoerotic sexual experiences through pornography use may potentially shape an individual's attitudes that sex is primarily to extend your own pleasure and is strictly physical (Brown, Conner, and Vennum 2017, 468, Family Studies and Human Services: Marriage and Family Therapy, Community, Family and Addiction Sciences: Marriage and Family Services; Human Services: Addiction Counseling Program)

Satisfaction

Although our focus in the search and analysis was primarily on pornography use and pleasure, our systematic review revealed that this was not the most important theme in the sample. In fact, the articles – and particularly articles from the social sciences – focused less on pleasure and more on satisfaction.

Many articles in the sample gathered data about satisfaction using, between them, thirteen separate scales to measure 'sexual satisfaction', 'couples satisfaction' and 'marital satisfaction'. By contrast, no scales were used to measure sexual pleasure.

Articles in this same category also discussed 'relationship satisfaction' and 'dyadic adjustment'. Other articles are not explicitly about relationship satisfaction, but implicitly link sex with relationships. These articles draw on satisfaction scales which are labelled as measuring 'sexual satisfaction' but which ask questions which firmly position sexual practice within couple-based (and implicitly monogamous) relationships, asking more about relationship quality than sexual pleasure. For example, the Golombok-Rust Inventory of Sexual Satisfaction (Rust and Golombok 1985) asks 'Are you dissatisfied with the amount of variety in your sex life with your partner?' (emphasis added in all quotations); the Global Measure of Sexual Satisfaction (Lawrance and Byers 1995) is 'used to assess global satisfaction with various aspects of the sexual relationship'; the Sexual Satisfaction Questionnaire (Butler, Holm, and Ferraro 2011) includes statements such as 'I wish that my partner would be more experimental/adventurous during sexual activity'; the Multidimensional Sexuality Questionnaire (Snell, Fisher, and Walters 1993) includes the item "My sexual relationship is very good compared to most". Only two of the scales used ask about sexual pleasure independent of intimacy, a dyadic relationship or marriage. The Arizona Sexual Experiences Scale (McGahuey et al. 2000) asks about 'sex drive, arousal, vaginal lubrication/penile erection, ability to reach orgasm, satisfaction from orgasm, and pain during sex' – although it is notable that the same authors also feel the need, at the same time, to use 'the Sexual Compulsivity Scale (Kalichman 2010) and the Sexual Avoidance Subscale of the Sexual Aversion Scale (Katz et al. 1989)', ensuring that the question of sexual pleasure as risk is also present (see below). Snell's Index of Sexual Satisfaction (Snell, Fisher, and Walters 1993) measures 'the way in which one's sexual needs are being met, the degree in which one feels sexually fulfilled, and the appraisal of whether something is presently missing in one's sexual life'. Only research from the social sciences wrote about satisfaction; it was not mentioned in humanities research. The relationship between relationship satisfaction or marital satisfaction and sexual pleasure *per* se is not made explicit in any article in the sample.

Twenty-one articles in the sample addressed sexual satisfaction, eleven addressed relationship satisfaction and five addressed marital satisfaction. In total, thirty-seven articles in the sample – more than half – addressed some kind of satisfaction.

One subtheme of writing about satisfaction was that 'Higher frequencies of SEM use were associated with less sexual and relationship satisfaction' (Morgan 2011, 520). Several articles in the sample were interested in this topic and provided similar findings (Stewart and Szymanski 2012, Poulsen, Busby, and Galovan 2013, Perry 2016). There is confusion in the articles analysed about the role of causality in this association. Even within a single article authors can move between a rigorous recognition that causality cannot be assumed; and attempts to assume causality. For example, Morgan writes:

It is important to recognize that SEM viewing frequency either could contribute to lower sexual and relationship satisfaction or a non-satisfying sex-life or relationship might contribute to more frequent SEM viewing (Morgan 2011, 528, Psychology).

But, on the same page, she also writes:

This difference could reflect a disconnect between their preferences and their actual sexual and relationship experiences, suggesting that SEM viewing may indeed set up young adults to expect unrealistic sexual encounters (528).

Many articles in the sample claim or imply causality where they have in fact only demonstrated association:

It appears that pornography has a negative impact on love and marital satisfaction. The results indicated that love and marital satisfaction had a significant negative relationship with pornography (Fadaki and Amani 2015, 245, Psychiatry, Psychology).

The data was consistent with the notion that more gender role conflict leads to more anxious and avoidant attachment styles which in turn lead to more pornography use which in turn leads to less relationship quality and less sexual satisfaction (Szymanski and Stewart-Richardson 2014, 76Psychology).

Within this subtheme, researchers also examined the role of a number of intervening variables in the relationship between pornography use and relationship satisfaction, including 'discrepancies' between partners in pornography use rather than simply frequencies of pornography consumption (Willoughby et al. 2016), attachment styles (Gouvernet et al. 2017) and religiosity (Perry 2016).

Discussion and suggestions for future research

The results of this systematic review demonstrate the difficulty of integrating research findings from different academic disciplines even when they address the same object of study. All of the articles reviewed addressed, in some form, the question of pornography and pleasure; but the different disciplines involved did so in different ways. As we note above, some of the articles discussed 'pleasure'; but others used the language of 'arousal'. These terms represent different lenses through which the sexual experience involved in pornography use is viewed. While people have and enjoy pleasure, and pleasure is an important part of healthy sexual development, they do not have or enjoy 'arousal', and 'arousal' has not been identified as a part of healthy sexual development. This difference in language points to the different theoretical traditions and research agendas that converge in the field of porn studies. Different disciplines, our results suggest, are asking different questions about the effects of pornography. For some research traditions, pleasure is something that is seen as worthwhile and important, and research should explore the function and nature of pleasure, as well as ways in which it can be maximised. For other traditions of research, pleasure is not visible. In social psychology for example, 'arousal' is a common and long-standing term. It is also interesting to note that in social psychology, arousal is not a straightforwardly positive term – indeed, in studies of aggression, arousal can be seen as risky and even something to be avoided. In terms of our larger project that aims to synthesise existing knowledge about the effects of pornography across academic disciplines this finding suggests that it will be necessary for each domain of Healthy Sexual Development to broker dialogue between researchers from different disciplines who may not agree on even the most fundamental axioms of terminology and value judgements. This finding reinforces the importance of starting research on the effects of pornography by reaching an agreement on what counts as Healthy Sexual Development.

We would also suggest that the focus on relationships rather than on pleasure in the articles we reviewed is part of an orientation in this academic research towards Rubin's 'charmed circle' (Rubin 1992, 281) of practices that it names as 'good', whereby,

Sexuality that is 'good', 'normal' and 'natural' should ideally be heterosexual, marital, monogamous, reproductive and non-commercial. It should be coupled,

relational, within the same generation, and occur at home. It should not involve pornography, fetish objects, sex toys of any sort (280-1)

Relationship-focused research is grounded in the dominant sexual ideology, as characterized by Rubin, which places a premium on married, or at least, coupled sex. Conversely, this approach to sexuality devalues sex that is unmarried, casual, non-procreative, commercial, in groups, cross-generational, in public, uses pornography, involves manufactured objects, or is sadomasochistic, for example. Rubin argues strongly that favouring dominant forms of sexuality over their marginalised counterparts is not scientific or natural, but rather that these 'hierarchies of sexual value':

function in much the same ways as do ideological systems of racism, ethnocentrism and religious chauvinism. They rationalize the well-being of the sexually privileged and the adversity of the sexual rabble (280).

Rubin also draws attention to the fact that the production of such hierarchies is imbricated in 'sex negativity' – the tendency to treat sex with suspicion and regard it as requiring excuses such as love or marriage. We argue that the articles in this sample - which privilege relationship quality over sexual pleasure - are taking a 'charmed circle' approach. They are not interested in whether the consumption of pornography leads to more masturbatory sexual pleasure; they are interested rather in the association between the consumption of pornography and marital/relationship/coupled satisfaction.

We note that we can say nothing about the intention of any of the individual researchers working in this area. Rather we are drawing attention to the ways in which these discourses function to approach aspects of sexuality in different ways.

Although it did not produce enough data to be presented for analysis in a separate section, the coders also noted that the next most common theme after pleasure and satisfaction was 'risk'. Mentions of risk appeared in the majority of articles considered (44 out of 68), suggesting that pornography's pleasure is often considered as being located within a risk framework. Mentions of risk were coded into sub-themes, with the most common being 'risky sexual behaviours' (or 'sexual risk behaviours'). This can refer to particular sexual acts depicted in pornography (e.g. unprotected anal

intercourse), or sexual behaviours of pornography users, potentially influenced by porn use (including 'casual sex' and having multiple partners). Other risks commonly discussed include pornography addiction, HIV/STI transmission risks, sexual abuse or aggression, and the gendered risks of pornography (specifically the social risks to women who engage with pornography). Some concern was also raised about pornography users 'modelling risk behaviours' or learning about sex through pornography. Finally, several studies suggested that the internet itself was risky for providing easy access to pornography.

We noted above that articles about pornography and pleasure tend to focus on women and gay men as consumers while research with heterosexual men tends to present their use of porn as a risk. This reflects the disparate traditions and theoretical paradigms in porn research, and the fact that different questions tend to be asked concerning different populations. Traditional 'effects' research focuses on heterosexual men, and is concerned with 'risk,' whereas research on women and gay men enquires into the subjective experience of porn consumption, and centres questions of sexual agency and sexual identity development. This is related to the fact that women and men are positioned differently in respect to pornography, and with the differing functions that porn fulfils in the lives of gay and straight men.

For future research we note that researchers must be scrupulous not to conflate correlation and causality when discussing the relationship between aspects of Healthy Sexual Development and the consumption of pornography. We encourage researchers to focus on the relationship between pornography consumption and sexual pleasure – this is a vital part of Healthy Sexual Development. In particular it will be interesting to find out more about heterosexual men's sexual pleasure in relation to pornography use, perhaps asking some of the questions that have previously been asked of women and gay men's pornography use. We also hope that more researchers in the future will avoid the "charmed circle" approach, and will recognise that non-normative sexual practices including casual sex and BDSM can be part of Healthy Sexual Development.

Limitations

As with every systematic review, it is possible that relevant articles have been omitted because they did not appear in the searches, despite the advice of the Delphi panel and the use of extensive databases for the searches. It is also possible that the search terms used were not entirely exhaustive. As always, there is a tension between the epistemic values of replicability and exhaustiveness (Fallis 2008, 1668).

Because this systematic review focused only on journal articles published in English within a specific timeframe (January 2000 - December 2017), books, book chapters, unpublished materials, material published not in English and material published before January 2000 and after December 2017 are by default excluded. In regard to the earlier date, it was intended that the cumulative nature of academic research should mean that the findings of earlier work will inform the articles that were included; in regard to the later date, it was necessary to set a final date otherwise it would be impossible to finalise the analysis.

Conclusion

Humanities and social sciences approaches to exploring the relationships between pornography and pleasure show distinct variations; while the former tend to value pleasure in its own right, the latter tend to confound pleasure with relationship maintenance and risk. This has implications for young people's understanding of positive sex and healthy sexual development, as well as posing immense challenges for educators, be these in schools, families, clinics or elsewhere.

References

- Ashton, Sarah, Karalyn McDonald, and Maggie Kirkman. 2018. "Women's experiences of pornography: a systematic review using qualitative methods." *The Journal of Sex Research* 55 (3):334-347.
- Attwood, Feona, and Clarissa Smith. 2010. "Extreme concern: regulating "dangerous pictures" in the United Kingdom." *Journal of Law and Society* 37 (1):171-188.
- Braun, Virginia, and Victoria Clarke. 2006. "Using thematic analysis in psychology." *Qualitative Research in Psychology* 3 (2):77-101. doi: 10.1191/1478088706qp063oa.
- Brown, Cameron C, Stacy Conner, and Amber Vennum. 2017. "Sexual attitudes of classes of college students who use pornography." *Cyberpsychology, Behavior and Social Networking* 20 (8):463-469.
- Bryant, Jennings, and Mary Beth Oliver. 2008. *Media Effects: Advances in Theory and Research*. New York: Routledge.
- Butler, Mary E, Jeffrey E Holm, and F Richard Ferraro. 2011. "Pornography's Immediate Effect on Relationship Satisfaction." *Psi Chi Journal of Undergraduate Research* 16 (3):113-122.
- Duffy, A, D L Dawson, and Das Nair. 2016. "Pornography addiction in adults: a systematic review of definitions and reported impact." *The Journal of Sexual Medicine* 13 (5):760-777.
- Fadaki, Seyyed Morteza Jafarzadeh, and Parisia Amani. 2015. "Relationship of love and marital satisfaction with pornography among married university students in Birjand, Iran." *Journal of Fundamentals of Mental Health* 17 (5):240-246.
- Fallis, Don. 2008. "Towards an epistomology of Wikipedia." *Journal of the American Society for Information Science and Technology* 59 (10):1662-1674.
- Glascock, Jack. 2005. "Degrading Content and Character Sex: Accounting for Men and Women's Differential Reactions to Pornography." *Communication Reports* 18 (1):43-53. doi: DOI: 10.1080/08934210500084230.
- Goh, Joseph N. 2017. "Navigating sexual honesty: a qualitative study of the meaning-making of pornography consumption among gay-identifying Malaysian men." *Porn Studies* 4 (4):447-462. doi: DOI: 10.1080/23268743.2017.1371066.
- Gouvernet, B, T Rebelo, F Sebbe, Y Hentati, S Yougbaré, A Combaluzier, and A Rezrazi. 2017. "Is pornography pathogen by itself? Study of the role of attachment profiles on the relationship between pornography and sexual satisfaction." *Sexologies* 27:e27-e33. doi: http://dx.doi.org/10.1016/j.sexol.2016.10.001.
- Grubbs, Joshua B, Samuel L Perry, Joshua A Wilt, and Rory C Reid. 2019. "Pornography problems due to moral incongruence: an integrative model with a systematic review and meta-analysis." *Archives of Sexual Behavior* 48:397-415.
- Gurevich, Maria, Amy Brown-Bowers, Stephanie Cosma, Alexander T Vasilovsky, Usra Leedham, and Nicole Cormier. 2017. "Sexually progressive and proficient: Pornographic syntax and postfeminist fantasies." *Sexualities* 20 (5-6):558-584. doi: https://doi.org/10.1177/1363460716665785.
- Harkness, Emily L, Barbara Mullan, and Alex Blaszczynski. 2015. "Association between pornography use and sexual risk behaviors in adult consumers: a systematic review." *Cyberpsychology, Behavior and Social Networking* 18 (2):59-71.

- Horne, Sharon, and Melanie J Zimmer-Gembeck. 2005. "Female sexual subjectivity and well-being: comparing late adolescents with different sexual experiences." *Sexuality Research and Social Policy* 2 (3):25-40.
- Kalichman, Seth C. 2010. "Sexual compulsivity scale." In *Handbook of Sexuality-Related Measures*, edited by Terri D Fisher, Clive M Davis, William L Yarber and Sandra L Davis. London and New York: Routledge.
- Katz, Roger, Martin Gipson, Annette Kearl, and Melinda Kriskovich. 1989. "Assessing sexual aversion in college students: the sexual aversion scale." *Journal of Sex and Marital Therapy* 15 (2):135-140.
- Laier, Christian, Frank P Schulte, and Matthias Brand. 2013. "Pornographic picture processing interferes with working memory performance." *Journal of Sex Research* 50 (7):642-652. doi: DOI: 10.1080/00224499.2012.716873.
- Lawrance, Kelli-An, and E Sandra Byers. 1995. "Sexual satisfaction in long-term heterosexual relationships: The interpersonal exchange model of sexual satisfaction." *Personal Relationships* 2:267-285.
- Lofgren-Martenson, Lotta, and Sven-Axel Mansson. 2010. "Lust, Love, and Life: A Qualitative Study of Swedish Adolescents' Perceptions and Experiences with Pornography." Journal of Sex Research 47 (6):568-579. doi: DOI: 10.1080/00224490903151374.
- McCormack, Mark, and Liam Wignall. 2017. "Enjoyment, Exploration and Education: Understanding the Consumption of Pornography among Young Men with Non-Exclusive Sexual Orientations." *Sociology* 51 (5):975-991. doi: https://doi.org/10.1177/0038038516629909.
- McGahuey, Cynthia, Alan J Gelenberg, Cindi A Laukes, Francisco A Moreno, Pedro L Delgado, Kathy M McKnight, and Rachel Manber. 2000. "The Arizona Sexual Experience Scale (ASEX): Reliability and Validity." *Journal of Sex and Marital Therapy* 26:25-40.
- McHugh, Mary L. 2012. "Interrater reliability: the kappa statistic." *Biochemia Medica* 22 (3):276-282.
- McKee, A., P. Byron, K. Litsou, and R. Ingham. 2019. "An interdisciplinary definition of pornography: Results from a global Delphi Panel." *Archives of Sexual Behavior*. doi: doi.org/10.1007/s10508-019-01554-4.
- McKee, Alan, Kath Albury, Michael Dunne, Sue Grieshaber, John Hartley, Catharine Lumby, and Ben Mathews. 2010. "Healthy Sexual Development: A Multidisciplinary Framework for Research." *International Journal of Sexual Health* 22 (1):14-19. doi: 10.1080/19317610903393043.
- McKeown, Janet K L, Diana C Parry, and Tracy Penny Light. 2018. "'My iPhone changed my life': how digital technologies can enable women's consumption of online Sexually Explicit Materials." *Sexuality & Culture* 22:340-354. doi: https://doi.org/10.1007/s12119-017-9476-0,.
- McNeill, Tanya. 2013. "Sex education and the promotion of heteronormativity." *Sexualities* 16 (7):826-846. doi: 10.1177/1363460713497216.
- Morgan, Elizabeth. 2011. "Associations between young adults' use of Sexually Explicit Materials and their sexual preferences, behaviors and satisfaction." *Journal of Sex research* 48 (6):520-530. doi: 10.1080/00224499.2010.543960.
- Paul, Bryant, and Jae Woong Shim. 2008. "Gender, Sexual Affect, and Motivations for Internet Pornography Use." *International Journal of Sexual Health* 20 (3):187-199. doi: 10.1080/19317610802240154.

- Perry, Samuel L. 2016. "From Bad to Worse? Pornography Consumption, Spousal Religiosity, Gender, and Marital Quality." *Sociological Forum* 31 (2):441-464. doi: DOI: 10.1111/socf.12252.
- Poulsen, Franklin O, Dean M Busby, and Adam M Galovan. 2013. "Pornography use: who uses it and how it is associated with couple outcomes." *Journal of Sex Research* 50 (1):72-83. doi: 10.1080/00224499.2011.648027.
- Reid, Rory C, Desiree S Li, Randy Gilliland, Judith A Stein, and Timothy Fong. 2011.

 "Reliability, Validity, and Psychometric Development of the Pornography
 Consumption Inventory in a Sample of Hypersexual Men." *Journal of Sex and Marital Therapy* 37:359-385. doi: 10.1080/0092623X.2011.607047.
- Ressing, Meike, Maria Blettner, and Stefanie Klug, J. 2009. "Systematic literature reviews and meta-analyses." *Deutsches Ärzteblatt International* 106 (27):456-463.
- Richters, Juliet. 1997. "Doing HIV Social Research: travelling in two cultures." *Venereology* 10 (4):214-261.
- Rubin, Gayle. 1992. "Thinking sex: notes for a radical theory of the politics of sexuality." In *Pleasure and Danger: Exploring female sexuality*, edited by Carole S Vance, 267-319. London: Pandora/Harper Collins.
- Rust, J, and S Golombok. 1985. "The Golombok-Rust inventory of Sexual Satisfaction." *Journal of Clinical Psychology* 24 (1):63-64.
- Snell, W E, R D Fisher, and A S Walters. 1993. "The multidimensional sexuality questionnaire: an objective self-reported measure of psychological tendencies associated with human sexuality." *Annals of Sex Research* 6:27-55.
- Spišák, Sanna. 2017. "Negotiating Norms: Girls, Pornography and Sexual Scripts in Finnish Question and Answer Forum." *Young* 25 (4):359-374. doi: 10.1177/1103308816660482.
- Staley, Cameron, and Nicole Prause. 2013. "Erotica Viewing Effects on Intimate Relationships and Self/Partner Evaluations." *Archives of Sexual Behavior* 42:615-624. doi: DOI 10.1007/s10508-012-0034-4.
- Stewart, Destin N, and Dawn M Szymanski. 2012. "Young adult women's reports of their male romantic partner's pornography use as a correlate of their self-esteem, relationship quality and sexual satisfaction." *Sex Roles* 67 (5-6):257-271. doi: 10.1007/s11199-012-0164-0.
- Sun, Chyng, Ana Bridges, Jennifer A Johnson, and Matthew B Ezzell. 2016. "Pornography and the Male Sexual Script: An Analysis of Consumption and Sexual Relations." *Archives of Sexual Behavior* 45:983-994. doi: DOI 10.1007/s10508-014-0391-2.
- Szymanski, Dawn M, and Destin N Stewart-Richardson. 2014. "Psychological, relational and sexual correlates of pornography use on young adult heterosexual men in romantic relationships." *The Journal of Men's Studies* 22 (1):64-82. doi: 10.3149/jms.2201.64.
- Willoughby, Brian J, Jason S Carroll, Dean M Busby, and Cameron C Brown. 2016.

 "Differences in Pornography Use Among Couples: Associations with Satisfaction,
 Stability, and Relationship Processes." *Archives of Sexual Behavior* 45:145-158. doi: DOI 10.1007/s10508-015-0562-9.
- World Health Organization. 2006. Defining Sexual Health: Report of a technical consultation on sexual health, 28-31 January 2002, Geneva. Geneva: World Health Organization.

¹ In order to allow readers to see how responses are distributed across humanities and social sciences disciplines we have identified the departmental affiliation of researchers from whose work we quote, as indicated in the articles.

[&]quot;'Sexual agency refers here to an individual's feelings of empowerment within the sexual domain. That is, sexual agency provides a sense that an individual has the right to create and take action on his or her own behalf, to make sexual choices, and to meet his or her sexual needs' (Horne and Zimmer-Gembeck 2005, 29)