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Pornography through the lens of the 21st century and its impact on society

Pornografia w świetle XXI wieku oraz jej wpływ na społeczeństwo

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Abstract

Pornography is most commonly defined as any depiction of sexual behaviours aimed at inducing sexual arousal. According to numerous scientific studies, the use of pornography is a widespread phenomenon across all age groups today, with a particularly high prevalence among men. The popularity of pornographic content seems to be increasing over the years, primarily due to its easy accessibility, which stems mainly from technological advancements. Given that pornography addiction is not formally classified in DSM-5 or ICD-10, most studies assessing the frequency of this phenomenon are based on the subjective impressions of participants, suggesting that the issue affects a few to several percent of the population. It has also been observed that pornography addiction shows strong similarities to addiction to psychoactive substances. Motivations for consuming pornography are linked to evolutionary mechanisms, sexual and life strategy theories, and psychological models. Most users of pornographic materials state that they view them to satisfy sexual urges, which is more pronounced among men. Notably, both genders report using pornography equally often to improve their sexual performance. The impact of pornography on its users has not been clearly classified as either positive or negative due to significant discrepancies in research findings. Some studies suggest that it negatively affects male sexual functioning, while positively influencing female sexual experience.

Keywords: addiction, review, pornography

Streszczenie

Pornografia jest najczęściej definiowana jako dowolna forma przedstawienia zachowań seksualnych, której celem jest wywołanie podniecenia seksualnego. Według licznych badań korzystanie z pornografii jest obecnie zjawiskiem powszechnym w każdej grupie wiekowej, a szczególnie wśród mężczyzn. Popularność materiałów pornograficznych zdaje się wzrastać wraz z biegiem lat, co jest łączone głównie z bardzo łatwą dostępnością, wynikającą przede wszystkim z rozwoju technologicznego. Ze względu na to, że uzależnienie od pornografii nie było klasyfikowane w DSM-5 ani ICD-10, większość badań oceniających częstość tego zjawiska opierała się na subiektywnym wrażeniu badanych i sugerowała, że problem ten dotyczy od kilku do kilkunastu procent populacji. Zaobserwowano również, że uzależnienie od pornografii wykazuje duże podobieństwo do uzależnienia od substancji psychoaktywnych. Przyczyn oglądania pornografii można się doszukiwać w mechanizmach ewolucyjnych, teoriach strategii seksualnych, teoriach strategii życiowych i teoriach psychologicznych. Większość użytkowników materiałów pornograficznych deklaruje, że korzysta z nich w celu zaspokojenia popędu seksualnego, co jest bardziej wyrażone u mężczyzn. Na szczególną uwagę zasługuje fakt, że przedstawiciele obu płci korzystają z pornografii również często w celu poprawienia własnej sprawności seksualnej. Wpływ pornografii na jej użytkowników nie został

jednoznacznie określony jako korzystny lub szkodliwy ze względu na duże rozbieżności w wynikach badań. Niektóre z nich sugerują, że wpływa ona negatywnie na funkcjonowanie seksualne mężczyzn, zaś pozytywnie na funkcjonowanie seksualne kobiet.

Słowa kluczowe: uzależnienie, przegląd, pornografia

INTRODUCTION

Issue of definition

Although the term “pornography” has been present in literature for centuries, defining it unambiguously presents many challenges (Jenkins, 2024). This difficulty stems from various factors, including technological progress (with the emergence of new types of artistic mediums, new forms of pornography have appeared), cultural differences (what is considered pornography in one cultural context may not in another), and the inherent subjectivity of those attempting to define the concept (Jenkins, 2024; Mehmood Qadri et al., 2023). For practical purposes, the authors of this article have decided to adopt a relatively common definition found in the literature, where pornography refers to any depiction of sexual behaviour (e.g. in books, images, films, etc.) intended to evoke sexual arousal (Jenkins, 2024). It is also worth noting the existence of a concept closely related to pornography (which typically carries a negative connotation), namely “erotica” (with a neutral connotation) (Jenkins, 2024). However, the boundary between the two appears to be fluid and depends largely on the cultural context and the viewer’s perspective (Jenkins, 2024).

Issue of popularity of pornographic content

Numerous scientific sources report that in recent years, the global popularity of all forms of pornographic materials has significantly increased, even in countries where access to such content is legally restricted (Donadelli and Lalanne, 2020; Mehmood Qadri et al., 2023; Zattoni et al., 2020). A key role in this process is attributable to technological developments over the past few decades, which have resulted in very easy and widespread access to online pornography (Mehmood Qadri et al., 2023).

Purpose of the article

The impact of pornography on societal functioning and the potential for addiction is an extremely interesting topic that seems to be relatively under-researched. Therefore, the aim of this article is to discuss various aspects of pornography based on the available literature. However, the article should be viewed more as a collection of selected data related to each of the discussed subtopics, as each is so extensive that it would warrant a separate publication. It is hoped that this review will contribute to increased interest in the topic of

pornography and lead to further studies that will explore its specific aspects in more detail.

SOCIETAL PREVALENCE OF PORNOGRAPHY USE AND ADDICTION

Brief overview of popularity of pornographic websites

In 2019, one of the most popular pornographic websites generated over a billion views per month, making it one of the most visited websites in the world (Donadelli and Lalanne, 2020).

Global prevalence of pornography use

Data on the prevalence of pornography use globally vary and depend on the population studied (Mehmood Qadri et al., 2023). Older studies estimated that around 75% of men and 30% of women used pornography (Carrol et al., 2008). A study conducted in 2018 showed that 91.5% of men and 60.2% of women used pornography; however, more recent studies suggest that these percentages are likely lower, ranging from 46–74% for men and 16–41% for women (Mehmood Qadri et al., 2023; Solano et al., 2018; Zattoni et al., 2020). Ballester-Arnal et al. (2023) studied the prevalence of pornography use between 2016 and 2019 across age groups under 18, 18–25, 26–40, 41–60, and over 60. They found that the phenomenon is widespread in every age group (over 85% of respondents) and its prevalence does not significantly differ by age. Based on these findings, the authors concluded that pornography seems to be an integral element of human sexuality in modern times (Ballester-Arnal et al., 2023). Particular attention should be given to studies assessing the prevalence of pornography use among minors. According to older studies, 35–66% of minors used pornography (Mitchell et al., 2007; Wolak et al., 2007). More recent studies suggest that the phenomenon is far more common, with approximately 68–85% of teenagers being exposed to pornography (Ballester-Arnal et al., 2023; Wright et al., 2020).

Prevalence of pornography use in Poland

Research on pornography use in Poland is scarce. A study conducted by Franczyk (2013) found that about 77% of respondents had been exposed to pornography, with more than half reporting regular use. A more recent study by Dwulit and Rzymiski (2019) similarly showed that 80% of respondents had been exposed to pornography and the median age of first exposure was 14 years. However, it should

be noted that the first study focused mainly on students (Franczyk, 2013), while the second involved exclusively students (Dwulit and Rzymiski, 2019), which does not allow for conclusions to be drawn about the prevalence of this phenomenon in the general population.

Analyses of pornography use among Polish youth also do not allow for definitive conclusions. A study conducted by Izdebski (2012) found that 77.5% of respondents had been exposed to pornography; however, this study only included youth in the second year of middle school (aged 14–15). A more recent study involving individuals aged 11–18, conducted by Makaruk et al. (2017), reported that 43% of respondents had been exposed to pornography.

In summary, the data presented above suggest that pornography use seems to be a widespread phenomenon, regardless of age group or cultural context. It should also be noted that all researchers (Ballester-Arnal et al., 2023; Carroll et al., 2008; Dwulit and Rzymiski, 2019; Franczyk, 2013; Izdebski, 2012; Makaruk et al., 2017; Mehmood Qadri et al., 2023; Mitchell et al., 2007; Solano et al., 2018; Wolak et al., 2007; Wright et al., 2020; Zattoni et al., 2020) agree that men are significantly more likely to use pornographic materials, although the gender gap appears to be narrowing over time.

Prevalence of pornography addiction globally and in Poland

Excessive consumption of pornography, uncontrolled masturbation, and similar behaviours are classified in ICD-11 as compulsive sexual behaviours (de Alarcón et al., 2019). The prevalence of this phenomenon is estimated to be around 3–6% of the global population (de Alarcón et al., 2019). Referring to the Polish population, it is worth mentioning the study by Dwulit and Rzymiski (2019), in which 12.2% of respondents considered themselves addicted to pornography. Data on the prevalence of this phenomenon primarily rely on the subjective impressions of respondents, due to the lack of specific diagnostic criteria at the time.

REASONS FOR WATCHING PORNOGRAPHY

Evolutionary theory

According to evolutionary theory, watching pornography can be understood as a consequence of an increased sexual drive, which is more pronounced in men, allowing them to achieve greater reproductive success in the past (Buss, 1995; Malamuth, 1996; Salmon, 2012; Salmon and Fisher, 2018; Salmon et al., 2019). This view is also associated with the previously mentioned greater popularity of pornographic materials among men, which lends support to its validity.

Sexual strategies theory

Sexual strategies theory divides human sexual behaviours into short-term and long-term strategies (Buss and Schmitt,

1993; Schmitt, 2016). Short-term sexual behaviours involve engaging in sexual activities with multiple partners and minimal emotional involvement (Gangestad and Simpson, 2000), while long-term sexual behaviours involve both sexual and emotional commitment within a specific relationship (Buss, 2008). Men are more inclined to engage in short-term sexual behaviours, as these are linked to greater reproductive success (Schmitt et al., 2001). According to proponents of this theory, watching pornography is classified as a short-term sexual behaviour (Salmon and Symons, 2003). This viewpoint is mainly justified by the observation that pornography evokes emotions similar to those experienced during casual sex (Hald and Malamuth, 2008). This theory again ties into men's greater tendency to consume pornographic content and can be viewed as an extension of evolutionary theory.

Psychological perspective

Researchers analysing the reasons for watching pornography from a psychological perspective have concluded that it is somewhat linked to the traits of the Dark Triad (narcissism, Machiavellianism, psychopathy) (Paulhus and Williams, 2002). Individuals with high levels of narcissism and psychopathy tend to exhibit a strong interest in sexuality, a high desire for sex (Baughman et al., 2014), a greater tendency to engage in casual sexual encounters (Jonason and Sherman, 2020), and more frequent pornography consumption (Kasper et al., 2015; Paul, 2009). The Dark Triad traits are more common in men (Jonason et al., 2017) and appear to predispose individuals to engage in short-term sexual behaviours (Jonason et al., 2009; Paulhus and Williams, 2002), which, as mentioned earlier, is associated with the tendency to watch pornography (Hald and Malamuth, 2008; Salmon and Symons, 2003).

Other researchers analysing pornography consumption from a psychological perspective suggest that it is common because it may facilitate maintaining long-term relationships by expanding knowledge about sex and sexuality (Apostolou et al., 2018). Thus, the psychological perspective seems to approach the topic more comprehensively than previous theories, as it explains interest in pornography both among individuals oriented primarily toward casual sex and those invested in long-term relationships.

Life strategies perspective

Researchers evaluating pornography consumption from the life strategies perspective have concluded that this behaviour can be justified both within fast and slow strategies (Figueredo et al., 2006). Growing up in an unstable and harsh environment leads to adopting a fast life strategy, which is associated with the previously described short-term sexual behaviours (Belsky et al., 2010; Figueredo et al., 2006). Conversely, a supportive and more stable upbringing promotes a slow life strategy, which focuses on forming

long-term romantic relationships (Giosan et al., 2018). In this context, pornography seems to serve as a source of information about sexuality, making it easier to establish and maintain such relationships (Giosan et al., 2018). The life strategies perspective thus synthesises the previously mentioned theories and also explains why an individual may be more interested in a specific type of relationship (short-term/long-term).

Reasons for watching pornography according to its users

Burtäverde et al. (2021) conducted a study aimed at determining the reasons for watching pornography. They were classified into four groups, listed below in order from most to least common:

1. sexual drive – watching pornography for pleasure, e.g. during masturbation;
2. improving one's sexual performance – watching pornography to gain new information about sex, etc.;
3. social reasons – watching pornography due to social pressure;
4. lack of relational and emotional skills – watching pornography due to difficulties in forming close emotional relationships with another person (Burtäverde et al., 2021).

In the study by Burtäverde et al. (2021), open-ended questions were asked, making it more reliable compared to other studies where respondents answered closed-ended questions (Bolshinsky and Gelkopf, 2019; Franc et al., 2018; Hare et al., 2015). Nevertheless, the results of these studies are consistent, which supports their validity.

It is also worth noting that Burtäverde et al. (2021) showed that all the reasons for watching pornography were more frequently chosen by men, except for improving one's sexual performance, for which no gender difference was observed. These findings are consistent with the previously presented views on pornography from the evolutionary perspective and the generally greater sexual drive in men (2021). Additionally, a study by Apostolou et al. (2018) showed that both men and women experience difficulties maintaining long-term relationships, which explains the lack of gender differences in the frequency of watching pornography to improve sexual performance.

PORNOGRAPHY ADDICTION

Disorder classification

Pornography addiction is not listed in the DSM-5 or ICD-10 classifications; hence, in numerous studies, it has been diagnosed based on respondents' subjective impressions (Dwułit and Rzymiski, 2019). In the latest ICD-11 classification, the term "compulsive sexual behaviour" has been introduced, under which such a disorder could be categorised (de Alarcón et al., 2019).

Similarities between pornography addiction and substance abuse

According to many researchers, pornography addiction closely resembles substance addiction, as both result from strong stimulation of the brain's reward system during use (George et al., 2019). Magnetic resonance imaging and electroencephalography studies conducted on individuals addicted to pornography and those addicted to substances also show significant similarities (de Alarcón et al., 2019). It is worth noting that nearly 10% of those addicted to substances are also addicted to pornography, although no studies have yet demonstrated a clear link between these disorders (de Alarcón et al., 2019).

IMPACT OF PORNOGRAPHY ON SEXUAL HEALTH

Impact of pornography on adults

According to many authors, excessive use of pornography is associated with lowered mood and self-esteem. However, the consequences of this activity mainly affect functioning in the sexual sphere (de Alarcón et al., 2019; Mehmood Qadri et al., 2023). The causes of this phenomenon are primarily attributed to viewers comparing themselves to the (usually) unrealistic scenes portrayed in pornographic films.

Some researchers (Weinberg et al., 2010; Wright et al., 2013) suggest that pornography can positively affect sexual functioning, serving as a source of sexual inspiration and expanding the range of sexual practices and behaviours. Conversely, other researchers (Wright et al., 2021) indicate that pornography negatively affects sexual functioning, particularly among men. Frequent pornography use in men has been linked to dissatisfaction with penis size (a correlation not observed in women regarding either genitals or breasts) (Cranney, 2015; Wright et al., 2017), and cognitive distraction during sexual activity (a correlation not observed in women) (Goldsmith et al., 2017). Considering these findings (Cranney, 2015; Goldsmith et al., 2017; Wright et al., 2021, 2017), it can be stated that pornography seems to negatively impact men's sense of sexual competence. This is further reflected in the type of pornography men tend to watch – more hardcore and paraphilic content compared to women – which is associated with a greater tendency to compare their sexual performance (Leonhardt and Willoughby, 2019).

Sommet and Berent (2023) conducted a longitudinal study on a very large sample of respondents, which showed that pornography has different effects on men and women. In men, the negative aspects of pornography usually prevail, leading to lower sexual competence and reduced satisfaction with sexual life (both personally and as perceived by their partners) (Sommet and Berent, 2023). Conversely, in women, the positive aspects of pornography mostly prevail, leading to increased sexual competence, more sexual

inspiration, and greater satisfaction with sexual life (both personally and as perceived by their partners) (Sommet and Berent, 2023). This observation is intriguing, given that men, as mentioned earlier in the article, tend to use pornography much more frequently. Sommet and Berent (2023), in line with other studies (Kirby, 2021; Mollaioli et al., 2018), suggest that reducing pornography use may help reduce sexual dysfunction in men, while increasing its use may have the same effect for women. However, it is important to remember that sexual dysfunctions have various causes and should not be attributed solely to pornography. In summary, it is not possible to definitively determine the impact of pornography on the sexual health of its users, as its effects appear to differ by gender. This can be partly explained by the different motivations men and women have for viewing such material. The authors also point out that maintaining an appropriate distance from this type of content is crucial for extracting positive experiences from watching pornography – it should be regarded primarily as a way to relieve sexual tension or as a source of inspiration rather than a benchmark.

This observation could serve as a good starting point for developing appropriate educational programmes, as given the widespread use of pornography, educating about it seems a more reasonable approach than attempting to discourage its use, which would most likely prove ineffective.

Impact of pornography on minors

Due to the relatively high prevalence of pornography use among minors, it is also necessary to examine its impact on their sexual development. Research findings in this area are inconsistent (Jhe et al., 2023); some studies focus primarily on the negative effects, while others highlight the positive impact of pornography on this age group. The first group of researchers points out that pornography may contribute to:

1. the development of unrealistic expectations about sex among young people (e.g. regarding the duration of sexual intercourse or the ease with which women achieve orgasm) (Peter and Valkenburg, 2010);
2. the perception of sex as a purely physical act, devoid of emotionality (Häggström-Nordin et al., 2006);
3. the objectification of sexual partners, especially women (Peter and Valkenburg, 2009);
4. increased engagement in casual sexual encounters (Braun-Courville and Rojas, 2009);
5. the development of higher levels of sexual aggression, particularly among men (Ybarra and Mitchell, 2005).

However, it is important to note that most of the studies mentioned above examine correlations rather than cause-and-effect relationships, which explains some of the inconsistencies in their findings (Jhe et al., 2023).

Researchers who highlight the potential positive impact of pornography on youth primarily refer to its educational aspect (Jhe et al., 2023). For young people, watching

pornography was also reported as a way to spend free time and an opportunity to relieve sexual tension (Jhe et al., 2023). Rothman et al. (2018) conducted a study in which teenagers were asked about the impact of pornography on their lives. Most respondents declared that watching pornography increased their confidence in the sexual sphere, as it introduced them to various sexual practices they would not have learned about otherwise. This study (Rothman et al., 2018) also suggests that pornography positively may contribute to the exploration of personal sexuality and the search for gender identity among young people.

In summary, similar conclusions can be drawn for minors as for adults: pornography can have both positive and negative effects. Given the widespread use of such materials among young people and virtually unrestricted access, educating them appropriately appears more reasonable than enforcing bans (which would be practically impossible to implement).

CONCLUSION

Watching pornography seems to be a common phenomenon across all age groups and societies, and it appears to occur much more frequently among men. Therefore, viewing pornography as an element of contemporary human sexuality seems entirely justified.

Due to the exclusion of pornography addiction from the DSM-5 and ICD-10 classifications, it is currently not possible to determine the scale of this phenomenon. Changes following the ICD-11 may contribute to a better classification and understanding of this disorder.

The impact of pornography on the sexual functioning of women and men appears to differ, with women likely deriving greater benefits from it, despite engaging in this activity less frequently. Further research in this area is recommended, as the existing literature does not allow for definitive conclusions due to the conflicting results of numerous studies.

Similarly, the impact of pornography on the sexual development of youth is ambiguous, as evidenced by inconsistent research findings. Therefore, more studies on this topic are needed. Given the prevalence of pornography use among minors, it also seems appropriate to undertake educational initiatives aimed at increasing awareness of pornography within this age group, which may help mitigate its potential negative impact on views related to sexuality. Limiting young people's access to pornography seems impossible today due to the very easy access to such content via the Internet.

It should also be noted that numerous studies on the impact of pornography on various aspects of human sexuality are based on correlations rather than cause-and-effect relationships, which may explain the aforementioned discrepancies reported in the literature.

In conclusion, this article has the advantage of discussing various aspects of pornography use. The literature review

highlights that many aspects are not yet well-researched, particularly within the Polish population. One limitation is certainly its focus on the most important elements of each subtopic. The authors are aware that each of these areas could be the subject of more in-depth analysis and hope that their work will contribute to increasing the number of publications on this topic.

Conflict of interest

The authors do not report any financial or personal connections with other persons or organisations which might negatively affect the content of this publication and/or claim authorship rights to this publication.

Author contribution

Original concept of study; critical review of manuscript; final approval of manuscript: KW. Collection, recording and/or compilation of data; analysis and interpretation of data: AM, JW. Writing of manuscript: KW, AM, JW.

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