



Research article

Exploring the Interplay of problematic pornography use, sexism, and rape myth acceptance: An Italian cross-sectional study

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ABSTRACT

The relationships among pornography use, sexist ideology and false or stereotypical ideas about rape are controversial. This study specifically examines the associations of problematic pornography use (PPU) with sexism and rape myth acceptance among both male and female participants within the Italian context utilizing a cross-sectional methodology. Based on data from 815 participants collected through an online questionnaire, the study identifies significant gender-based differences, with men typically exhibiting higher scores on sexism, rape myth acceptance, and token resistance beliefs. Correlation analysis revealed that in men, there was a positive relationship between pornography cravings and sexist beliefs but not between pornography cravings and minimizing rape or accusations of lying (rape myth). Women showed significant positive correlations across all problematic pornography use dimensions with sexist ideology, although the relationship with rape myth acceptance varied. These findings underscore the critical need for acknowledging these relationships to enhance strategies for preventing gender-based violence.

1. Introduction

Pornography is a form of adult entertainment that has long been considered a controversial topic. Current concerns relate mainly to gender issues and sexism. The use and consumption of pornography can have significant impacts on individuals' attitudes and beliefs about gender roles, as well as on broader societal norms and sexual expectations [1–3]. Pornography is a primary means by which most young adults learn about sex [4], and pornography content includes roles, expectations, models, norms, and values, which can significantly influence sexual behavior and the quality of relationships with the opposite sex [5]. While some studies have focused on the negative effects of pornography consumption, such as its association with discrimination and violence against women [6,7], other research has found positive effects, including increased sexual arousal as a couple, greater sexual self-confidence and openness to new experiences, and enhanced communication about one's desires and pleasures [8–10]. Despite extensive research on pornography use and sexism, the association between problematic pornography use (PPU) and rape myth acceptance (RMA) within the Italian context remains underexplored. The theoretical framework of this work revolves around three main themes: pornography and sexism,

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pornography and rape myth acceptance, and problematic pornography use. The framework draws on social cognitive theory, highlighting how individuals learn attitudes and behaviors from media representations. Feminist theory is integrated to explore how societal norms and power structures shape gender relations, including the perpetuation of harmful attitudes such as rape myths. Additionally, addiction theory informs the understanding of problematic pornography use, examining patterns of compulsive behavior and associated negative consequences.

1.1. Pornography and sexism

Some content analysis studies show that mainstream pornography often portrays women in degrading and/or objectifying ways, with frequent themes of female submission, male domination, and exploitation [11,12]. When unequal power dynamics are depicted, women are typically shown as submissive partners, and the focus of pornography is often men's rather than women's pleasure. Additionally, the inclusion of "degrading" sexual acts in mainstream pornography has been cited as evidence that much of it objectifies and debases women [12]. This emphasis could reinforce men's attitudes toward gender subtypes, the degrees to which men and women are often categorized and stereotyped [13], and sexist beliefs based on gender stereotypes (e.g., women are dependent on men) [14]. Glick and Fiske [14] introduced the theory of ambivalent sexism, which consists of two components: hostile and benevolent. Hostile sexism embodies overtly negative attitudes toward women, advocating for dominance and control over them while highlighting gender differences to maintain a hierarchy that devalues women. Benevolent sexism is subtler and is conveyed with an affective tone. It perceives women as delicate entities needing male protection and endorses stereotypes that align with traditional views of femininity and gender roles. Some studies have found an association between the construct of sexism, especially hostile sexism, and the frequent use of pornographic material [15,16], while others have not established a consistent association between experimental exposure to pornography and sexism, and cross-sectional studies have found that pornography use is either unrelated to sexism or associated with more egalitarian beliefs regarding certain gender issues [2,17]. Another controversial issue is the role of pornography in the construction of masculinity. The production and consumption of pornography could influence masculinity, portraying men's image as driven by explosive sexuality and uncontrollable erotic instincts, which often result in dominant and violent attitudes [3]. According to a recent study by De Heer et al. [6], instead of a direct relationship between pornography use and masculinity, there is a hypothetical predictive relationship between elevated levels of masculinity, pornography consumption, and the potential for committing sexual coercion.

1.2. Pornography and rape myths acceptance

Rape myths refer to mistaken beliefs and attitudes about rape that minimize the harm suffered by victims and/or hold them responsible for their own victimization [18]. Supportive attitudes toward rape are also widely held [19]. Research on this topic has comprised two main streams, feminist and sociological, and various tools have been developed to measure how rape myths are represented within social and cultural contexts [20]. For this reason, it is necessary to observe how changes in social culture can alter the acceptance of some myths over others. Moreover, as the issue becomes increasingly central in public debate, it is important to pay attention to aspects of social desirability, as acceptance may be more elusive [21]. Researchers have linked pornography and rape culture, focusing specifically on the way pornography contributes to the perpetuation of harmful attitudes and behaviors against women [16,22]. In college students, pornography use has been associated with greater acceptance of rape myths and a reduced likelihood of bystander intervention in situations of sexual coercion and abuse, as measured by scenarios [23]. Research has found that women who viewed hardcore and sadomasochist pornography were more likely to endorse rape myths and have a lower willingness and efficacy to intervene in a sexual assault scenario [24]. Similar findings were found in a male sample with a greater likelihood of raping [25].

Borgogna and collaborators [26] suggested that there is no correlation between the consumption of pornography, particularly hardcore porn, and the acceptance of the rape myths of the victim lying about being raped or their behavior instigating rape. Instead, it seems that hostile sexism is the proximal factor concerning the acceptance of rape myths for both men and women. Moreover, frequent hardcore pornography viewing intensifies the relationship between hostile sexism and "she asked for it" rape myths in both genders. The authors concluded that hardcore pornography viewing may be a significant behavioral risk factor for rape myth acceptance in individuals with hostile sexist attitudes. The evidence for a causal relationship between exposure to pornography and sexual aggression is controversial [27].

Peter and Valkenburg [28] showed that the use of sexually explicit internet material leads to a stronger belief among adults that women exhibit token resistance in sexual scenarios. Token resistance denotes the belief that women "say no when they mean yes" and that their refusal should not be taken seriously [29]. Different studies have indicated that men who believe that women practice token resistance, as well as both women and men who employ token resistance, are more likely to exhibit sexual aggression and rape myth acceptance [30–32].

Interestingly, Noll and colleagues [33] observed that in young adults, the frequency of masturbation to pornography during the past month was positively associated with the acceptance of rape myths. However, after controlling for gender, the correlation between the frequency of masturbation to pornography and the acceptance of rape myths was no longer significant.

1.3. Problematic pornography use

Fernandez and Griffith's review [34] revealed that different tools are used to measure the construct of problematic pornography

use and how to operationalize problematic pornography behavior. Indeed, several tools, with the study identifying twenty-two, adopt different perspectives (e.g., social cognitive, a-theoretical, compulsive behavior, hypersexuality). Despite the different theoretical perspectives, the instruments had significant overlaps in the components of addiction (e.g., control management, salience, mood changes, interpersonal conflict, and impact on daily life). For this reason, in the present study, we adopted the theoretical model of addiction and considered the aspect of craving. The pornography use (e.g., Refs. [35,36]) addiction models were proposed considering pornography use along a severity continuum. Specifically, three types of users can be identified: nonproblematic or recreational users (use of pornography as entertainment), those at risk of developing problematic pornography use (PPU) (use of pornography to regulate dysphoric states), and problematic or compulsive users (compulsive pornography use associated with serious psychosocial impairments). This classification is related to the theoretical reference model, given the lack of unified models for explaining problematic pornography use: what is considered problematic versus nonproblematic is based on the underlying theory, such as an addiction model versus a compulsion model [37]. Problematic pornography use has been conceptualized in several ways, as impulsive or compulsive behavior and specifically as addiction [38]. Problematic pornography use shares several core features with other addictive behaviors, such as gambling and substance abuse (e.g., Refs. [39,40]). Indeed, as suggested by Kor et al. [38,41], problematic pornography use is described as frequent, excessive, or compulsive use of pornography, including a strong desire or craving prior to engaging in the behavior, with the intention of either achieving or maintaining a positive emotional state or escaping from a negative emotional state. Moreover, problematic pornography use is characterized by a decreased ability to control one's engagement in the behavior and persistent involvement in the behavior despite negative consequences (i.e., personal distress and impaired functioning). Problematic pornography use is linked to several negative outcomes, including disruption of family or friend relationships, comorbidity with other mental disorders (e.g., depressive symptoms), insomnia, and reduced interest in other recreational activities [42,43].

1.4. Aims and hypotheses

To our knowledge, no prior studies have examined the relationships among problematic pornography use, sexism, and rape myth acceptance. Previous studies have analyzed the frequency of exposure to pornography and the viewing of hardcore or violent content,

Table 1
Sociodemographic characteristics in the full sample, men and women.

		Men 441 (54.1 %)	Women 374 (45.9 %)	Total 815 (100 %)
Age	Mean	30.83	27.84	29.46
	Std. Deviation	8.72	7.19	8.19
	Range	18–60	18–54	18–60
	N (%)			N (%)
Nationality	Italian	434 (98.4)	365 (97.6)	799 (98.0)
	Other	7 (1.6)	9 (2.4)	16 (2.0)
Sexual Orientation	Heterosexual ^a	395 (89.6)	302 (80.7)	697 (85.5)
	Homosexual	13 (2.9)	8 (2.1)	21 (2.6)
	Bisexual ^a	29 (6.6)	51 (13.6)	80 (9.8)
	Other ^a	4 (0.9)	13 (3.5)	17 (2.1)
Educational Level	Secondary School	19 (4.3)	22 (5.9)	41 (5.0)
	High School	224 (50.8)	175 (46.8)	399 (49.0)
	Bachelor's degree	89 (20.2)	95 (25.4)	184 (22.6)
	Master's degree	70 (15.9)	54 (14.4)	124 (15.2)
	Postgraduate degree	39 (8.8)	28 (7.5)	67 (8.2)
Work	Unemployed ^a	20 (4.5)	33 (8.8)	53 (6.5)
	Student ^a	96 (21.8)	124 (33.2)	220 (27.0)
	Freelancer ^a	66 (15.0)	30 (8.0)	96 (11.8)
	Worker ^a	259 (58.7)	187 (50.0)	446 (54.7)
Religious beliefs	Yes, practicing	31 (7.0)	26 (7.0)	57 (7.0)
	Yes, not practicing	152 (34.5)	152 (40.6)	304 (37.3)
	No (Atheist/agnostic)	258 (58.5)	196 (52.4)	454 (55.7)
Political ideology	Extreme right ^a	7 (1.6)	0 (0.0)	7 (0.9)
	Right ^a	99 (22.4)	28 (7.5)	127 (15.6)
	Center	64 (14.5)	38 (10.2)	102 (12.5)
	Left ^a	146 (33.1)	156 (41.7)	302 (37.1)
	Extreme left	10 (2.3)	7 (1.9)	17 (2.1)
	Not interested ^a	115 (26.1)	145 (38.8)	260 (31.9)
Marital status	Single	159 (36.1)	116 (31.0)	275 (33.7)
	Cohabiting partner	91 (20.6)	72 (19.3)	163 (20.0)
	Noncohabiting partner	140 (31.7)	139 (37.2)	279 (34.2)
	Married	46 (10.4)	38 (10.2)	84 (10.3)
	Separated	3 (0.7)	6 (1.6)	9 (1.1)
	Divorced	2 (0.5)	3 (0.8)	5 (0.6)
Children	Yes	62 (14.1)	56 (15.0)	118 (14.5)
	No	379 (85.9)	318 (85.0)	697 (85.5)

Note. ^a indicates a statistically significant gender difference (Z score) at the specified confidence level (i.e., 0.05 level).

yielding different findings. Some authors [17] found an association with a more favorable and egalitarian attitude toward women, while other studies [44] reported an association with increased aggression toward women. The evidence is also controversial regarding how harmful sexual attitudes are associated with the use of pornography, which is operationalized in studies in terms of the content to which one is exposed or the frequency of use. However, how the problematic use of pornography, understood as an aspect of addiction and craving, is associated with adherence to sexist beliefs and an acceptance of rape myths has not been studied.

To address these gaps in the literature, the aim of this study is to determine whether there is a relationship between problematic pornography use, rape myth acceptance, and sexism.

Three main hypotheses were formulated for this study: (1) there is a gender difference between problematic pornography use (i.e., pornography cravings (PCQ scale) and pornography-related problems (PPUSS scale), rape myth acceptance (i.e., adherence to rape culture related to rape myth acceptance (SRMA scale) and the belief that women use token resistance in sexual situations (TRSS scale)) and sexist beliefs (i.e., benevolent and hostile sexism (ASI scale) and adherence to sexist ideology related to male role norms (MRNI scale)); (2) there is a positive correlation between problematic pornography use (PCQ and PPUSS scales) and rape myth acceptance (SRMA and TRSS scales); and (3) there is a positive correlation between problematic pornography use (PCQ and PPUSS scales) and sexist beliefs (ASI and MRNI scales).

2. Materials and methods

2.1. Participants

A priori power analysis was conducted using G*Power (version 3.1.9.7) software for the F test. With a total of 306 participants and a power of 0.80, we detected an effect size of 0.25 (as a conventional medium effect). For this study, 921 participants were recruited, 77 of whom were excluded because they reported never having viewed pornographic material. After checking for outliers, an additional 25 responses were eliminated, thus resulting in a total sample of 819 participants. Of these, 0.5 % (N = 4) did not identify with any gender, and their responses were excluded during analysis due to a lack of representativeness, resulting in a final sample of 815 participants. Participants (men = 54.1 %; women = 45.9 %) ranged in age from 18 to 60 years (M = 29.46; SD = 8.19). Complete sociodemographic characteristics are described in Table 1, while information on pornography use and autoerotism is presented in Table 1S (see Supplementary Materials).

2.2. Procedures

This study was initiated on July 15, 2022, and concluded on September 19. The survey was distributed online using the Qualtrics platform. A nonprobabilistic and convenience sampling technique was used to reach as many voluntary participants as possible. Specifically, the questionnaire link was distributed through posts and stories on social networks (i.e., Facebook and Instagram), email, and university channels. Participants provided their consent by digitally signing an informed consent form stating that the data collection would be completely anonymous, and that the information would not be shared outside of the current research use. After providing informed consent, the participants were asked to complete different questionnaires on demographic characteristics, pornography use, adherence to rape myths and token resistance to sex, sexism and masculinity. Participants could withdraw at any time, and due to the ethical aspects of the research and the possible triggers it could activate, they were given the chance to contact the research team via email to obtain specific information about the research, clarify any doubts, and retract their consent at any time.

3. Materials

The *Pornography Craving Questionnaire* (PCQ; [41]) is a 12-item scale that assesses the desire to watch pornography. The scale is theoretically based on addiction models, of which craving is an element. The PCQ measures a single factor, namely, subjective cravings for pornography. Examples of items include “I feel like watching porn right now” and “If I watched porn right now, I would have difficulty stopping.” These items are rated on a 7-point scale (from 1 = “completely disagree” to 7 = “completely agree”). Although described as a desire questionnaire, the PCQ assesses four components of addiction: salience, altered control, craving, and mood modification [41]. The present study showed excellent internal consistency, with a Cronbach’s alpha of 0.90.

The *Pornography-Related Problems Scale* (PPUSS; [38]) includes 12 items and is based on models describing the main characteristics of addiction. The PPUSS measures four factors: distress and functional problems, excessive use, difficulty controlling use, and use to escape/avoid negative emotions. In this study, the subscales had Cronbach’s alpha values of 0.67, 0.86, 0.83, and 0.83, respectively, with an overall internal consistency of 0.89. Examples of items include “Pornography use has created significant problems in my personal relationships with others, social situations, work, or other important aspects of my life” (distress and functional problems subscale) and “I have not been successful in my efforts to reduce or control the frequency with which I use pornography in my life” (difficulties in controlling use), rated on a 7-point scale (from 1 = “never” to 7 = “almost always”).

The *Rape Myth Acceptance Short Form* (SRMA; [21]) is a shorter and updated version of the IRMA scale [45]. It aims to investigate adherence to rape culture, i.e., a culture that normalizes rape and violence against women. The Italian version has recently been validated by Martini et al. [20] and includes 22 items with a 5-point Likert scale (from 1 = “completely disagree” to 5 = “completely agree”). The measure comprises four subscales. The first, “She wanted it,” refers to the false idea that a woman provokes rape with her behavior. The second, “He didn’t mean to,” reflects the belief that the rapist did not intend to attack the woman but was unable to avoid it; an example of an item is “Rape happens when a boy’s sexual desire gets out of control”. The third, “It wasn’t really rape,” includes

statements that minimize the event, justifying the perpetrator. The fourth, “She lied,” describes the stereotype that women invent many disclosures as an excuse. In this study, the subscales had Cronbach’s alpha values of 0.68, 0.73, 0.56, and 0.89, respectively, with an overall internal consistency of 0.88.

The *Ambivalent Sexism Inventory Short Form* (ASI-SF; [46]) was used to measure sexism. The shortened scale includes 12 items (6 for hostile sexism and 6 for benevolent sexism) with a 5-point response range (from 1 = “completely disagree” to 5 = “completely agree”). An example item from the Hostile Sexism Subscale (HM) is “Women seek to gain power by holding men in check”. An example item from the Benevolent Sexism Subscale (BS) is “Women should be pampered and protected by men.” The subscales showed a Cronbach’s alpha of 0.80 for hostile sexism and 0.73 for benevolent sexism.

The *Male Role Norms Inventory Short Form* (MRNI-SF; [47]) is a shorter version of the MRNI-R [48]. It aims to measure adherence to a sexist ideology through 21 items on a 7-point Likert scale (from 1 = “completely disagree” to 7 = “completely agree”). There are seven subscales: restrictive emotionality (“A man should never admit when others hurt his feelings”), mechanical skills (“Men should be able to fix things inside the house”), negativity toward sexual minorities (“Homosexuals should never get married”), avoiding femininity (“Men should watch football matches instead of fiction”), the importance of sex (“Men should always want to have sex”), tenacity and dominance (“A man should always be in charge”). The overall Cronbach’s alpha was 0.89.

The *Token Resistance to Sex Scale* (TRSS) measures token resistance beliefs ([30]). This scale assesses identification with the belief that women use token resistance in sexual situations and consists of eight items rated on a 7-point Likert scale. Responses range from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating a stronger endorsement of token resistance beliefs. Example items from the scale include the statements “Women usually say ‘no’ to sex when they really mean ‘yes’” and “When a woman waits until the very last minute to object to sex in a sexual interaction, she probably really wants to have sex.” We developed the Italian version of the TRSS using the back-translation method. One professional translator translated the original scale into Italian, and another back-translated it into English. We then invited a bilingual psychologist to check the consistency of the original and back-translated versions, after which we finalized the Italian version. The overall Cronbach’s alpha was 0.88.

3.1. Data analysis

Preliminary analyses were conducted to verify the assumptions for further analyses and to investigate the sample characteristics. Specifically, after excluding 25 participants from analyses as univariate outliers (i.e., z scores of the scales used greater than 3), the data distributions were verified for normality (skewness <2; kurtosis <7) for each variable investigated, and internal consistency was calculated for all scales and subscales using the Cronbach’s alpha coefficient. In addition, descriptive analyses were conducted on the sociodemographic characteristics of pornography use and autoerotism in the entire sample and separately for men and women. A chi-square test with a post hoc Z test for independent proportions was used to compare gender characteristics. Afterward, multivariate analysis of variance (MANOVA) was conducted to analyze gender differences in problematic pornography use, rape myth acceptance, and sexist beliefs, controlling for age, self-eroticism, self-eroticism, while viewing pornography and the use of pornography. When variance in the violation of the homogeneity assumption was significant (i.e., Levene’s test for equality of variances with $p < 0.01$), we used Fisher’s F test with equal variances not assumed. Multiple comparisons were performed by using the Bonferroni correction for alpha inflation due to multiple tests. Finally, a partial Pearson’s correlation analysis was conducted to check correlations between the investigated variables controlling for age, self-eroticism, self-eroticism while viewing pornography, and pornography use. All analyses were conducted in IBM SPSS Statistics (version 27.0.1), and statistical significance was considered at a two-tailed probability level of less than 0.05.

4. Results

4.1. Descriptive analysis

Regarding sociodemographic characteristics, in both gender-defined groups, higher percentages emerged for Italian nationality (men = 98.4 %; women = 97.6 %), heterosexual orientation (men = 89.6 %; women = 80.7 %), a working occupation (men = 58.7 %; women = 50.0 %), an atheist/agnostic orientation (men = 58.5 %; women = 52.4 %), a left-wing political ideology (men = 33.1 %; women = 41.7 %), and childlessness (men = 85.9 %; women = 85.0 %). Conversely, regarding marital status, there was a higher frequency of singles in the group of men. In contrast, there was a higher frequency of noncohabiting partners in the group of women. In addition, statistically significant differences emerged between men and women in terms of age, sexual orientation, employment status, and political ideology, as shown in [Table 1S](#).

Concerning the use of pornography and autoerotism ([Table 1S](#)), most participants, both men and women, reported staying in a permanent relationship, sometimes using a year of self-eroticism and not viewing extreme pornographic content (e.g., gang bang; hardcore; pissing; brutal sex; bondage; sadomasochism).

Women reported self-eroticism behavior while viewing pornographic content less frequently than men did. Statistically significant differences emerged between men and women in all dimensions investigated, except for the viewing of extreme pornographic content, as shown in [Table 1S](#).

4.2. Differences in gender-defined groups

To analyze gender differences in problematic pornography use, rape myth acceptance, and sexist beliefs controlling for age, self-

eroticism, and self-eroticism while viewing pornography and the use of pornography, a MANOVA was conducted. The ANOVA results showed a statistically significant difference in all investigated dimensions except for the PCQ. When controlling for age, self-eroticism, self-eroticism while viewing pornography, and pornography use, the results also showed a statistically significant difference in the PCQ. Notably, there were no gender differences in the escape negative emotions dimension of the PPUS. Men scored higher than women on all the investigated variables except for the PCQ (Table 2, Figs. 1S, 2S and 3S).

4.3. Correlation analysis

To assess the relationships between problematic pornography use (i.e., PCQ and PPUS scales), rape myth acceptance (i.e., SRMA and TRSS scales), and sexist beliefs (i.e., ASI and MRNI scales), a partial correlation analysis divided by gender controlling for age, self-eroticism, self-eroticism while viewing pornography, and the pornography use was conducted.

Table 2
Gender differences in problematic pornography use, rape myth acceptance and sexist beliefs.

	F	df	p	η_p^2	Group	N	Mean (SD)	SE	95 % CI ^b	
									Lower Bound	Upper Bound
PCQ	19.044	813	<0.001	0.023	Men	441	3.04 (1.124)	0.054	-0.593	-0.225
					Women	374	3.07 (1.184)	0.061	0.225	0.593
PPUS_D	35.421 ^a	801	<0.01	0.012	Men	441	1.95 (1.142)	0.054	0.094	0.427
					Women	374	1.49 (0.855)	0.044	-0.427	-0.094
PPUS_EU	52.751 ^a	797	<0.01	0.010	Men	441	2.31 (1.299)	0.062	0.082	0.444
					Women	374	1.61 (0.952)	0.049	-0.444	-0.082
PPUS_DCU	88.159 ^a	770	<0.001	0.026	Men	441	2.38 (1.374)	0.065	0.252	0.622
					Women	374	1.49 (0.910)	0.047	-0.622	-0.252
PPUS_ENE	7.016 ^a	807	0.801	0.000	Men	441	2.86 (1.592)	0.076	-0.211	0.273
					Women	374	2.31 (1.473)	0.076	-0.273	0.211
PPUS_Tot	34.197 ^a	804	<0.01	0.013	Men	441	2.37 (1.075)	0.051	0.099	0.397
					Women	374	1.73 (0.816)	0.042	-0.397	-0.099
MRNI	69.976 ^a	753	<0.001	0.124	Men	441	2.49 (0.764)	0.036	0.478	0.692
					Women	374	1.91 (0.480)	0.025	-0.692	-0.478
ASI_BS	41.320	813	<0.001	0.049	Men	441	2.67 (0.737)	0.040	0.276	0.519
					Women	374	2.25 (0.748)	0.043	-0.519	-0.276
ASI_HS	47.891	813	<0.001	0.056	Men	441	2.72 (0.811)	0.043	0.329	0.589
					Women	374	2.23 (0.766)	0.041	-0.589	-0.329
SRMA_SW	12.352 ^a	813	<0.001	0.086	Men	441	1.77 (0.535)	0.025	0.284	0.449
					Women	374	1.42 (0.450)	0.023	-0.449	-0.284
SRMA_HDM	27.732	813	<0.001	0.033	Men	441	2.08 (0.745)	0.035	0.199	0.436
					Women	374	1.84 (0.703)	0.036	-0.436	-0.199
SRMA_WRR	106.741 ^a	752	<0.001	0.086	Men	441	1.34 (0.387)	0.018	0.187	0.296
					Women	374	1.12 (0.243)	0.013	-0.296	-0.187
SRNA_SL	56.551	813	<0.001	0.065	Men	441	2.34 (0.839)	0.040	0.377	0.644
					Women	374	1.88 (0.768)	0.040	-0.644	-0.377
SRMA_Tot	13.162 ^a	813	<0.001	0.096	Men	441	1.89 (0.492)	0.024	0.282	0.432
					Women	374	1.57 (0.414)	0.021	-0.432	-0.282
TRSS	6.015 ^a	808	<0.001	0.078	Men	441	2.46 (0.985)	0.047	0.499	0.811
					Women	374	1.81 (0.903)	0.047	-0.811	-0.499

Note. ^a = Levene's test is significant ($p < 0.05$), suggesting a violation of the assumption of equal variances; ^b = Adjustment for multiple comparisons: Bonferroni.

Control Variables = Age, self-eroticism, self-eroticism while viewing pornography, and pornography use.

PCQ = Pornography Craving Questionnaire measuring the desire to watch pornography; **PPUS_D** = Pornography-Related Problems Scale subscale measuring distress and functional problems resulting from pornography use; **PPUS_EU** = Pornography-Related Problems Scale subscale measuring the excessive use of pornography; **PPUS_DCU** = Pornography-Related Problems Scale subscale measuring difficulties in controlling the use of pornography; **PPUS_ENE** = Pornography-Related Problems Scale subscale measuring the use of pornography to escape from negative emotions; **PPUS_Tot** = Total score of Pornography-Related Problems Scale; **MRNI** = Male Role Norms Inventory Short Form; **ASI_BS** = Ambivalent Sexism Inventory Short Form – Benevolent Sexism Subscale; **ASI_HS** = Ambivalent Sexism Inventory Short Form – Hostile Sexism Subscale; **SRMA_SW** = Rape Myth Acceptance Short Form – “She Wanted It” subscale measuring acceptance of the false idea that a woman provokes rape with her behavior; **SRMA_HDM** = Rape Myth Acceptance Short Form – “He didn't mean to” subscale measuring acceptance of the belief that the rapist did not intend to attack the woman but was unable to avoid it; **SRMA_WRR** = Rape Myth Acceptance Short Form – “It wasn't really rape” subscale measuring minimization of the event and justification of the perpetrator's actions; **SRMA_SL** = Rape Myth Acceptance Short Form – “She lied” subscale measuring acceptance of the stereotype that many disclosures are invented by women as an excuse; **SRMA_Tot** = Rape Myth Acceptance Short Form total score; **TRSS** = Token Resistance to Sex Scale measuring the belief that women use token resistance in sexual situations.

4.4. Correlation analysis for the men's group

Without controlling for confounding variables, within the men's group (Table 3S), pornography cravings (i.e., PCQ scale) showed statistically significant positive correlations with all sexist belief dimensions (i.e., ASI subscales and MRNI scale), with the belief that women use token resistance in sexual situations (i.e., TRSS scale), the rape myth related to the belief that "She wanted it" (i.e., SRMA_SW), "He didn't mean to" (i.e., SRMA_HDM), and with the total score related to adherence to rape culture (i.e., SRMA_Tot). In contrast, no significant correlation was found between the beliefs that "It wasn't really rape" (i.e., SRMA_WRR) and "She lied" (i.e., SRMA_SL).

Regarding the problematic use of pornography (i.e., PPUSS scale), the results showed statistically significant positive correlations between the total score (PPUSS_Tot), the excessive use of pornography (i.e., PPUSS_EU) and difficulties in controlling the use of pornography (i.e., PPUSS_DCU) and all rape myth acceptance (i.e., SRMA subscales and total score and TRSS scale) and sexist beliefs (i.e., ASI subscales and MRNI scale). Regarding the relationship between distress and functional problems resulting from pornography use (i.e., PPUSS_D), the use of pornography to escape from negative emotions (i.e., PPUSS_ENE) and sexist belief dimensions (i.e., ASI subscales and MRNI scale), both subscales of the problematic use of pornography (i.e., PPUSS_D and PPUSS_ENE) showed nonsignificant correlations with adherence to sexist ideology measured with the MRNI. However, while distress and functional problems resulting from pornography use (i.e., PPUSS_D) showed a statistically significant positive correlation with both dimensions of sexism (i.e., ASI subscales), the use of pornography to escape from negative emotions (i.e., PPUSS_ENE) showed a significant correlation with hostile sexism only and not with benevolent sexism. Finally, both subscales of the problematic use of pornography (i.e., PPUSS_D and PPUSS_ENE) showed statistically significant positive correlations with all rape myth acceptance dimensions (i.e., SRMA subscales and total score), except for the belief that "She lied".

As shown in Table 3, when controlling for age, self-eroticism, self-eroticism while viewing pornography, and pornography use, the correlations between ASI benevolent sexism and the use of pornography to escape negative emotions (i.e., PPUSS_ENE), the rape myth related to the belief that "It wasn't really rape" (i.e., SRMA_WRR) and pornography cravings (i.e., PCQ scale), the belief that "She lied" (i.e., SRMA_SL) and distress and functional problems resulting from pornography use (i.e., PPUSS_D) were also found to be statistically significant.

4.5. Correlation analysis for the women's group

Without controlling for confounding variables, in the women's group (Table 4S), pornography craving (i.e., PCQ) showed a statistically significant positive correlation with all sexist belief dimensions (i.e., ASI subscales and MRNI scale), the belief that women use token resistance in sexual situations (i.e., TRSS scale) and all dimensions related to adherence to rape culture (i.e., SRMA subscales and total score), except for the belief that "It wasn't really rape" (SRMA_WRR).

Concerning the relationship between problematic pornography use (PPUSS subscales and total score) and sexist belief dimensions (i.e., ASI subscales and total score and MRNI scales), all PPUSS dimensions showed statistically significant positive correlations with adherence to sexist ideology measured with the MRNI. However, only the excessive use of pornography (i.e., PPUSS_EU) showed a significant positive correlation with both sexism dimensions (i.e., ASI benevolent and hostile sexism). In contrast, distress and functional problems resulting from pornography use (i.e., PPUSS_D), difficulties in controlling the use of pornography (i.e., PPUSS_DCU)

Table 3

Pearson's correlation between problematic pornography use and rape myth acceptance and sexist beliefs controlling for age, self-eroticism, self-eroticism while viewing pornography, and the use of pornography in the men's group.

	ASI_BS	ASI_HS	MRNI	SRMA_SW	SRMA_HDM	SRMA_WRR	SRMA_SL	SRMA_Tot	TRSS
PCQ	0.220**	0.163**	0.141**	0.165**	0.104*	0.096*	0.083	0.140**	0.191**
PPUSS_D	0.158**	0.205**	0.044	0.138**	0.179**	0.129**	0.099*	0.173**	0.140**
PPUSS_EU	0.205**	0.223**	0.137**	0.157**	0.211**	0.130**	0.177**	0.224**	0.239**
PPUSS_DCU	0.179**	0.176**	0.146**	0.138**	0.181**	0.153**	0.115*	0.185**	0.171**
PPUSS_ENE	0.106*	0.159**	0.088	0.149**	0.186**	0.124**	0.071	0.168**	0.122*
PPU_Tot	0.206**	0.244**	0.136**	0.189**	0.245**	0.174**	0.146**	0.242**	0.215**

Note. * = $p < 0.05$; ** = $p < 0.01$. Control Variables = Age, self-eroticism, self-eroticism while viewing pornography, and the use of pornography. **PCQ** = Pornography Craving Questionnaire measuring the desire to watch pornography; **PPUSS_D** = Pornography-Related Problems Scale subscale measuring distress and functional problems resulting from pornography use; **PPUSS_EU** = Pornography-Related Problems Scale subscale measuring the excessive use of pornography; **PPUSS_DCU** = Pornography-Related Problems Scale subscale measuring difficulties in controlling the use of pornography; **PPUSS_ENE** = Pornography-Related Problems Scale subscale measuring the use of pornography to escape from negative emotions; **PPUSS_Tot** = Total score of Pornography-Related Problems Scale; **MRNI** = Male Role Norms Inventory Short Form; **ASI_BS** = Ambivalent Sexism Inventory Short Form – Benevolent Sexism Subscale; **ASI_HS** = Ambivalent Sexism Inventory Short Form – Hostile Sexism Subscale; **SRMA_SW** = Rape Myth Acceptance Short Form – "She Wanted It" subscale measuring acceptance of the false idea that a woman provokes rape with her behavior; **SRMA_HDM** = Rape Myth Acceptance Short Form – "He didn't mean to" subscale measuring acceptance of the belief that the rapist did not intend to attack the woman but was unable to avoid it; **SRMA_WRR** = Rape Myth Acceptance Short Form – "It wasn't really rape" subscale measuring minimization of the event and justification of the perpetrator's actions; **SRMA_SL** = Rape Myth Acceptance Short Form – "She lied" subscale measuring acceptance of the stereotype that many disclosures are invented by women as an excuse; **SRMA_Tot** = Rape Myth Acceptance Short Form total score; **TRSS** = Token Resistance to Sex Scale measuring the belief that women use token resistance in sexual situations.

Table 4

Pearson's correlation between problematic pornography use and rape myth acceptance and sexist beliefs controlling for age, self-eroticism, self-eroticism while viewing pornography, and pornography use in the women's group.

	ASI_BS	ASI_HS	MRNI	SRMA_SW	SRMA_HDM	SRMA_WRR	SRMA_SL	SRMA Tot	TRSS
PCQ	0.168**	0.179**	0.179**	0.101	0.161**	0.085	0.143**	0.175**	0.216**
PPUSS_D	0.181**	0.117*	0.195**	0.136**	0.093	0.048	0.062	0.118*	0.215**
PPUSS_EU	0.170**	0.094	0.161**	0.087	0.112*	0.070	0.027	0.100	0.133*
PPUSS_DCU	0.120*	0.054	0.169**	0.074	0.074	0.009	0.000	0.059	0.065
PPUSS_ENE	0.102*	0.047	0.189**	0.148**	0.037	0.050	0.063	0.096	0.112*
PPU_Tot	0.180**	0.097	0.235**	0.152**	0.097	0.059	0.053	0.122*	0.168**

Note. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$. Control Variables = Age, self-eroticism, self-eroticism while viewing pornography, and pornography use.

and the total score of PPUSS (i.e., PPUSS_Tot) showed significant correlations with benevolent sexism only. Neither of the sexism dimensions showed a significant correlation with the use of pornography to escape from negative emotions (i.e., PPUSS_ENE). Regarding the relationship between problematic pornography use (i.e., PPUSS scale) and rape myth acceptance (i.e., SRMA and TRSS scale), the results showed a statistically significant positive correlation between the belief that women use token resistance in sexual situations (i.e., TRSS scale) and distress and functional problems resulting from pornography use (i.e., PPUSS_D), the excessive use of pornography (i.e., PPUSS_EU) and total score of PPUSS (i.e., PPUSS_Tot). In contrast, no significant correlation was found between difficulties in controlling the use of pornography (i.e., PPUSS_DCU) and the use of pornography to escape from negative emotions (i.e., PPUSS_ENE) dimensions. Regarding adherence to rape culture (i.e., SRMA subscales and total score), the results did not show a significant correlation between any of the PPUSS dimensions and the beliefs that "He didn't mean to" (i.e., SRMA_HDM), "It wasn't really rape" (i.e., SRMA_WRR) and "She lied" (i.e., SRMA_SL). Furthermore, the results revealed statistically significant positive correlations between distress and functional problems resulting from pornography use (i.e., PPUSS_D) and the total score of the PPUSS (i.e., PPUSS_Tot) and the rape myth related to the belief that "She wanted it" (i.e., SRMA_SW) and the total score on the scale measuring adherence to rape culture (i.e., SRMA_Tot). On the other hand, the excessive use of pornography (i.e., PPUSS_EU) had a significant correlation with the total score of SRMA only (i.e., SRMA_Tot), while the use of pornography to escape from negative emotions (i.e., PPUSS_ENE) had a significant correlation with the belief that "She wanted it" only (i.e., SRMA_SW). Therefore, difficulty in controlling the use of pornography (i.e., PPUSS_DCU) was the only PPUSS dimension that did not show a significant correlation with the rape myth acceptance dimensions (i.e., SRMA subscales and total score and TRSS).

As shown in Table 4, when controlling for age, self-eroticism, self-eroticism while viewing pornography, and pornography use, statistically significant correlations were found between ASI benevolent sexism (i.e., ASI_BS) and the use of pornography to escape from negative emotions (i.e., PPUSS_ENE), ASI hostile sexism (i.e., ASI_HS) and distress and functional problems resulting from pornography use (i.e., PPUSS_D), the rape myth related to the belief that "He didn't mean to" (i.e., SRMA_HDM) and the excessive use of pornography (i.e., PPUSS_EU), the belief that women use token resistance in sexual situations (i.e., TRSS scale) and the use of pornography to escape from negative emotions (i.e., PPUSS_ENE). There was a correlation between ASI hostile sexism (i.e., ASI_HS) and the excessive use of pornography (i.e., PPUSS_EU), the belief that "She wanted it" (i.e., SRMA_SW) and pornography cravings (i.e., PCQ scale). The SRMA total score and the excessive use of pornography (i.e., PPUSS_EU) were not statistically significant.

4.6. Correlation comparisons between genders

Figs. 4S and 5S provide a scatterplot of the relationships between the use of pornography, sexist beliefs, and rape myth acceptance by gender.

Overall, regarding the relationships between pornography use (i.e., PCQ and PPUSS scales) and sexism (i.e., ASI and MRNI scales), benevolent sexism (i.e., ASI_B) showed the same correlation pattern with PCQ and PPUSS in both the men's and women's groups, showing a statistically significant positive correlation with all pornography use dimensions (i.e., PCQ and PPUSS subscales), except for the use of pornography to escape from negative emotions (i.e., PPUSS_ENE) only when not controlling for confounding variables (i.e., age, self-eroticism, self-eroticism while viewing pornography, and pornography use). Hostile sexism (i.e., ASI_H) showed a statistically significant positive correlation with all pornography use dimensions (i.e., PCQ and PPUSS subscale) in the men's group. In the women's group, it had a statistically significant positive correlation only with pornography cravings (i.e., PCQ) and the excessive use of pornography (i.e., PPUSS_EU) when not controlling for confounding variables (i.e., age, self-eroticism, self-eroticism while viewing pornography, and pornography use) and with pornography cravings (i.e., PCQ) and distress and functional problems resulting from pornography use (i.e., PPUSS_D) when controlling for confounding variables. Conversely, adherence to sexism ideology related to male role norms (i.e., MRNI) showed a statistically significant positive correlation with all pornography use dimensions (i.e., PCQ and PPUSS subscale) in the women's group, while in the men's group, there were no significant correlations with distress and functional problems resulting from pornography use (i.e., PPUSS_D) and the use of pornography to escape from negative emotions (i.e., PPUSS_ENE) when both controlling and not controlling for confounding variables (i.e., age, self-eroticism, self-eroticism while viewing pornography, and pornography use).

With regard to the relationship between pornography use (i.e., the PCQ and PPUSS scales) and rape culture adherence (i.e., the SRMA and TRSS scale), the rape myth related to the belief that "She wanted it" (i.e., SRMA_SW), "He didn't mean to" (i.e.,

SRMA_HDM), women use token resistance in sexual situations (i.e., TRSS scale), and the total SRMA score showed a statistically significant positive correlation with all pornography use dimensions (i.e., the PCQ and PPUSS subscales) in the men's group when both controlling and not controlling for confounding variables (i.e., age, self-erotism, self-erotism while viewing pornography, and pornography use). In the women's group, the belief that "She wanted it" (i.e., SRMA_SW) showed no significant correlation with the excessive use of pornography (i.e., PPUSS_EU) and difficulties in controlling the use of pornography (i.e., PPUSS_DCU), and with pornography cravings (i.e., PCQ) only when controlling for confounding variables (i.e., age, self-erotism, self-erotism while viewing pornography, and pornography use). The belief that "He didn't mean to" (i.e., SRMA_HDM) showed a statistically significant positive correlation only with pornography cravings (i.e., PCQ scale) and with excessive use of pornography (i.e., PPUSS_EU) when controlling for confounding variables. The belief that women use token resistance in sexual situations (i.e., TRSS scale) and the total SRMA score showed no significant correlation with difficulties in controlling the use of pornography (i.e., PPUSS_DCU) and the use of pornography to escape from the negative emotions (i.e., PPUSS_ENE). When controlling for confounding variables, the total SRMA score did not show a statistically significant correlation with the excessive use of pornography (i.e., PPUSS_EU), and the belief that women use token resistance in sexual situations (i.e., TRSS scale) showed a statistically significant positive correlation with the use of pornography to escape from negative emotions (i.e., PPUSS_ENE). In the men's group, the rape myth related to the belief that "It wasn't really rape" showed no statistically significant correlation with pornography cravings only (i.e., PCQ scale), while in the women's group, there were not statistically significant correlations both controlling and not controlling for confounding variables (i.e., age, self-erotism, self-erotism while viewing pornography, and pornography use). The belief that "She lied" (i.e., SRMA_SL) showed no statistically significant positive correlation with pornography cravings (i.e., PCQ scale) and distress and functional problems resulting from pornography use (i.e., PPUSS_D) in the men's group and showed a statistically significant positive correlation with pornography cravings only (i.e., PCQ scale) in the women's group when both controlling and not controlling for confounding variables (i.e., age, self-erotism, self-erotism while viewing pornography, and pornography use).

5. Discussion

This study investigated the relationships between problematic pornography use, pornography craving, rape myth acceptance, and sexism, accounting for variables including age, self-erotism, and pornography use.

The first research hypothesis regarding gender differences in problematic pornography use, rape myth acceptance, and sexist beliefs was partially confirmed. Specifically, the results showed that men report higher levels of problematic pornography use and greater adherence to sexist ideologies and to a rape culture normalizing sexual violence against women [20,26,48]. However, no differences emerged in the use of pornography to escape/avoid negative emotions, and women showed higher levels of craving than men did. This finding can be explained in several ways. First, the problematic use of pornography to escape negative emotions was found to significantly predict participants' body image and relationship dissatisfaction.

This result suggests that individuals who turn to pornography as a coping mechanism to address negative emotions may experience dissatisfaction with their relationships and body image [49]. The literature has reported higher levels of body dissatisfaction among women than among men, which could explain our results. In fact, Gualdi-Russo et al. [50] showed that females were more dissatisfied with their bodies than males concerning both their own ideals and the silhouette they considered attractive to the opposite sex. Furthermore, Karazsia et al. [51] demonstrated that girls and women scored higher than boys and men in predicting thinness-oriented dissatisfaction.

In addition, individuals with negative cognitions about distress caused by problematic pornography use may be more likely to use pornography to seek relief from their feelings. This condition could elicit moral incongruence regarding problematic pornography use, which can lead to cognitive dissonance [52]. Consequently, women might experience greater moral incongruence because normative female sexual behavior is still perceived as being characterized by lower sexual arousal and higher sexual inhibition [53].

The study also partially confirmed the second and third hypotheses regarding a positive correlation between problematic pornography use and rape myth acceptance on the one hand and gender stereotypes on the other. Specifically, as hypothesized, the results showed positive correlations between problematic use/craving and rape myth adherence (e.g., "She wanted it," "He didn't mean to," "It wasn't really rape," "Women usually say 'no' to sex when they really mean 'yes'", i.e., token resistance to sex) for men, while in the women's group, these relationships were found only for the beliefs that "She wanted it" and "Women usually say 'no' to sex when they really mean 'yes'" (token resistance to sex) and pornography cravings. Regarding the second hypothesized relationship, the results showed a relationship in both the men's and women's groups between all dimensions defining problematic pornography use and cravings and benevolent sexism toward women and male sexism, especially in the women's group. In contrast, hostile sexism showed a positive correlation with excessive pornography use, principally in the men's group. In the women's group, this relationship was pronounced, with levels of craving and functional problems resulting from excessive pornography use. These findings are consistent with those from meta-analyses of the relationship between pornography use and rape myth acceptance, which revealed statistically significant correlations between pornography use and rape myth acceptance [16,22]. For women, the patterns of correlation with rape myth acceptance were more nuanced, with some dimensions not significantly correlated; similar findings have been reported by Borgogna and colleagues [26]. The results seem to indicate that both the craving aspect and the use of pornography as a coping strategy to manage negative emotions are associated with rape myth acceptance and sexism rather than the excessive use of pornography per se. In terms of sexist beliefs, similar results were found, namely, a positive association between pornography exposure and both the development of less egalitarian attitudes toward women and hostile sexism [54,49]. One reason could be that pornography consumption contributes to the acquisition of certain specific sexual scripts in which women are portrayed in stereotypical roles and act according to these roles [16]. A sexual script can be understood as a mechanism by which society establishes and communicates

socially acceptable, desirable, and pleasurable patterns of sexual behavior. Pornography use, as measured by the frequency and variety of use, indirectly influences the likelihood of adopting harmful sexual attitudes through the mediation of specific sexual scripts [23]. Analyzing the correlation between benevolent sexism and problematic pornography use among both genders shows that the widespread acceptance of benevolent sexism by both men and women contributes to its perception as a more socially acceptable form of sexism [55]. García et al. [56] showed that high scores on benevolent sexism mask the subordinated perspective of women by presenting themselves as expressions of affection and protection. A plausible explanation for this phenomenon could be that as women mature, the stereotypical perception of a dominant male evolves into a benevolent portrayal of a protective male figure, making this form of sexist behavior more difficult to identify. Garos et al. [57] also showed a correlation between benevolent sexism and mainstream pornography use, suggesting that the motivation behind pornography use extends beyond misogynistic attitudes toward women and that people who use pornography may have positive feelings toward women but still tend to stereotype them. Previous research has shown a relationship between women's benevolent sexism and the viewing of erotic content in which a man sexually dominates his partner, with a strong tendency to validate benevolent sexism when erotica depicting a man in a dominant position over a woman perceived as "romantic" [52,53].

The present study has several limitations. First, the use of a convenience sample may have introduced self-selection bias that undermines the generalizability of the results. However, the sample was numerically quite large, with most participants identifying as heterosexual. Future research should garner a more diverse sample regarding sexual orientation. Second, although evidence from both the data and the literature indicate a connection between problematic pornography use, sexism, and acceptance of the rape myth, it was not possible to investigate the types of relationships between these variables considering the cross-sectional nature of the study. It could therefore be insightful to conduct longitudinal studies to examine the cause-and-effect relationships among social phenomena related to these issues. In this study, the questionnaire considered potential intersectional factors such as nationality, sexual orientation, gender, and assigned sex at birth. However, data collection consisted predominantly of responses from Italian and heterosexual individuals, thereby limiting the ability to conduct a comprehensive intersectional analysis. This limitation, along with the intrinsic limitation regarding self-report questionnaires on topics that could be influenced by social desirability, does not allow for generalizing the findings beyond the Italian and heteronormative context, as sociodemographic variables play a significant role in individuals' acceptance of stereotypes and their persistence over time. Therefore, it is necessary to repeat the study in different cultural settings.

Despite these limitations, the study has several notable strengths that bolster its contributions to the field. The large sample size and the detailed collection of covariate data enhance the reliability of our findings, while the use of well-validated scales and robust data analysis techniques ensure rigorous examination of the hypothesized relationships. These methodological strengths are crucial, particularly when exploring complex social phenomena such as the impact of pornography use on social attitudes.

In the future, it would also be interesting to observe the construct of sexual objectification. Theorizing this construct could provide a useful framework for understanding the relationships between pornography cravings or problematic pornography use and rape myths. Previous studies have demonstrated a significant association between pornography use and sexual objectification [58,59]. Specifically, higher pornography consumption has been strongly linked to increased endorsement of sexual objectification and related behaviors [60]. Therefore, exploring self-objectification as a mediating factor in the relationship between internet pornography use and the acceptance of rape myths is important for deepening the understanding of these connections and the implications of internet pornography consumption [56,57]. Moreover, it might be useful to develop research projects that analyze changes over time, possibly integrating various disciplines that allow for the analysis of individual beliefs and the changes that occur at the social and cultural levels over time.

6. Conclusion

The present research suggests a relationship between gender and pornography use, rape myth acceptance, and sexism. For instance, in our sample, pornography use and negative attitudes toward women, such as hostile sexism and adherence to rape culture, are more represented by men, who also tend to show a more significant correlation between pornography use and negative attitudes, such as hostile sexism and adherence to rape culture. This pattern, however, was not represented among women, where benevolent sexism seems to be a common factor for both pornography cravings and problematic pornography use. Understanding the links between gender-based violence (e.g., through rape culture acceptance) and the use of pornography might help both in preventing women's sexual objectification and in increasing awareness of the effects they might have on both men and women.

Research on the importance of problematic pornography use in gender-based violence is relatively recent, primarily due to the increased accessibility of online content. Several studies have attempted to investigate the relationship between exposure to pornography and attitudes toward women, which foster either more egalitarian ideas or, conversely, aggression toward women. However, considering gender-based violence as a multidimensional and complex construct, this research aimed to explore the relationship between problematic pornography use and multidimensional variables such as acceptance of rape myths and sexism. This exploration was facilitated by using multiple scales to investigate similar constructs, thus providing a better understanding of the relationships between dimensions. This type of study, which incorporates multiple perspectives, allows for a better understanding of the factors that influence and perpetuate gender-based violence, how these factors are interconnected, and, consequently, the applicability of the results.

Research on problematic pornography use and its connection to gender stereotypes and sexism can be valuable for the development of training projects on multiple levels. On the one hand, it is possible to educate those who already consume this content problematically to narrow the gap between women's representation in pornography and reality. On the other hand, by conducting causal rather than correlational research, prevention programs targeting adolescents could be developed within schools to directly address

stereotypes and sexism in pornography. Considering the ease, disintermediate, and often uncontrolled access of minors to online porn content, this approach is extremely relevant. Moreover, such a way of misrepresenting and/or replacing sex education with pornography, combined with a generalized lack of comprehensive sex education, can fuel negative attitudes toward genders [28]. An interesting goal for clinical practice would be to intercept patients experiencing pornography cravings and addiction, sexist attitudes, or acceptance of rape myths to help address not only their disorder but also erroneous beliefs related to the disorder. Furthermore, policies could be developed to regulate the representation of women in pornography, aiming to reduce stereotypical attributions that are far from reality.

Institutional Review Board statement

The study was conducted in accordance with the ethical standards of the Declaration of Helsinki and was approved by the Institutional Review Board of the Department of Psychology at the University of Rome “La Sapienza” (Protocol No. 0000275/17-02-2022).

Informed consent statement

Informed consent was obtained from all subjects involved in the study.

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Data availability

The data supporting the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy and ethical restrictions.

CRediT authorship contribution statement

Benedetta Barchielli: Writing – original draft, Methodology, Data curation, Conceptualization. **Clarissa Cricenti:** Writing – original draft, Formal analysis, Data curation. **Giulia Lausi:** Writing – review & editing, Methodology, Formal analysis. **Alessandro Quagliari:** Writing – review & editing, Conceptualization. **Emanuela Mari:** Writing – review & editing. **Gabriele Rocca:** Writing – review & editing. **Arije Antinori:** Writing – review & editing. **Anna Maria Giannini:** Writing – review & editing, Supervision. **Stefano Ferracuti:** Writing – review & editing, Supervision, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.heliyon.2024.e32981>.

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