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# Attitudes Towards Pornography and Sexual Well-Being Among Young Women in the UK

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## ABSTRACT

With the increasing prevalence of sexual content in media and evolving sexual/social norms, young women are exposed to pornography more frequently. This study aims to explore the mechanisms linking young women's attitudes toward pornography and sexual well-being. Involving 306 women from the UK (mean age = 20.12 years), the study examined how attitudes toward pornography are associated with sexual satisfaction and comfort with sex, with potential mediating factors including emotion after porn use, frequency of use, and sexual communication. Results indicate that positive attitudes toward porn are associated with higher sexual satisfaction and comfort with sex, whereas no association was found between negative attitudes toward porn and these variables. Sexual communication mediated the relationship between positive attitudes and sexual well-being, but neither emotion after porn use nor frequency of use served as mediators. Findings suggest that women with positive attitudes may experience less internal conflict related to pornography use. Negative attitudes, while correlated with emotional discomfort, were not associated with broader sexual well-being, possibly reflecting adaptive strategies for managing personal ambivalence. These results emphasize the need for sex education that critically examines and constructively addresses the psychosexual impact of pornography use on young women's sexual development.

## Introduction

The social environment in which young people are embedded is changing. With the increasing prevalence of sexual content in mass media (Ezzell et al., 2020), young women are being exposed to pornography more frequently and earlier than in the past (Wright & Herbenick, 2025). Simultaneously, though the causal relationships and sequences are difficult to determine, young people's sexual behaviors and attitudes have also shifted. Over time, sexual scripts and sexual norms have evolved, with more young people now adopting more open sexual attitudes and engaging in sexual exploration. Recent studies have documented changes in sexual behavior among adolescents and young adults, including increased openness about premarital sexual activity in specific regions, such as the United States (Landry et al., 2017), China (Shi et al., 2022), and Uganda (Omona & Ssuka, 2023).

Existing studies on internet pornography use among young people have employed both quantitative surveys and qualitative interviews with sample sizes ranging from several hundred to several thousand participants, but the predominance of cross-sectional methods means

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that causal relationships remain difficult to establish. Various studies have explored potential connections between pornography use<sup>1</sup> (Sallabank et al., 2022) and different aspects of sexual engagement among young people. While growing research has examined women's experiences with pornography (e.g., Litsou et al., 2021), much of the existing literature has focused either on male participants or on how women respond to their partners' pornography use (e.g., Rehman et al., 2021; Ruffing et al., 2024). Moreover, studies centering on women have often emphasized the potential negative effects of pornography—such as lowered self-esteem (Dorman, 2019; Nakai, 2017), increased body image concerns (Cruz & Sheridan, 2022; Johnson et al., 2019), and feelings of dependency (Litsou et al., 2021)—while paying less attention to women's own meaning-making and active engagement with pornography. However, many women, despite being aware of the potential negative effects of pornography, continue to access it with complex and contradictory feelings, e.g., enjoying sexual arousal while worrying about the authenticity of pornography, such as concern over the feelings and health of the actresses (Lebedíková, 2023). Some women utilize pornography to enhance sexual satisfaction but also endure the negative sexual experiences that come with such complex feelings, such as guilt or shame (Fernández-Ruiz et al., 2023), while others actively engage in strategies to increase the likelihood of positive experiences (A. C. Davis et al., 2020; Frings et al., 2015). Many of the qualitative studies that have previously focused on women's complex feelings about pornography have advocated exploring the potential factors influencing the relationship between pornography use and young women's sexual well-being (Daskalopoulou & Zanette, 2020).

This study investigates how young women's attitudes toward pornography, both positive and negative, are associated with key indicators of psychosexual well-being, including sexual satisfaction, comfort with sexuality, and emotional responses after pornography use. By using a quantitative approach to examine individual-level variables, this study addresses a gap in the existing literature, which has predominantly explored women's pornography use within relational or clinical frameworks, often underrepresenting women's own attitudes and the psychological and behavioral correlates of their engagement with pornography. Further insights into these areas can potentially inform educational policies and practices aimed at facilitating young women's positive experiences with pornography, fostering enhanced sexual well-being, and contributing to their mental health and overall quality of life.

## ***Women's attitudes toward pornography***

### ***Sexual norms***

Women's attitudes toward porn, which are complex, nuanced and vary between and within individuals, are influenced by various context-related social-psychological factors including religiosity and normative pressure, such as sexual and social norms (Ashton et al., 2018; Grigoropoulos, 2023; Mattebo et al., 2013; Wright, 2011). Social and sexual norms influence how pornography is associated with sexual expectations and behavioral intentions (Izdebski et al., 2020; Simms & Byers, 2013). When perceived norms are more favorable toward sexual activity, individuals, particularly women, may still navigate gendered expectations that constrain their sexual autonomy. In many heterosexual contexts, traditional sexual scripts often emphasize male pleasure and initiative, which may lead to internalized beliefs that women's pleasure is subservient or secondary to men's, reinforcing sexual double standard norms (Berrocal et al., 2019; Daskalopoulou & Zanette, 2020). The submissive position of women in much mainstream pornography, for instance, makes it difficult for some women to refuse unwanted or violent sexual behaviors that make them uncomfortable, thus triggering negative attitudes toward pornography (Fernández-Ruiz et al., 2023) and decreased sexual satisfaction (Wright, 2020) and comfort with sexuality (Lin & Lin, 2018). Having a "relaxed and accepting" attitudes toward porn, in contrast, is associated with increased porn consumption and sexual satisfaction (Hald, 2006, p. 581; Kohut et al., 2017).

### ***Sexual shame about porn use***

Numerous negative psychological consequences of sexual guilt and shame have been demonstrated, including increased anxiety, depression, and life satisfaction, and a greater likelihood of problematic pornography use (Carboneau, 2018; Lewczuk et al., 2020; Wacks et al., 2023). Religious beliefs have been cited as one of the possible triggers of sexual shame in women (Wacks et al., 2023; Tillman & Wells, 2023), although some studies have found some potential “adaptive elements” in religion that might help men reduce the negative effects of sexual shame (Wacks et al., 2023). Such “adaptive elements,” however, do not appear to function in the same way for women. When further examining the origins of women’s sexual shame, prevailing sexual scripts and the double standards that encourage women to remain sexually ignorant, reserved, and abstinent are evident (Tillman & Wells, 2023). These norms, when internalized, may give rise to conflicting responses when actual behaviors do not align with prescriptive expectations (Lewczuk et al., 2020). Pornography use may represent one such point of dissonance. Women who hold personally negative evaluations of pornography may be more likely to experience feelings of guilt or shame during use (Floyd et al., 2022; Rivas-Koehl et al., 2023).

### ***Pornography use and sexual well-being***

#### ***Emotion after porn use***

Women’s feelings toward pornography, especially emotions after porn use, are contradictory, even “paradoxical” (Ashton et al., 2018; Li et al., 2025a). Whilst utilizing pornography for sexual pleasure and arousal, there may be many concerns that inhibit sexual enjoyment, such as personal values, sexual coercion experiences, or perceived authenticity of the porn actresses’ pleasure (Parvez, 2006). Results from an intersectional feminist analysis claimed that women prefer to place themselves in the female porn performer’s position or identify with these performers; therefore, they could be more sensitive to and/or victimized by pornography that contains anti-feminist, traditional patriarchal, or misogynistic sexual scripts (Ashton et al., 2018). Young women also proactively respond to these contradictory feelings through different strategies for pursuing desire and understanding female sexuality (Daskalopoulou & Zanette, 2020; Häggström-Nordin et al., 2006). Much feminist porn, with more authentic sexual performances and/or more “enthusiastic performer consent,” has been developed for this purpose (Mondin, 2017). When young women perceive the authenticity of these types of pornography, potential benefits—including increased sexual self-esteem, sexual knowledge, sexual communication and decreased guilt—are maximized (Ashton et al., 2018).

#### ***Frequency of porn use***

Despite previous studies stating the negative outcomes of porn use among women in relationships, such as increased body monitoring (Morgan, 2011), when exploring porn’s effects without the partner’s influence, psychological symptoms and negative outcomes associated with increased pornography consumption are more often found in men (Czajeczny et al., 2023). For women, conversely, increased pornography use has generally been associated with higher sexual well-being, including higher sexual satisfaction (use with partners only), higher sexual self-competence, and lower sexual arousal difficulties (Rodrigues et al., 2021; Sommet & Berent, 2023). In addition, high-frequency pornography use is often examined as a predictor in studies of problematic use, yet the influence of personal values and perceived disapproval has also been emphasized (Lewczuk et al., 2020). Some theoretical models suggest that the interaction between use frequency and negative personal attitudes toward pornography may be relevant when exploring patterns of distress related to its use (Floyd et al., 2022; Li et al., 2025b; Su et al., 2024). Therefore, when exploring psychosexual well-being, the frequency of pornography use should not be used as an independent stand-alone predictor but should be examined along with young women’s attitudes and emotional responses after pornography use and the contexts in which porn is accessed.

### **Sexual communication**

Sexual communication is seen as “the best predictor” of women’s sexual satisfaction, irrespective of the measure used (Rausch & Rettenberger, 2021). Effective sexual communication within couples may increase sexual well-being for both partners (Blumenstock et al., 2020), whereas lower satisfaction with sexual communication is associated with diminished sexual well-being (Montesi et al., 2013). Sexual communication also plays a significant role in the interplay between women’s attitudes toward pornography and their sexual well-being (Wright, 2020), both when using pornography together with a partner (shared pornography use) and alone (solitary pornography use) (Kohut et al., 2018). For instance, women’s positive attitudes, such as being “open-minded” and “accepting” of their partners’ pornography use, which could be fostered by effective sexual communication, correlate with higher sexual satisfaction (Rehman et al., 2021). Notably, focusing solely on adhering to a particular communication style considered valid for other couples is not usually associated with satisfaction. It is the adoption of a communication style tailored to the specific couple that enhances communication satisfaction (Blunt-Vinti et al., 2019).

### **Current study**

Despite potential associations with negative outcomes, women continue to use and benefit from pornography (A. C. Davis et al., 2020; Frings et al., 2015). The current study examines how young women’s attitudes toward pornography use are associated with dimensions of psychosexual well-being, specifically sexual satisfaction, comfort with sexuality, and emotional responses following pornography use, and explores the potential mediating roles of pornography use frequency and sexual communication. Although sexual communication is included as a mediator, the primary focus is on individual-level attitudes and experiences. Conducted among young adult women in the UK, a context with relatively high accessibility to pornography and more liberal sexual norms, this research aims to contribute to a more nuanced understanding of the psychological correlates of pornography use in everyday, non-clinical populations.

Given the limited evidence on how these mediators operate among young women in the UK, we formulated research questions rather than directional hypotheses. The following research questions were addressed:

- RQ1: To what extent is the association between attitudes toward porn and sexual satisfaction mediated by emotion after pornography use, frequency of pornography use, and sexual communication?
- RQ2: To what extent is the association between attitudes toward porn and comfort with sex mediated by emotion after pornography use, frequency of pornography use, and sexual communication?

## **Method**

### **Participants**

Participants were eligible to take part if they self-identified as women, were at least 18 years old, and resided in the UK at the time of data collection. Recruitment was conducted primarily through the undergraduate research participation pool at the authors’ institution, supplemented by snowball sampling, whereby participants were invited to share the study link with others who might meet the inclusion criteria. The study was described to participants as research on sexual well-being and pornography use; the term “pornography” was explicitly included in the Participant Information Sheet to ensure informed consent. A total of 308 individuals initiated

the survey. Two responses were excluded from analysis due to missing data on the pornography use frequency item (“prefer not to say”), yielding a final analytic sample of 306 participants.

## **Measures**

### **Demographics**

The first section of the questionnaire contained sociodemographic items, including self-reported gender, age, student/employment status, importance of religion, sexual orientation, and relationship status; a “prefer not to say” option was offered for most items. Any respondent who did not identify as a woman was thanked for their time and taken to the debrief page, providing necessary “aftercare,” and the study was closed.

### **Attitudes toward pornography**

Attitudes toward pornography were assessed with two sub-scales from the Attitude Toward Erotica Questionnaire (Lottes et al., 2018), measuring the perceived negative and positive attitudes toward pornography; sample items included “The material exploits women” and “The material can improve sex relations among adults.” Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). The first subscale demonstrated good reliability ( $\alpha = .84-.90$ ), and the second showed acceptable reliability ( $\alpha = .73-.78$ ) as reported by Lottes et al. (1993).

### **Emotion after pornography use**

Emotion after pornography use was assessed with a self-designed scale developed from Grubbs’ study, comprising seven items asking about participants’ negative and positive emotions after pornography use (Grubbs et al., 2019). Sample items included 4 items of negative emotions: “After I use pornography, I feel ashamed/guilty/bad about myself,” “I believe viewing pornography is morally wrong,” and 3 items of positive emotions: “After I use pornography, I feel fine/happy/good about myself.” Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). The reliability of this self-designed scale in this study is reported in the Results section.

### **Frequency and patterns of pornography use**

Frequency of pornography use in the previous six months was assessed by asking participants: “In the past half year, on average, how often have you accessed pornography?” Items were based on the previous research of Solano et al. (2020) to categorize the level of exposure. Response options included: Every day, Once a week or more, Once every two weeks, Once a month, Once in 2 months, Once in 3 months, Never, Prefer not to say. Participants who selected “Prefer not to say” were not included in subsequent analyses.

Patterns of pornography use in the previous six months were assessed by asking: “Thinking about all the occasions that you have accessed pornography in the past half year, on how many of those occasions did you access it by yourself” or “with a sexual partner/s.” Responses ranged from 1 (Never) to 7 (Every time). There was a reminder guiding participants who had not engaged in sexual partnerships during the preceding six months to select “Never.”

### **Sexual communication**

Sexual communication was assessed with the 13-item Dyadic Sexual Communication Scale. Sample items include: “My partner rarely responds when I want to talk about our sex life” and “Talking about sex is a satisfying experience for both of us.” There was a reminder before the scale: “If you don’t currently have a sexual partner, you can base your response on a recent partner or imagine how you would feel if you had a sexual partner.” While imagined responses do not reflect actual relational behavior, they are appropriate when the analytic focus is on stable attitudinal constructs rather than situationally bound behaviors. Responses ranged from

1 (Strongly Disagree) to 7 (Strongly Agree). In previous research, this scale has shown good reliability (Cronbach's  $\alpha = .81$ , Catania et al., 1990).

### **Sexual well-being factors**

**Sexual satisfaction.** Sexual satisfaction was assessed with the New Sexual Satisfaction Scale, which is not gender, sexual orientation, or relationship status-specific (Knudsen et al., 2008). Sexual satisfaction is considered via personal experiences/sensations as well as the individual's perception of their partner's sexual behaviors and reactions. Specifically, the *Ego-Centered* subscale was assessed with the first 10 items (e.g., "The quality of my orgasms"), and the Partner and *Activity-Centered subscale* were assessed with the subsequent 10 items (e.g., "The frequency of my sexual activity"). Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). There was a reminder helping participants to recall their sexual experience with "your current, former sexual partner or on your own" and "if you don't currently have a sexual partner, you can base your response on a recent partner or an imaginary sexual partner." In line with the approach used for the sexual communication measure, this instruction was included to capture women's broader sexual experiences, including solitary sexual activity such as masturbation. The purpose was to assess overall sexual satisfaction and comfort with sexuality as psychological constructs that may develop through both partnered and non-partnered sexual experiences. Allowing responses based on imagined or non-current scenarios ensured that the measures reflected internal perceptions rather than being limited to current relationship contexts. This scale demonstrated excellent reliability, with Cronbach's  $\alpha$  ranging from .94 to .96 for the full scale and .91 to .93 and .90 to .94 for each subscale, respectively (see, e.g., Stulhofer et al., 2010).

**Comfort with sexuality.** Comfort with sexuality was assessed with the nine-item short form of the Multidimensional Measure of Comfort with Sexuality (e.g., "I enjoy the opportunity to share my personal views about sexuality" and "My past sexual experiences and explorations have been very worthwhile") (Tromovitch, 2000). Responses ranged from 1 (Strongly Disagree) to 7 (Strongly agree). This scale has good internal consistency ( $\alpha = .80$ , C. M. Davis, 1998, pp. 578–581).

### **Procedure**

Data were collected via an anonymous online survey hosted on the Qualtrics platform, which was accessible between late March 2023 and mid-January 2024. Prior to participation, all respondents were presented with a Participant Information Sheet outlining the purpose, procedures, and ethical considerations of the study. The survey took approximately 20 minutes to complete and included demographic questions, measures of pornography use frequency, attitudes toward pornography, and psychosexual well-being. To assess data quality, three attention-check items were embedded at random throughout the questionnaire. All participants passed these checks. Upon completion of the survey, participants were thanked for their time and given course credits (if recruited through the departmental subject pool) or the opportunity to enter a raffle to win one of six £25 vouchers via a separate survey to preserve anonymity of survey responses. The study was approved by the University of Southampton Faculty Research Ethics Committee (ERGO number 80274).

### **Statistical analyses**

After excluding one participant who did not pass the validation questions, descriptive statistics were used to present the percentages and numbers of demographic items using SPSS version 29.0 (IBM Corp., Armonk, NY, USA). Bivariate correlations were used to explore associations between attitudes toward porn and sexual outcomes (emotion after pornography use, sexual

satisfaction, comfort with sexuality, frequency of pornography use, and sexual communication). Preliminary statistical assumptions were tested, and all the effects were assessed through 5000 bootstrap samples based on 95% bias-corrected bootstrap confidence intervals (95% CIs). Based on the results of bivariate correlations, PROCESS macro3.5.2 (module 4) (Hayes, 2022) for SPSS version 29.0 (IBM) was used for exploring the mediation analyses. Mediation was further probed by estimating and plotting the conditional direct and indirect effects at values of support corresponding to the -1SD, Mean, and +1SD points. Specifically, parallel mediation models consist of the attitudes toward porn (independent variable) as associated with sexual satisfaction (dependent variable Y1) mediated by negative emotion after pornography use (mediator variable 1), positive emotion after pornography use (mediator variable 2), frequency of pornography use (mediator variable 3) and sexual communication (mediator variable 4). Similarly, parallel mediation models consisted of the attitudes toward porn (independent variable) as associated with comfort with sexuality (dependent variable Y2) mediated by the same four mediators (mediator variable 1 to mediator variable 4). The number of mediator variables varied depending on the results of bivariate correlations.

## Results

### *Scale quality*

In this study, considering the reliability of the Attitudes toward Porn scale, the positive attitudes toward porn subscale demonstrated good reliability ( $\alpha = .81$ ) and the negative attitudes toward porn subscale showed acceptability reliability ( $\alpha = .76$ ). For Emotions after Pornography Use, Exploratory Factor Analysis revealed that all items on the self-designed scale fit the structure of its two sub-scales and demonstrated excellent reliability: Negative Emotion ( $\alpha = .94$ ) and Positive Emotion ( $\alpha = .90$ ). The scale of Sexual Communication also showed good reliability (Cronbach's  $\alpha = .87$ ). For the sexual well-being scales, the scale of Comfort with Sexuality demonstrated good reliability with Cronbach's  $\alpha: .87$  and the two subscales of Sexual Satisfaction scale had excellent Cronbach's  $\alpha$  of  $.91$  for Ego-Centered,  $.93$  for Partner and Activity-Centered, and  $.95$  for the full scale.

### *Participants*

The sample consists of 306 women with a mean age of 20.12 years ( $SD = 0.16$ , range 18–39 years). The majority (99.3%) are students, and nearly thirty percent had a part-time job; 62.7% identified as heterosexual and 26.8% as bisexual. Approximately half of the participants are single, and 28.8% reported being in a committed relationship; more than three-quarters reported no or low religious adherence. During the previous six months, roughly half (46.2%) of the sample accessed pornography alone every time and about three-quarters (75.8%) reported never having accessed pornography with sexual partner(s). Full demographic details of the sample are provided in Table 1.

### *Correlations between variables*

For attitudes toward porn, the results are as follows: unsurprisingly, negative attitudes toward porn are significantly correlated with less positive attitudes toward porn, more negative emotions after pornography use and less positive emotion after pornography use. Positive attitudes toward porn are significantly correlated with less negative emotion after pornography use, more positive emotion after pornography use, higher sexual satisfaction, more comfort with sexuality, higher frequency of pornography use, more solitary and shared pornography use and more sexual communication.

**Table 1.** Numbers and percentages of demographic characteristics ( $n=306$ ).

	Option	<i>N</i>	%
Sexual orientation	Heterosexual or straight	192	62.7
	Gay or lesbian	9	2.9
	Bisexual	82	26.8
	Pansexual	6	2.0
	Asexual	3	1.0
	Queer	5	1.6
	Other	6	1.9
	Prefer not to say	3	1.0
Relationship status	Single	139	45.4
	Dating	52	17.0
	Committed relationship/s but not cohabitating	88	28.8
	Married or in Cohabiting relationship/s	24	7.8
	Prefer not to say	3	1.0
Current occupation	Student full time	222	72.5
	Student with part-time job	76	24.8
	Employed full time	5	1.6
	Unemployed	3	1.0
Frequency of pornography use	Every day	7	2.3
	Once a week or more	57	18.6
	Once every two weeks	55	18
	Once a month	32	10.5
	Once in 2 months	21	6.9
	Once in 3 months	65	21.2
	Never	63	20.6
	Prefer not to say	6	2.0
Frequency of solitary pornography use	Never	64	20.9
	Rarely	12	3.9
	Occasionally	14	4.6
	Sometimes	12	3.9
	Frequently	16	5.2
	Usually	39	12.7
	Every time	149	48.7
Frequency of shared pornography use	Never	232	75.8
	Rarely	38	12.4
	Occasionally	13	4.2
	Sometimes	14	4.6
	Frequently	4	1.3
	Usually	2	0.7
	Every time	3	1.0
Importance of religion	Not at all	186	60.8
	Low	49	16.0
	A little	26	8.5
	Medium	24	7.8
	A lot	7	2.3
	High	3	1.0
	Very much	11	3.6

Note. Frequency of both solitary and shared pornography use are assessed in the past 6 months.

As for sexual well-being factors, sexual satisfaction is significantly correlated with more positive emotion after pornography use ( $r = .15, p < .01$ ), higher comfort with sexuality ( $r = .43, p < .01$ ) and more sexual communication ( $r = .62, p < .01$ ). Comfort with sexuality is significantly correlated with less negative emotion after pornography use ( $r = -.15, p < .01$ ), more positive emotion after pornography use ( $r = .19, p < .01$ ), higher frequency of pornography use ( $r = .20, p < .01$ ), more solitary ( $r = .22, p < .01$ ) and shared pornography use ( $r = .12, p < .05$ ) and more sexual communication ( $r = .44, p < .01$ ). More information is displayed in Table 2. While most correlations reached statistical significance, smaller coefficients (e.g.,  $|r| < .20$ ) should be interpreted with caution, as their effect sizes indicate limited practical significance despite statistical significance (Cohen, 1988).

**Table 2.** Bivariate correlations, means, and standard deviations for variables/scales of interest ( $n = 300$ ).

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Negative Attitude toward Porn	3.76	0.8	1								
2. Positive Attitude toward Porn	4.8	0.81	-.27**	1							
3. Negative Emotion after Pornography Use	3.66	1.59	.50**	-.32**	1						
4. Positive Emotion after Pornography Use	3.93	1.3	-.46**	.38**	-.71**	1					
5. Sexual Satisfaction	5.14	1.11	-0.09	.19**	-0.06	.15**	1				
6. Comfort with Sexuality	4.96	0.91	0.04	.32**	-.15**	.19**	.43**	1			
7. Frequency of Pornography Use	4.5	1.93	0.08	-.39**	.28**	-.36**	0.01	-.20**	1		
8. Solitary Pornography Use	5.01	2.46	0.02	.30**	-.20**	.17**	0.02	.22**	-.62**	1	
9. Shared Pornography Use	1.49	1.1	-0.08	.17**	-.14*	0.07	0.09	.12*	-.11*	-0.04	1
10. Sexual Communication	4.96	0.84	-0.01	.19**	-0.03	0.08	.62**	.44**	-0.05	0.11	.20**

Note. Seven-point Likert scales (1 = strongly disagree; 7 = strongly agree) is used to assess attitudes toward pornography, emotion after pornography use, sexual satisfaction, comfort with sexuality, frequency of pornography use in the past half year and sexual communication. Participants who selected "Prefer not to say" the frequency of pornography use are excluded. \*Significant less than the .05 level (2-tailed). \*\*Significant less than the .01 level (2-tailed).

**Factors mediating the association between positive and negative attitudes toward porn and sexual satisfaction**

Before conducting the mediation analyses, we evaluated the underlying statistical assumptions, linearity among variables, normality of residuals, homoscedasticity, and absence of multicollinearity, and confirmed that all criteria were satisfactorily met. The mediation model with positive attitudes toward porn associated with sexual satisfaction, as mediated by positive emotion after pornography use and sexual communication, explains 39.93% of the variance in satisfaction,  $R^2 = 0.40$ ,  $F_{3,296} = 65.58$ ,  $p < .001$  (see Table 3). The indirect effect for sexual communication is significant (Unstandardized B = .16, Bootstrapped SE = .06, 95% CI [.06, .27]). The direct path was not statistically significant, and the overall indirect effect was statistically significant. About 63.6% of the total effect of positive attitudes toward porn on sexual satisfaction is mediated by sexual communication (see Figure 1). These results suggest that more positive attitudes toward pornography are associated with higher sexual satisfaction in the context of increased sexual communication. Positive attitudes alone, in the absence of elevated sexual communication, do not appear to correspond with higher sexual satisfaction within this model.

No significant associations were found between negative attitudes toward porn and sexual satisfaction, so no further mediation analysis was performed.

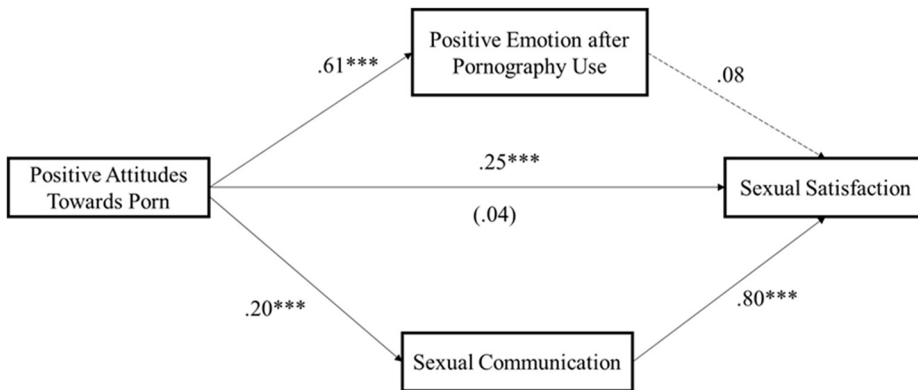
**Factors mediating the association of positive and negative attitudes toward porn and comfort with sexuality**

The mediation model with positive attitudes toward porn associated with comfort with sexuality, as mediated by negative and positive emotion after pornography use, frequency of pornography use, and sexual communication explains 26.29% of the variance in comfort with sexuality,  $R^2 = 0.26$ ,  $F_{5,294} = 20.97$ ,  $p < .001$  (see Table 4). The indirect effect for sexual communication is significant (Unstandardized B = .09, Bootstrapped SE = .03, 95% CI [.03, .15]). About 32.9% of the total effect of positive attitudes toward porn on comfort with

**Table 3.** Mediation model between positive attitudes toward porn and sexual satisfaction ( $n=300$ ).

	B	SE	t	p	95% CI
Positive attitudes toward porn (X) to Sexual satisfaction (Y)	.04	.07	0.66	0.508	-0.08 to 0.17
Positive emotions after pornography use (Mediator)	.61	.09	7.14	<.001	0.44 to 0.78
Sexual communication (Mediator)	.20	.06	3.42	<.001	0.08 to 0.31
Mediator to sexual satisfaction (Y)					
Positive emotions after pornography use	.08	.04	1.87	0.062	0.00 to 0.15
Sexual communication	.80	.06	13.27	<.001	0.68 to 0.91
Positive attitudes toward porn (X) to sexual satisfaction (Y) through mediators	.25	.08	3.27	<.001	0.10 to 0.40

Note. Regression coefficients are unstandardized. CI, bias-corrected bootstrap confidence interval; Bootstrap sample size = 5,000. CI, X, independent variable; Y, dependent variable. Participants who selected "Prefer not to say" the frequency of pornography use are moved.  $\beta$  and  $p$  Value are corresponded to Figure 1. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



**Figure 1.** Mediation model between positive attitudes toward porn and sexual satisfaction ( $n=300$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ).

sexuality is mediated by sexual communication (see Figure 2). These results suggest that more positive attitudes toward pornography are associated with greater comfort with sex in the context of increased sexual communication. Positive attitudes alone, in the absence of elevated sexual communication, do not appear to correspond with higher sexual satisfaction within this model.

No significant associations were found between negative attitudes toward porn and comfort with sexuality, so no further mediation analysis was performed.

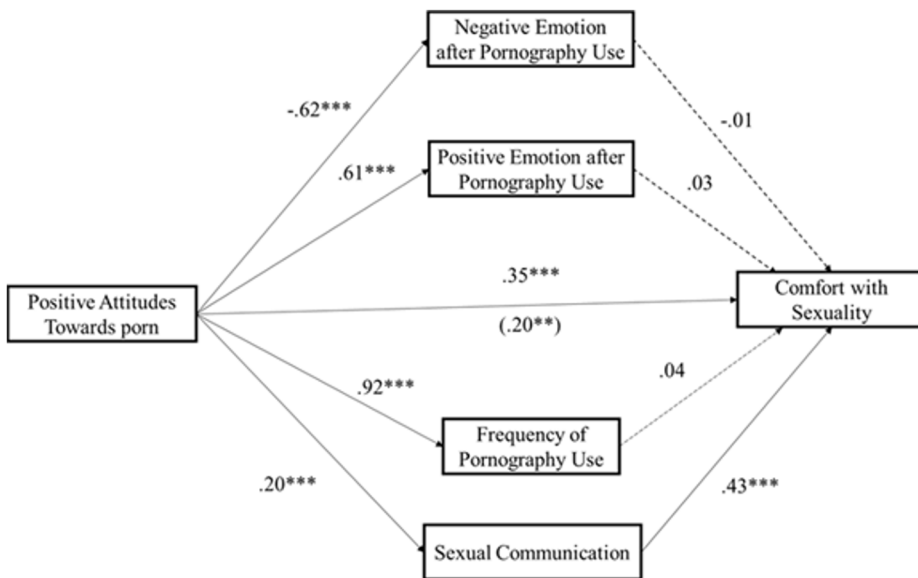
## Discussion

The findings of this study highlight the importance of considering the contemporary sexual and social contexts in which young women manage their exposure to pornography. With increased access to online sexual content and greater openness toward sexual exploration, many young women today may experience less internal conflict with pornography use. This shift may reflect a generational change, in which previously common sources of negative emotional reactions are becoming less relevant. At the same time, those who hold negative attitudes toward pornography may still experience emotional discomfort, but this does not seem to be significantly associated with their broader sexual satisfaction and comfort with sex. These findings highlight the importance of acknowledging how pornography use and personal attitudes can help to shape sexual well-being in today's digital age.

**Table 4.** Mediation model between positive attitudes toward porn and comfort with sexuality ( $n=300$ ).

	B	SE	t	p	95% CI
Positive attitude toward porn (X) to Comfort with sexuality (Y)	.20	.06	3.10	.002	0.07 to 0.32
Negative emotion after pornography use (Mediator)	-.62	.11	-5.75	<.001	-0.83 to -0.4
Positive emotion after pornography use (Mediator)	.61	.09	7.14	<.001	0.44 to 0.78
Frequency of pornography use (Mediator)	.92	.13	7.20	<.001	0.66 to 1.16
Sexual communication (Mediator)	.20	.06	3.42	<.001	0.08 to 0.31
Mediator to Comfort with Sexuality (Y)					
Negative emotions after pornography use	-.01	.04	-0.33	.740	-0.09 to 0.06
Positive emotions after pornography use	.03	.05	0.62	.533	-0.06 to 0.13
Frequency of pornography use	.04	.03	1.61	.108	0.00 to 0.09
Sexual communication	.43	.06	7.79	<.001	0.32 to 0.53
Positive attitude toward porn (X) to Comfort with Sexuality (Y) through mediators	.35	.06	5.75	<.001	0.23 to 0.47

Note. Regression coefficients are unstandardized. CI, bias-corrected bootstrap confidence interval; Bootstrap sample size = 5,000. X, independent variable; Y, dependent variable. Participants who selected "Prefer not to say" the frequency of pornography use are moved.  $\beta$  and  $p$  Value are corresponded to Figure 2. \* $p < .05$ ; \*\* $p < .01$ .



**Figure 2.** Mediation model between positive attitudes toward porn and comfort with sexuality ( $n=300$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ).

**Divergent emotional responses and sexual well-being correlates of positive and negative attitudes toward pornography**

It is established that young women’s sexual well-being is influenced by pornography use-related factors, but the internal mechanisms of how the factors enhance women’s sexual well-being have not been examined in previous research (Wright et al., 2021; Dorman, 2019). The present study addresses this gap by demonstrating that individual attitudes toward pornography are meaningfully associated with sexual satisfaction and comfort with sexuality. These findings conceptually align with Kohut et al. (2017), who reported that individuals in romantic

relationships often perceived pornography use as contributing to improved sexual communication, sexual experimentation, and comfort with sexuality. However, the current study extends this line of research by quantitatively examining these associations at the individual level, including women regardless of relationship status. To further examine the underlying dynamics of these associations, the study included emotional responses after pornography use, frequency of pornography use, and sexual communication as mediating variables, on the basis of their theoretical relevance to distinct dimensions of women's pornography experiences as discussed in prior literature. Although all three variables were initially considered, only sexual communication demonstrated a significant mediating effect. Therefore, the following discussion focuses on the significant effects supported by the present findings, with the mediating effect of sexual communication, and significant results of emotional responses and frequency of use.

Positive attitudes toward pornography were associated with more positive emotions and fewer negative emotions after pornography use. The alignment between attitudes and behavior seems to promote a sense of sexual empowerment and comfort with sexual identity (Su et al., 2024). By accepting pornography as an acceptable and perhaps beneficial part of their sexual exploration, women likely experience less internal conflict, leading to enhanced sexual satisfaction. Women who accept pornography as part of their sexual expression may have greater self-acceptance regarding their sexual desires and behaviors, reducing the likelihood of internal conflict (Klussman et al., 2022; Sutton, 2016). Pornography used by women proactively to seek sexual information contributes more, compared with other sexual information sources, to the pursuit of pleasure, enhances sexual innovation (Carroll et al., 2017; Tillman & Wells, 2023), and promotes more open attitudes toward sex and pornography use. As the diversity of pornography grows, the subjectivity and flexibility of women's choice of pornography increases. This might allow young women to increase their sense of control and flexibility over their sexual scripts and increase their sexual pleasure (Fahs & Plante, 2017). It is possible that some young women who passively use porn or are under the pressures described above could minimize negative feelings toward pornography use by adjusting their sexual scripts. Despite its relevance, emotional response did not significantly mediate the association between pornography attitudes and sexual well-being in this study. Nonetheless, the correlation results suggest that affective responses may still be relevant as an individual-level correlate of porn-related experiences.

Conversely, negative attitudes were significantly correlated with negative emotions after pornography use and reduced positive emotions. This emotional discomfort, however, did not extend to sexual dissatisfaction or discomfort with sex. This outcome could reflect a coping strategy where women who hold negative attitudes toward pornography might rationalize their use of it, thereby minimizing the broader impact on their sexual self-perception. For example, previous research has explored different value-related influences on attitudes toward porn; positive attitudes tend to be associated with personal values, such as pleasure, sexuality and emotion, while negative attitudes tend to be associated with social values (Parvez, 2006). The pressures of such sexual norms, stereotyped gender norms, and social desirability may lead young women to feel that using pornography conflicts with their cultural sexual scripts and/or religious demands, resulting in psychological guilt or shame (Grigoropoulos, 2023) and discouraging them from pursuing pleasure and exploring sexual innovation (Rawat, 2020). However, some of these sexual scripts, coming with sexual shame, are not necessarily internalized to influence women's actual sexual behavior and sexual satisfaction (Rawat, 2020; Sævik & Konijnberg, 2023). Modern sexual norms, which are more accepting of diverse sexual activities, may enable women to navigate conflicting internal or social expectations with greater flexibility, thereby reducing potential disruptions to sexual satisfaction. As such, young women's attitudes and behaviors may be shaped by more liberal sexual environments, which can lessen the impact of value-based tensions on their sexual well-being.

### ***Sexual communication: a key mediator of positive attitudes and sexual well-being***

Although emotional responses after pornography use and frequency of pornography use were initially hypothesized as potential mediators, neither reached statistical significance in the current models. One possible explanation is that emotional reactions to pornography may be transient and context-dependent, and thus less directly tied to enduring indicators of sexual well-being when examined alongside more stable interpersonal processes such as sexual communication (Laier & Brand, 2017). Similarly, frequency of pornography use might capture behavioral engagement without necessarily reflecting the quality or context of that use (Böthe et al., 2022), which could explain its weaker association with sexual satisfaction in this sample.

The findings of this study underscore the important role of sexual communication in enhancing sexual well-being, particularly for women with positive attitudes toward pornography. Sexual communication has been found to play a positive role in increasing women's sexual satisfaction both directly and indirectly (Rausch & Rettenberger, 2021; Rehman et al., 2021). In holding positive attitudes toward porn, communication, whether during or after sex, might serve not only as a way to express emotions but also as a "catalyst" for warming up sexual or relationship satisfaction between partners (Kohut et al., 2017, p.669) and exploring shared sexual attitudes and preferences (Kohut et al., 2018). In the present study, sexual communication was the only mediating variable that reached statistical significance, suggesting that it may represent a particularly salient process through which positive pornography attitudes are associated with greater sexual satisfaction and comfort with sexuality. Consistent with previous studies, the results of the current study suggest the potential non-negligible benefits of sexual communication for women's sexual well-being and expand on the mediating mechanisms of sexual communication which may promote women's acceptance of and openness to pornography, reducing the pressures mentioned earlier and ultimately contributing to higher levels of sexual well-being. Individuals who embrace and accept their own sexual preferences, desires, and behaviors, including pornography use, are more likely to engage in open and honest communication with their partners about these topics and maybe others. This acceptance might reduce internal conflict and promote a healthy dialogue about sexual needs and boundaries, fostering greater sexual satisfaction and comfort with one's sexuality and contributing to more fulfilling sexual experiences and relationships.

### ***Limitations and strengths***

The current study has some limitations that should be recognized. Sampling bias may exist as the sample is self-selected; most participants in this study are students and those who are interested in pornography are probably more likely to participate in the study. In addition, the study relied on participants' self-reporting and self-assessment scores, which may be subject to social desirability bias, even within a generally sex-positive sample. Finally, although the study included both actual and imagined experiences, we did not record the exact number of participants in each category; future work could document this distinction to allow for more detailed comparisons. Moreover, the study did not assess how participants' sexual orientation, relationship status, or the importance of religion are associated with patterns of pornography use; future research should consider these variables to provide a more comprehensive understanding.

Despite these limitations, it appears that findings emphasize that the assumptions regarding sexual shame, self-stigma and potential mental health challenges among young women who engage with pornography should be reduced (Nyström & Mikkelsen, 2013; Dhuffar et al., 2015; Elison et al., 2014). By focusing on individual-level attitudes and psychosexual well-being in a UK-based sample of young women, this study contributes to a more nuanced understanding of how pornography is integrated into personal sexual experiences, beyond relational or clinical frameworks. These findings could guide schools to organize sex education programs to stimulate

reflections on culturally influenced sexual scripts and sexual norms (Elison et al., 2014; Bogen et al., 2023; Dhuffar et al., 2015; Byron, 2024).

### **Conclusion and future research**

In summary, this study provides insights into the associations between pornography use and young women's sexual well-being. Results indicate that positive attitudes toward pornography were associated with greater sexual satisfaction and comfort with sexuality, while negative attitudes showed no significant association with these outcomes. Mediation analyses revealed that sexual communication plays a key role in the relationship between positive attitudes toward pornography and sexual well-being, whereas emotional responses and frequency of use were not significant mediators. This suggests that the broader social and digital context, along with individual beliefs, shapes how pornography use correlates with sexual well-being, highlighting the value of educational approaches that address these complexities and support healthy sexual development. For future research, exploration involving participants from diverse cultural backgrounds with varying national policies and a wider range of sexual orientations/preferences and sexual scripts concerning pornography would be valuable. Large-scale surveys and longitudinal research could be conducted among women across a wide age spectrum to explore the influence of different patterns and motivations of women's pornography use on their sexual well-being. Specific items incorporating participants' personal evaluations and perceived social expectations could be developed to assess potential internal conflicts in future research. Additionally, future studies could further explore how sexual well-being relates to communication about safer sex, refusal (or acceptance) skills, consent, and coercion.

### **Note**

1. Regarding the term "use" of pornography, the words: use, watch, consume, view, engage, expose to and access are used interchangeably, although we recognise that these may have somewhat different implications.

### **Authors' contributions**

Yishu Li, Roger Ingham, and Heather Armstrong contributed to the conception and design of the study and critically revised the manuscript for important intellectual content. Yishu Li conducted the data analysis and interpretation and drafted the initial manuscript. All authors reviewed and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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## Data availability statement

The data that support the findings of this study are openly available in the Open Science Framework (OSF) repository at <https://doi.org/10.17605/OSF.IO/8G2YC>.

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