



Spanish Women and Pornography Based on Different Sexual Orientation: an Analysis of Consumption, Arousal, and Discomfort by Sexual Orientation and Age

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Abstract

Introduction The proactive role of women in sexuality has been socially invisible, especially in regard to pornography use. For this reason, this study aims to explore Spanish women's sexual experiences regarding viewing, arousal, and discomfort as perceived by different types of pornography and based on the women's sexual orientation.

Methods Between January and March 2019, 2730 Spanish women between 18 and 44 years old ($M = 24.16$; $SD = 6.04$) completed a questionnaire about the consumption of heterosexual, gay, and lesbian pornography and the discomfort they felt when they were aroused by this type of material. Regarding their sexual orientation, 78.1% were heterosexual, 15.4% were bisexual, and 6.5% were lesbian.

Results In general, more lesbian and bisexual women consume pornography than heterosexual women do. In any case, all of them consume and are aroused by pornographic content based on a sexual orientation that differs from their reported sexual orientation. Women experience discomfort when viewing pornography, regardless of their sexual orientation and the type of content. Particularly, the youngest women are associated with discomfort when viewing heterosexual pornography, although the discomfort of older bisexual women is associated with gay and lesbian pornography.

Conclusions Regardless of their reported sexual orientation, women view and feel aroused by different types of pornographic content. In addition, this study reveals their associated discomfort, which could interfere with their sexual health.

Policy Implications Sexual health strategies should include a more active role of women in sexuality, as well as a more flexible conception of their sexual orientation to prevent stigmatizing them.

Keywords Sexual orientation · Pornographic content · Discomfort · Women · Arousal

Introduction

Women's pleasure has long been ignored or pathologized (Van Ness et al., 2017). In particular, sexist and conservative societies characterize women as being sexually passive with a low sexual drive and relegate women's sexual behaviors to men's sexual satisfaction (Emmerink et al., 2016; Lamb, 2010). Additionally, in this context, the sexual double standard, which criticizes women who show active sexuality while positively valuing these behaviors for men

(Emmerink et al., 2016; Van Ness et al., 2017), indicates that most women experience their own sexuality in silence, purity, and repression (Trinh, 2016; Van Ness et al., 2017). In particular, the difficulty of identifying women as a proactive sexual agent increases for those manifestations that are socially condemned. The consumption of pornography is one of these invisible aspects. However, several studies have shown that women consume pornography, especially since beginning of the Internet era, which facilitates access to erotic content (Carnes et al., 2007).

For example, in the United States, 68% of women between 18 and 61 years old had ever intentionally seen pornography on the Internet (Kasper et al., 2015). These figures are in line with another study which found that 40% of women (between 17 and 64 years old), either less or more frequently, had used pornography to masturbate in recent

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years and that 20.8% had seen pornography, but without masturbating (Bridges et al., 2016).

In China, the percentages are similar; a study found that 62% of women (between 19 and 58 years old) had intentionally watched erotic videos online in the last 12 months (Zheng & Zheng, 2014). Another study found that in Australia, 54% of women (from 16 to 69 years old) had ever looked pornographic material in their lives, and 41% had done so recently (Rissel et al., 2017).

Regarding Europe, in a study among a young population (between 18 and 26 years old), 56.9% of Polish women and 49.3% of German women had used pornography more than once a month in the last 6 months (Martyniuk et al., 2016). In Spain, a study found that 68.1% of adolescent and young women (from 19 to 25 years old) had ever searched for sexual material on the Internet, and 68.5% of them had ever masturbated while they were on the Internet (Ballester-Arnal et al., 2017). However, women over the age of 55 rarely report current pornography consumption (4.7%) (Ballester-Arnal et al., 2019). This decrease is in line with a study from the USA comparing young people versus middle-aged and older people, in which it was observed that the consumption of pornography during the most recent year decreased with age and increased conservative attitudes toward pornography (Price et al., 2016). Therefore, age may play an important role in pornography consumption.

Among the scarce literature on the effect that women's sexual orientation has on pornography consumption, a study developed by Hungarian portals showed that women of the LGBTQ community (lesbian, gay, bisexual, transgender, and queer) seemed to view pornography more frequently than heterosexual women (Bóthe et al., 2018). In this sense, in a study from Norway with women between 18 and 59 years old, 92% of lesbian and bisexual women had ever been exposed to pornography, more or less intentionally, compared to 67% of heterosexual women (Træen & Daneback, 2013).

Although these studies yield important findings, they do not explore other relevant elements, such as the type of pornography used or the associated discomfort. First, viewing erotic material has been associated with sexual well-being and sexual satisfaction between heterosexual couples (Maas et al., 2018), especially when it is occasional (Wright et al., 2019). Such viewing can be used to learn about sexual matters (Ševčíková & Daneback, 2014), provide greater sexual openness and better sexual experiences (Rissel et al., 2017), and serve as ways to discover preferences and develop intimacy (Attwood et al., 2018). In addition, the online context provides a “safer” place than the offline context (Griffiths, 2012). Thus, by using pornography, people can explore new horizons and enjoy sexual experiences that are not usually accessible, such as erotic material about certain fetishes and fantasies (Yu, 2013) or

sexual practices associated with different sexual orientations (Hald & Štulhofer, 2016; Walters & Spengler, 2016).

However, a higher and more regular consumption of pornography has also been associated with sexual dissatisfaction (Blais-Lecours et al., 2016; Wright et al., 2019). In particular, some authors have related the viewing of pornography with greater discussions (Carroll et al., 2017) and worse sexual quality within a couple (Poulsen et al., 2013). In particular, there have been discrepancies regarding the consumption of pornography and the attitudes that both partners have (Daneback et al., 2009). Moreover, a high consumption of pornography can create false expectations and beliefs that may lead to a greater sense of body dissatisfaction or lower sexual self-esteem (Tylka, 2015).

At the same time, pornography consumption may cause discomfort when dissonance occurs between the content of the sexual material and one's own sexual self-concept (Priolo et al., 2016). This would be the case not only when consuming materials from other sexual orientations (Walters & Spengler, 2016) but also when there is an inconsistency between engaging in this activity and one's values (Grubbs et al., 2019a), as well as the internalized passive role that is expected for women (Van Ness et al., 2017).

Despite the impact that pornography may have on both men and women, the literature has rarely analyzed these aspects in women. Following the systematic review of Grubbs et al. (2019b), most studies have focused on male populations or comparisons between men and women, thereby ignoring the content of pornography. In line with the systematic review by Ashton et al. (2018) that focused on pornography use by women, none of the studies evaluated the consumption of content based on different sexual orientations or the women's level of discomfort when consuming them.

Therefore, improving knowledge about women's experience of pornography consumption is required, particularly in Hispanic countries such as Spain, where there is little research in this regard and the sexual double standard still influences sexual behavior. For this reason, this study analyzes the consumption of pornography among Spanish women and their experience of being aroused by different types of content based on their sexual orientation, as well as their perception of discomfort. Due to the influence of age and sexual orientation on sexual behavior, both factors are considered in these analyses.

In this context, we establish the following research questions and hypotheses:

Research Question 1 Will Spanish women show differences in regard to viewing pornographic content based on sexual orientation? What are women looking at during the viewing of heterosexual porn and why do they pay attention to it?

Hypothesis 1 More lesbian and bisexual women will report consumption of pornography compared to heterosexual women.

Hypothesis 2 Heterosexual, lesbian, and bisexual women will show different consumption of gay, lesbian, and heterosexual content; i.e., heterosexual and bisexual women will consume more heterosexual pornography, while lesbian women will consume more lesbian pornography.

Research Question 2 Will the women in the sample show differences in the arousal felt by the different types of pornography (heterosexual, lesbian, and gay pornography) based on their sexual orientation?

Hypothesis 3 Heterosexual, lesbian, and bisexual women will show different arousal by gay, lesbian, and heterosexual pornography; i.e., heterosexual and bisexual women will be more aroused by heterosexual pornography, while lesbian women will be more aroused by lesbian pornography.

Research Question 3 Will the women show differences in their discomfort when consuming pornography based on their sexual orientation?

Hypothesis 4 Heterosexual, lesbian, and bisexual women will show different discomfort when aroused by gay, lesbian, and heterosexual pornography; i.e., heterosexual women will feel more discomforted by lesbian pornography, bisexual women will feel less discomforted by all types of pornography than will heterosexual and lesbian women, and lesbian women will feel more discomforted by gay pornography.

Research Question 4 Will the women, according to their sexual orientation, show differences by age in regard to the consumption, arousal, and discomfort felt by the different types of pornography (heterosexual, lesbian, and gay pornography)?

Hypothesis 5 Statistically significant differences by age will be found in regard to viewing, arousal, and discomfort according to each sexual orientation; i.e., more middle-aged adult women will consume pornography, be aroused by pornography, and feel discomfort compared to younger females.

Method

Procedure

The present study is part of a larger investigation about sexual experience according to sexual identity and orientation. To collect participants, an announcement was made on

social networks aimed at the general population that asked for collaboration in an investigation on sexual orientation among groups from various Spanish provinces. The sample collection process took place during January and March 2019 through the Google Forms platform.

When the participants clicked on the advertisement, they accessed an initial screen which informed them of the anonymous, voluntary, and confidential nature of this research. Additionally, they were asked for their informed consent. Once they agreed to participate in the research, they gained access to the online questionnaire. The participants did not receive any type of reward for answering the questionnaire. This research had the approval of the ethics committee of the Universitat Jaume I (Castellón de la Plana, Spain), following the ethical principles of the Declaration of Helsinki.

By means of convenience sampling, 4564 responses were collected. Finally, 2730 people who met the inclusion criteria of the study were enrolled as participants; these criteria were as follows: being a woman ($n = 3056$); identifying as heterosexual, lesbian, or bisexual ($n = 2965$); being over 18 years old ($n = 2917$); and residing in Spain and understanding Spanish language ($n = 2833$). Because the participants revealed a great dispersion of age and people older than 44 years were less represented, we proceeded to eliminate those women over 44 years of age ($n = 103$) since their inclusion could have biased the results.

Participants

Two thousand seven hundred thirty women between 18 and 44 years old ($M = 24.16$; $SD = 6.04$) participated in this study. Regarding their reported sexual orientation, 78.1% were heterosexual women, 15.4% were bisexual women, and 6.5% were lesbian women.

Regarding the sociodemographic data (see Table 1), most of the participants were atheistic or agnostic, had a higher education, were progressive from a political point of view, and came from an inner urban town. All of them lived in Spain and were distributed throughout the geography of Spain.

Instrument

For this study, an ad hoc pornography consumption questionnaire was used, which evaluated the viewing, arousal by, and discomfort with sexual material of different sexual orientations (gay, lesbian, and heterosexual).

Viewing and Arousal This subscale evaluates whether people have ever been aroused when they have seen gay (item 1), lesbian (item 2), or heterosexual erotic material (item 3) by a single choice question with “Yes,” “No,” or “I have not seen this type of material” as the possible answers. To

Table 1 Main sociodemographic characteristics of participants

| | Total | | Heterosexual | | Lesbian | | Bisexual | | <i>F</i> (<i>p</i>) | Cohen's <i>f</i> |
|---|----------|-----------|--------------|-----------|----------|-----------|----------|-----------|-----------------------|-------------------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | | |
| Age | 24.16 | 6.04 | 24.45 | 6.33 | 23.78 | 4.21 | 22.84 | 4.90 | 12.79 ($\leq .001$) | .096 |
| | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | χ^2 (<i>p</i>) | Cramer's <i>V</i> |
| Religious beliefs | | | | | | | | | | |
| Practicing believer | 149 | 5.5 | 126 | 5.9 | 8 | 4.5 | 15 | 3.6 | 75.49 ($\leq .001$) | .118 |
| Non-practicing believer | 900 | 33 | 782 | 36.7 | 45 | 25.4 | 73 | 17.4 | | |
| Atheist or agnostic | 1681 | 61.6 | 1225 | 57.4 | 124 | 70.1 | 332 | 79 | | |
| Level of education | | | | | | | | | | |
| Without studies | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 17.08 (.073) | .056 |
| Primary | 43 | 1.6 | 38 | 1.8 | 1 | 0.6 | 4 | 1 | | |
| Secondary | 458 | 16.8 | 355 | 16.6 | 26 | 14.7 | 77 | 18.3 | | |
| Vocational training | 452 | 16.6 | 335 | 15.7 | 43 | 24.3 | 74 | 17.6 | | |
| Diploma/Bachelor/Degree | 1559 | 57.1 | 1243 | 58.3 | 88 | 49.7 | 228 | 54.3 | | |
| Master/Doctorate | 217 | 7.9 | 161 | 7.5 | 19 | 10.7 | 37 | 8.8 | | |
| Place of residence during childhood/adolescence | | | | | | | | | | |
| Urban coast | 871 | 31.9 | 683 | 32 | 60 | 33.9 | 128 | 30.5 | 3.41 (.755) | .025 |
| Urban inland | 1031 | 37.8 | 800 | 37.5 | 63 | 35.6 | 168 | 40 | | |
| Rural coast | 183 | 6.7 | 139 | 6.5 | 16 | 9 | 28 | 6.7 | | |
| Rural inland | 645 | 23.6 | 511 | 24 | 38 | 21.5 | 96 | 22.9 | | |
| Political ideology | | | | | | | | | | |
| Conservative | 105 | 3.8 | 92 | 4.3 | 3 | 1.7 | 10 | 2.4 | 70.33 ($\leq .001$) | .113 |
| Center | 465 | 17 | 408 | 19.1 | 17 | 9.6 | 40 | 9.5 | | |
| Progressive | 1333 | 48.8 | 960 | 45 | 100 | 56.5 | 273 | 65 | | |
| Indifferent | 827 | 30.3 | 673 | 31.6 | 57 | 32.2 | 97 | 23.1 | | |

facilitate the analysis, the responses obtained were recoded into two different dimensions: viewing and arousal. In the viewing variable, the first group included those who had not seen this type of content (0), while the second group included those who had been aroused by pornography and those who had not, due to both of them having seen pornographic content. In the arousal variable, only the responses of those women who reported having seen pornography were considered.

The Focus of Attention During the Viewing of Heterosexual Pornography This item explores who the participants had looked at during their viewing of heterosexual pornography through a multiple-choice question with answer options of “Man,” “Woman,” or “Interaction between both.” Furthermore, they were also asked to explain their choice through a multiple-choice question, and they were able to choose among the following: “Because I feel attracted to the man,” “Because I feel attracted to the woman,” “Because I would like to be like him,” “Because I would like to be like her,” and “Because I would like to reproduce their interaction.”

Perception of Discomfort Among those women who had shown arousal, their discomfort due to being aroused by

each type of pornographic content was assessed. These questions were answered by a Yes/No question.

Statistical Analysis

IBM SPSS Statistical software (version 27) was used to carry out different statistical analyses. First, descriptive analyses were performed based on sexual orientation, the percentages of religious beliefs, level of education, place of residence during childhood/adolescence and political ideology, and the mean age. To determine the existence of differences based on sexual orientation and the effect size, chi-square and Cramer's *V* tests were performed for the percentages, and ANOVA and Cohen's *f* were performed in the case of age. Cohen's *f* was performed using the G*Power program (Faul et al., 2007; Mayr et al., 2007).

Second, contingency tables were made to determine the percentages, based on sexual orientation, of viewing, arousal by, and discomfort with having been excited by the three types of pornography (gay, lesbian, and heterosexual). To determine if there were differences and the effect sizes, chi-square and Cramer's *V* tests were performed among the different sexual orientations.

In the same way, contingency tables and chi-square tests were also used to determine whether there were differences, based on sexual orientation, regarding the focus of the participants’ attention when viewing heterosexual pornography and the reason why they looked at it. Cramer’s *V* was also performed to determine the size of the effect.

Finally, binary logistic regressions were performed using the dependent variables of viewing, arousal by, and discomfort with heterosexual, lesbian, and gay pornography. As independent variables, age and different sexual orientations (taking *heterosexuality* as the reference) were added to the first block. The interaction between age and each of the sexual orientations (taking *heterosexuality*age* as the reference) was included in the second block. In addition, the omnibus test was carried out to check if the variables entered in the blocks provided information, and the Hosmer–Lemeshow test was performed to determine the fit of the model.

Results

Viewing

The results showed that 91.4% of women had ever seen some type of pornography in their lives: specifically, 96.2% of bisexual women and 97.7% of lesbians had ever seen some type of pornography, compared to 90% of heterosexual women ($\chi^2 = 26.96; p \leq .001$). Regarding heterosexual pornography (see Table 2), a high percentage of women in each of the three sexual orientations had consumed this type of content. More bisexual women had consumed this content, followed by lesbian women, and finally, heterosexual women. These differences were statistically significant among the three sexual orientations, particularly between heterosexual and bisexual women.

In regard to lesbian porn, more lesbian women had consumed this content, followed by bisexual women, and finally,

heterosexual women. These results showed statistically significant differences. In line with the pairwise comparison, heterosexual women showed statistically significant differences from lesbian and bisexual women.

The results for gay pornography, in general, revealed lower percentages, although more than 60% of women had watched it. Lesbian and bisexual women showed similar results, which exceeded the results of heterosexual women. These differences were statistically significant by sexual orientation, particularly between heterosexual women and the other two groups, i.e., lesbian women and bisexual women.

As seen in Table 2, heterosexual pornography was the type of pornography that more heterosexual and bisexual women had viewed. Conversely, lesbian pornography was the one that more lesbian women had consumed. In any case, it is also worth noting the high use of pornography content based on a sexual orientation that differed from the women’s reported sexual orientation.

Who Are Women Looking at During the Viewing of Heterosexual Porn?

Regarding the attentional focus of women (see Table 3), heterosexual women were the most focused on men, followed by bisexual women and lesbian women. Statistically significant differences were obtained based on sexual orientation, as well as in all the pairwise comparisons.

In regard to women, more lesbian women paid attention to them, followed by bisexual women and heterosexual women. These differences were statistically significant by sexual orientation, as well as for all the pairwise comparisons.

Last, the interaction between both the man and woman was the most-chosen answer for all sexual orientation groups. Specifically, more heterosexual women were focused on the interaction, followed by bisexual women and lesbians. Statistically significant differences were obtained based on sexual orientation, as well as between

Table 2 Differential analysis in viewing and arousing by heterosexual, lesbian, and gay pornography by sexual orientation

| | Heterosexual | | Lesbian | | Bisexual | | $\chi^2 (p)$ | Cramer’s <i>V</i> | Post hoc |
|-------------------|--------------|------|----------|------|----------|------|------------------------|-------------------|-------------------|
| | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | | | |
| Viewing | | | | | | | | | |
| Heterosexual porn | 1898 | 89 | 164 | 92.7 | 400 | 95.2 | 16.81 ($\leq .001$) | .078 | B > H |
| Lesbian porn | 1502 | 70.4 | 171 | 96.6 | 389 | 92.6 | 139.09 ($\leq .001$) | .226 | L, B > H |
| Gay porn | 1303 | 61.1 | 134 | 75.7 | 316 | 75.2 | 41.45 ($\leq .001$) | .123 | L, B > H |
| Arousal | | | | | | | | | |
| Heterosexual porn | 1758 | 92.6 | 135 | 82.3 | 382 | 95.5 | 29.36 ($\leq .001$) | .109 | H, B > L B > H |
| Lesbian porn | 882 | 58.7 | 157 | 91.8 | 358 | 92 | 206.31 ($\leq .001$) | .316 | L, B > H |
| Gay porn | 479 | 36.8 | 92 | 68.7 | 234 | 74.1 | 172.60 ($\leq .001$) | .314 | L, B > H |

H heterosexual, *L* lesbian, *B* bisexual

Table 3 Differential analysis of women who look at man, woman, or interaction when viewing heterosexual pornography by sexual orientation

| | Heterosexual | | Lesbian | | Bisexual | | $\chi^2 (p)$ | Cramer's V | Post hoc |
|-------------|--------------|------|---------|------|----------|------|------------------------|------------|--------------|
| | n | % | n | % | n | % | | | |
| Man | 481 | 27.4 | 6 | 4.4 | 62 | 16.2 | 51.61 ($\leq .001$) | .151 | H > L, B > L |
| Woman | 288 | 16.4 | 72 | 53.3 | 151 | 39.5 | 175.07 ($\leq .001$) | .277 | L > H, B > H |
| Interaction | 1474 | 83.8 | 77 | 57 | 311 | 81.4 | 60.70 ($\leq .001$) | .163 | H, B > L |

H heterosexual, L lesbian, B bisexual

lesbian women and the other two groups (i.e., heterosexual and bisexual women).

Why Do They Pay Attention to It?

Regarding the reason for their attentional focus, the most prevalent reason for heterosexual and bisexual women was to the desire to “reproduce the interaction,” while for lesbian women it as feeling an “attraction to the woman” (see Table 4).

In addition, heterosexual women were the ones who most justified their “attraction to the man,” followed by bisexual women, and, to a lesser extent, lesbian women. Concerning “attraction to the woman,” lesbian women showed the highest percentage, followed by bisexual women and heterosexual women.

Regarding the answer of “to be like him,” the percentages were lower than those for other answer options. Lesbians showed the highest percentage, with bisexual women in the second position, and finally, heterosexual women. Regarding “to be like her,” bisexual women showed the highest percentages, followed by heterosexual women and lesbians.

In general, all the reasons revealed statistically significant differences, except for the pairwise comparison of “reproducing the interaction” between heterosexual women and bisexual women.

Table 4 Differential analysis of the reasons why women look at certain aspects when viewing heterosexual pornography by sexual orientation

| | Heterosexual | | Lesbian | | Bisexual | | $\chi^2 (p)$ | Cramer's V | Post hoc |
|---------------------------|--------------|------|---------|------|----------|------|------------------------|------------|-------------------|
| | n | % | n | % | n | % | | | |
| Attraction to man | 509 | 29 | 13 | 9.6 | 87 | 22.8 | 27.56 ($\leq .001$) | .110 | H > L, B > L |
| Attraction to woman | 104 | 5.9 | 78 | 57.8 | 148 | 38.8 | 489.61 ($\leq .001$) | .464 | L, B > H L > B |
| To be like him | 8 | 0.5 | 10 | 7.4 | 19 | 5 | 70.09 ($\leq .001$) | .176 | L, B > H |
| To be like her | 213 | 12.1 | 6 | 4.4 | 64 | 16.8 | 14.71 (.001) | .080 | H, B > L B > H |
| Reproduce the interaction | 1417 | 80.6 | 66 | 48.9 | 297 | 78 | 74.48 ($\leq .001$) | .181 | H, B > L |

H heterosexual, L lesbian, B bisexual

Arousal

Regarding heterosexual pornography, most women, regardless of their sexual orientation, reported being aroused (see Table 2). Specifically, more bisexual women reported arousal, followed by heterosexual women and lesbian women. Statistically significant differences were obtained based on sexual orientation, as well as between the different pairwise comparisons.

For lesbian pornography, more than 90% of bisexual women and lesbians reported being aroused by such content, with similar results between them. However, little more than half of heterosexual women reported having been aroused by lesbian porn. These differences were statistically significant with a moderate effect size. Furthermore, statistically significant differences were also obtained between heterosexual women and the other two groups, i.e., lesbian women and bisexual women.

Gay pornography was the type that was consumed by the least amount of women. More bisexual women showed arousal from this type of pornography, followed by lesbians, and finally, heterosexual women. Statistically significant differences were obtained based on sexual orientation, with a moderate effect size. Once again, in pairwise comparison, heterosexual women showed statistically significant differences from lesbian and bisexual women.

A higher percentage of heterosexual women and bisexual women were aroused by heterosexual pornography, while,

in contrast, more lesbians were aroused by lesbian pornography. In any case, even though these data were consistent with one’s sexual orientation, it should also be noted that a high percentage of women were aroused by nonpreferred sex pornography, such as heterosexual women being aroused by lesbian pornography or lesbians being aroused by gay pornography.

Perception of Discomfort

In general, more lesbian women reported perceived discomfort. In fact, lesbian women exceeded the percentages of bisexual and heterosexual women in regard to discomfort with heterosexual and gay porn, with statistically significant differences (see Table 5). Based on content, the highest percentage of lesbian and bisexual women reported feeling discomforted by gay porn, while heterosexual women were the most discomforted by lesbian porn.

Heterosexual porn was the type of pornography with which fewer women showed discomfort compared to the other types of content. Specifically, more lesbians showed discomfort with heterosexual porn, followed by bisexual women and heterosexual women. In pairwise comparisons, lesbian women showed statistically significant differences from heterosexual and bisexual women.

Concerning discomfort with being aroused by lesbian pornography, although the differences were statistically nonsignificant, lesbian women showed the highest percentages, followed by heterosexual women and bisexual women.

According to discomfort perceived when aroused by gay pornography, more lesbians showed discomfort, followed by bisexual women and heterosexual women. In the pairwise comparison, heterosexual women showed statistically significant differences from lesbian and bisexual women.

Regressions in Viewing, Arousal, and Perception of Discomfort by Sexual Orientation and Age

As seen in Table 6, the interactions between age and sexual orientation only provided information in the models of *discomfort lesbian porn* and *discomfort gay porn*. For this

reason, in regard to the rest of the variables, the interactions were not included in the final models.

Regarding viewing, more women reported consuming heterosexual, lesbian, or gay pornography as their age increased. Moreover, lesbian and bisexual women were associated with viewing content. In general, young adult women were related to consuming all types of content.

Regarding arousal, age was only statistically significant in the model of *arousal gay porn*, with more women reporting being aroused by this content as their age advanced. In addition, lesbian and bisexual women were related to being aroused by gay and lesbian porn. However, bisexual women were associated with reporting arousal in regard to heterosexual pornography, while lesbian women were less likely to do so.

Finally, in the *discomfort lesbian porn* and *discomfort gay porn* models, where interactions were included, it was found that bisexual women, as they got older, experience greater discomfort when aroused by lesbian or gay porn. Regarding the *discomfort heterosexual porn* model, it was found that as age increases, fewer women experience discomfort when aroused by heterosexual pornography.

Discussion

In light of our findings, compared to past investigations (Ballester-Arnal et al., 2017; Bridges et al., 2016; Kasper et al., 2015; Martyniuk et al., 2016; Rissel et al., 2017; Træen & Daneback, 2013; Zheng & Zheng, 2014), our results showed that more young adult Spanish women had consumed pornography. This difference may be due to the age of the participants, which in our case was from 18 to 44 years old, while in other studies, the sample was younger (Ballester-Arnal et al., 2017; Martyniuk et al., 2016) or had a greater range of ages (Bridges et al., 2016; Kasper et al., 2015; Rissel et al., 2017; Træen & Daneback, 2013; Zheng & Zheng, 2014). Another aspect that may influence the findings is what type of information has been collected. For example, we asked about the women’s behavior experience on at least one occasion and not for a specific period of time or regarding specific correlated practices

Table 5 Differential analysis of discomfort felt for being aroused by heterosexual, lesbian, and gay porn by sexual orientation

| | Heterosexual | | Lesbian | | Bisexual | | $\chi^2 (p)$ | Cramer’s V | Post hoc |
|-------------------|--------------|-----|---------|------|----------|-----|-----------------------|------------|----------|
| | n | % | n | % | n | % | | | |
| Discomfort | | | | | | | | | |
| Heterosexual porn | 19 | 1.1 | 9 | 6.7 | 8 | 2.1 | 25.89 ($\leq .001$) | .107 | L > H, B |
| Lesbian porn | 61 | 6.9 | 12 | 7.6 | 20 | 5.6 | 1.01 (.606) | .027 | |
| Gay porn | 19 | 4 | 10 | 10.9 | 20 | 8.5 | 9.92 (.007) | .111 | L, B > H |

H heterosexual, L lesbian, B bisexual

Table 6 Regressions of viewing, arousing, and discomfort by heterosexual, lesbian, and gay pornography by sexual orientation

| β | SE | Wald | df | p | OR | 95% CI | | Model | Hosmer-Lemeshow test | Nagelkerke's R ² |
|-------------------------------------|-------|--------|----|-------------|-------|--------|--------|--|------------------------------------|-----------------------------|
| | | | | | | Lower | Upper | | | |
| Viewing heterosexual porn | | | | | | | | | | |
| Constant | 0.01 | 0.01 | 1 | .975 | 1.01 | | | $\chi^2 = 65.36; df = 3; p \leq .001$ | $\chi^2 = 18.73; df = 8; p = .016$ | .050 |
| Age | 0.08 | 35.26 | 1 | $\leq .001$ | 1.09 | 1.06 | 1.12 | | | |
| Lesbian | 0.45 | 2.32 | 1 | .128 | 1.57 | 0.87 | 2.81 | | | |
| Bisexual | 1.01 | 17.79 | 1 | $\leq .001$ | 2.75 | 1.72 | 4.41 | | | |
| Viewing lesbian porn | | | | | | | | | | |
| Constant | -0.53 | 6.60 | 1 | .010 | 0.58 | | | $\chi^2 = 226.14; df = 3; p \leq .001$ | $\chi^2 = 13.49; df = 8; p = .096$ | .118 |
| Age | 0.05 | 46.24 | 1 | $\leq .001$ | 1.06 | 1.04 | 1.07 | | | |
| Lesbian | 2.51 | 36.20 | 1 | $\leq .001$ | 12.40 | 5.46 | 28.15 | | | |
| Bisexual | 1.75 | 82.46 | 1 | $\leq .001$ | 5.79 | 3.96 | 8.48 | | | |
| Viewing gay porn | | | | | | | | | | |
| Constant | -1.13 | 37.23 | 1 | $\leq .001$ | 0.32 | | | $\chi^2 = 127.25; df = 3; p \leq .001$ | $\chi^2 = 10.13; df = 8; p = .256$ | .063 |
| Age | 0.06 | 74.46 | 1 | $\leq .001$ | 1.06 | 1.05 | 1.08 | | | |
| Lesbian | 0.72 | 15.84 | 1 | $\leq .001$ | 2.06 | 1.44 | 2.94 | | | |
| Bisexual | 0.76 | 38.89 | 1 | $\leq .001$ | 2.15 | 1.69 | 2.74 | | | |
| Arousing heterosexual porn | | | | | | | | | | |
| Constant | 2.71 | 70.69 | 1 | $\leq .001$ | 15.03 | | | $\chi^2 = 24.59; df = 3; p \leq .001$ | $\chi^2 = 2.03; df = 8; p = .980$ | .024 |
| Age | -0.01 | 0.34 | 1 | .559 | 1.01 | 1.01 | 1.02 | | | |
| Lesbian | -0.99 | 20.05 | 1 | $\leq .001$ | 2.71 | 1.75 | 4.20 | | | |
| Bisexual | 0.51 | 3.93 | 1 | .047 | 1.66 | 1.01 | 2.76 | | | |
| Arousing lesbian porn | | | | | | | | | | |
| Constant | 0.43 | 4.75 | 1 | .029 | 1.55 | | | $\chi^2 = 243.65; df = 3; p \leq .001$ | $\chi^2 = 8.22; df = 8; p = .412$ | .156 |
| Age | -0.01 | 0.19 | 1 | .656 | 1.19 | 1.10 | 1.29 | | | |
| Lesbian | 2.06 | 52.66 | 1 | $\leq .001$ | 5.10 | 1.01 | 16.43 | | | |
| Bisexual | 2.08 | 114.54 | 1 | $\leq .001$ | 90.91 | 1.01 | 187.72 | | | |
| Arousing gay porn | | | | | | | | | | |
| Constant | -1.03 | 24.05 | 1 | $\leq .001$ | 0.35 | | | $\chi^2 = 182.02; df = 3; p \leq .001$ | $\chi^2 = 5.80; df = 8; p = .669$ | .132 |
| Age | 0.01 | 5.92 | 1 | .015 | 1.02 | 1.01 | 1.03 | | | |
| Lesbian | 1.35 | 47.76 | 1 | $\leq .001$ | 3.85 | 2.63 | 5.65 | | | |
| Bisexual | 1.63 | 132.36 | 1 | $\leq .001$ | 5.13 | 3.88 | 6.78 | | | |
| Discomfort heterosexual porn | | | | | | | | | | |
| Constant | -2.05 | 3.88 | 1 | .049 | 0.12 | | | $\chi^2 = 23.48; df = 3; p \leq .001$ | $\chi^2 = 10.18; df = 8; p = .253$ | .068 |
| Age | -0.10 | 5.31 | 1 | .021 | 1.11 | 1.02 | 1.22 | | | |
| Lesbian | 1.91 | 20.94 | 1 | $\leq .001$ | 6.79 | 2.98 | 15.42 | | | |
| Bisexual | 0.55 | 1.69 | 1 | .193 | 1.74 | 1.05 | 4.02 | | | |

Table 6 (continued)

| | β | SE | Wald | df | p | OR | 95% CI | | Model | Hosmer-Lemeshow test | Nagelkerke's R ² |
|--------------------------------|-------|------|-------|----|--------|--------|--------|--------|-----------------------------------|-----------------------------------|-----------------------------|
| | | | | | | | Lower | Upper | | | |
| Discomfort lesbian porn | | | | | | | | | | | |
| Constant | 1.41 | 0.89 | 2.48 | 1 | .115 | 4.12 | 1.10 | 1.29 | $\chi^2 = 9.10; df = 2; p = .011$ | $\chi^2 = 3.72; df = 8; p = .881$ | .060 |
| Age | -0.17 | 0.04 | 18.03 | 1 | ≤ .001 | 1.19 | 1.01 | 1.29 | | | |
| Lesbian | -1.62 | 2.24 | 0.52 | 1 | .469 | 5.10 | 1.01 | 16.15 | | | |
| Bisexual | -4.54 | 1.35 | 11.18 | 1 | .001 | 90.91 | 1.01 | 187.14 | | | |
| Age × lesbian | 0.07 | 0.09 | 0.62 | 1 | .430 | 1.08 | 1.01 | 1.31 | | | |
| Age × bisexual | 0.18 | 0.05 | 10.15 | 1 | .001 | 1.20 | 1.07 | 1.35 | | | |
| Discomfort gay porn | | | | | | | | | | | |
| Constant | 2.92 | 1.93 | 2.27 | 1 | .132 | 18.55 | 1.10 | 1.58 | $\chi^2 = 9.49; df = 2; p = .009$ | $\chi^2 = 1.68; df = 8; p = .989$ | .095 |
| Age | -0.27 | 0.09 | 8.61 | 1 | .003 | 1.32 | 3.02 | 24.01 | | | |
| Lesbian | -2.62 | 2.96 | 0.78 | 1 | .375 | 14.29 | 106.54 | 325.21 | | | |
| Bisexual | -5.36 | 2.20 | 5.93 | 1 | .015 | 232.43 | 1.01 | 1.54 | | | |
| Age × lesbian | 0.17 | 0.13 | 1.66 | 1 | .197 | 1.18 | 1.07 | 1.61 | | | |
| Age × bisexual | 0.27 | 0.10 | 7.23 | 1 | .007 | 1.31 | | | | | |

such as masturbation (Ballester-Arnal et al., 2017; Bridges et al., 2016) or the frequency thereof (Bridges et al., 2016; Martyniuk et al., 2016; Zheng & Zheng, 2014). However, cultural context and social desirability may have also influence on the outcomes. Depending on the country, there is a greater stigmatization of affective-sexual diversity and sexuality in general, which can inhibit women from talking about it (Digoix et al., 2016; Schmitt & Fuller, 2015).

In general, regardless of the women's reported sexual orientation, there was a consumption of all types of pornographic content. These findings support other studies (Copen et al., 2016; Nebot-Garcia et al., 2018; Vrangalova & Savin-Williams, 2010) in which women who identified as a specific sexual orientation were found to express desires, behaviors, and interests toward a theoretically nonpreferred sex.

In particular, these Spanish bisexual and lesbian women did not show significant differences between them in regard to viewing different types of pornography based on their sexual orientation. However, as we expected, more lesbian and bisexual women reported pornography consumption compared to heterosexual women. As another European study pointed out (Træen & Daneback, 2013), more lesbian and bisexual women consume pornography than their heterosexual counterparts. These differences may be due to the possible greater disinhibition of women with a nonheterosexual orientation. In this case, their behaviors are not limited to what is expected of them according to traditional gender roles, which means that they are able to show more proactive behavior in regard to seeking sexual pleasure. In addition, in more traditional contexts, this increased consumption among lesbian and bisexual women could also be related to the security and anonymity offered by the Internet, where sexuality can be explored and sexual desire be satisfied without fear of discrimination (Giménez-García et al., 2020).

Regarding content, as we expected, more heterosexual and bisexual women reported viewing heterosexual pornography, while more lesbian women reported viewing lesbian pornography.

Regarding arousal, the excitation responses also showed greater differences of the heterosexual women compared to those of lesbian and bisexual women. In any case, our research also supported that all women were aroused by gay pornography (Neville, 2015). This arousal has been observed especially in heterosexual women, probably because men, who are the object of desire of heterosexual women, appear in this type of content (Ramsay, 2017). Thus, attention to one or another element of pornographic content may be more related to attraction to the sexual object than to identification with the character of one's same gender. However, more than half of lesbian women had been aroused by gay pornography, while more heterosexual women had experienced arousal due to lesbian pornography. In line with Diamond

(2008), women's sexual desire can be separated into two aspects: libido and arousal. The first is associated with certain objects of desire, whereas arousal can be experienced with stimuli other than those marked by one's sexual orientation. Thus, women may feel aroused while seeing how other people enjoy sexual pleasure, regardless of whether they are attracted to them (Chivers et al., 2007; McCutcheon & Bishop, 2015). Moreover, regardless of their orientation, many women reject heterosexual pornography and prefer other typologies, such as gay or lesbian pornography, due to the passive role that women play in heterosexual porn (McCutcheon & Bishop, 2015; Neville, 2015; Ramsay, 2017). Moreover, sexual orientation may be more fluid and belong to a continuum rather than a closed category (Copen et al., 2016; Vrangalova & Savin-Williams, 2012). Therefore, if we evaluate sexual orientation through the Kinsey 7-point scale (Kinsey et al., 1948), which ranges from "exclusively heterosexual" to "exclusively homosexual," participants identified as lesbian or heterosexual might be in intermediate positions, i.e., showing some degree of attraction to men and women, which would explain their arousal by nonpreferred sex pornography.

Perception of discomfort, as we expected, may be related to an inconsistency between reported sexual orientation and sexual orientation content. In particular, this occurred with lesbian porn for heterosexual women and gay porn for lesbian women, who were more likely to perceive discomfort. These results may be due to the discrepancy between what is expected of oneself, depending on one's sexual orientation, and what is truly felt or experienced (Priolo et al., 2016). As past studies have described, these discrepancies regarding what is expected may raise doubts and questions about one's sexual orientation, with a consequential impact on well-being (Coulter et al., 2017).

However, discomfort was also observed in the arousal by materials according to orientation and for bisexual women. Therefore, there may be other factors that mediate such discomfort, such as religious beliefs (Baltazar et al., 2010; Nelson et al., 2010; Poulsen et al., 2013), moral values (Fisher et al., 2019; Grubbs et al., 2019a; Grubbs & Perry, 2019; Perry, 2018), or disagreement with the sexual role expected of women (Van Ness et al., 2017).

Regarding age, more women reported consuming any type of pornography as their age increased. This seems to go against other Spanish studies in which a higher consumption of pornography has been observed in young women aged 19–25 (Ballester-Arnal et al., 2017) than in those over 55 (Ballester-Arnal et al., 2019). However, it must be remembered that our sample was between 18 and 44 years old and that in another study, it was observed that diverse sexual behaviors increased in prevalence until approximately the age of 40, after which the prevalence began to decrease (Herbenick et al., 2010).

In the case of arousal, age was only significant in arousal by gay porn, where the number of women who had been aroused increased with age. It is possible that older women have rarely consumed this type of porn, which may increase their arousal when they finally watch it. After that, they may seek out this type of content explicitly to achieve greater arousal.

Regarding discomfort, the number of bisexual women who showed discomfort when aroused by gay or lesbian pornography increased as age increased. These results may be because bisexual women suffer greater discrimination, stigma, and invisibility (Balsam & Mohr, 2007; Brewster & Moradi, 2010) and are therefore more punished for carrying out behaviors that go beyond heteronormativity. Finally, more women experienced discomfort when aroused by heterosexual porn as age decreased. It is possible that young women, regardless of their sexual orientation, are more coerced by social norms and influenced by the ideology of women's sexuality, which would make their self-exploration difficult (Emmerink et al., 2016; Van Ness et al., 2017).

These results should be considered in light of some limitations. For example, we cannot generalize the results because the sample was obtained through convenience sampling. Second, the use of nonvalidated self-assessment reports and social desirability could influence the results, especially in some aspects of sexuality that may go against social norms (Van Ness et al., 2017). Third, we did not provide participants with a specific definition of pornography; thus, given the existence of various meanings or insights (McKee et al., 2020), participants may interpret pornography in different ways. Fourth, it must be considered that we asked about the consumption of pornography at some point in life, which is a measure that provides less detail than others such as frequency or asking about one's level of consumption during the last year. However, we were not as interested in the percentages of consumption as we were in if there were differences with respect to arousal and discomfort based on sexual orientation; thus, we chose this more general measure to be able to cover a larger population. However, despite having a good number of bisexual and lesbian participants, it would be advisable to increase the sample and include people over 44 years old to generalize these results.

Conclusions

The findings of this study showed the relevance of pornography in the sexual lives of young adult Spanish women. Moreover, the findings emphasize the existing diversity in the orientation of desire and the response of arousal regardless of the self-informed sexual orientation. In addition to some differences, the results also revealed the discomfort perceived by young adult Spanish women despite their

sexual orientation. In particular, for the heterosexual participants, age was a differential variable regarding experiencing discomfort with pornography. To prevent the stigmatization of women's sexuality, all these findings should be considered in sexual education programs and health policies to make visible the sexual orientation fluidity and the diversity in women's sexuality, as well as their active role. This consideration would have a positive impact on the quality of life and well-being of women, which would reduce their discomfort regarding their own sexual development.

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Declarations

Ethics Approval The study was approved by the Ethics Committee of Universitat Jaume I (Castellón de la Plana, Spain) and was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments.

Informed Consent Participants were informed about the objectives of the survey, completion times, benefits, and risks, as well as about the anonymity of the responses and the right to stop the survey in any point and for any reasons. Furthermore, participants were informed that the data collected would have been published in scientific journals in aggregate form. After reading all information, participants had to give their consent to participate in the online survey by clicking on the bottom "I accept to take part in the survey."

Conflict of Interest The authors declare no competing interests.

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