



BDSM Safety in Pornography: Its Perceived Accuracy and Impact on Practitioners' Safe Word Practices

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Abstract

As some BDSM activities can carry risk of temporary or permanent marks/injury, and even death, safety is a foundational principle to BDSM participation. Given the connection between BDSM and sex for some practitioners, pornography is a likely domain for learning about BDSM safety, given its easy accessibility online. However, it is unclear whether practitioners view BDSM safety depicted in pornography as accurate and whether it influences their own practices. Therefore, the current study surveyed self-identified BDSM practitioners' perceptions of pornography's accurate representation of communication, consent, safe words, negotiation, general safety, and how these perceptions relate to their use of safe words and safety training in their own activities. Results showed that (1) demographics nor BDSM-related attributes predicted perceived accuracy of BDSM safety depictions in pornography; (2) perceived accuracy of pornography's depiction of BDSM general safety and safe words did not predict practitioners' negotiation or use of safe words; however, years of BDSM experience did predict safe word usage; (3) submissive-related BDSM roles were more likely to use safe words than dominant-related BDSM roles; (4) those who participated in BDSM only in private were less likely to have CPR and/or first-aid training and more likely to have no other safety training; (5) those who believed pornography depicted BDSM safety mostly/very accurately were more likely to have no safety training; and (6) years of BDSM experience did not predict safety training. The impact of these findings on how we understand the influence of pornography on real-world BDSM practices are discussed.

Keywords BDSM · Pornography · Safety · Safe words · Learning

Introduction

BDSM (bondage/discipline, domination/submission, sadism/masochism) is built upon a framework of safety, involving negotiation, safe words, and consent (Dunkley & Brotto, 2020). This understanding has led to some characterizing BDSM's safety framework as a role model for effective consent culture post #MeToo (Fileborn & Loney-Howes, 2019; Newman & Haire, 2019). Despite the emphasis on safe practices, there are some potentially dangerous BDSM activities that could lead to accusations of assault and/or rape (Sheff, 2021), the unintentional leaving of temporary or permanent physical marks and injuries (Drouin et al., 2023) and, in rare circumstances, death (Schori et al., 2022).

While safety is foundational to healthy BDSM practices, there has been little research on how safe practices are learned. Given that BDSM and sexual activity are linked for some who engage in BDSM (Faccio et al., 2020; Sprott et al., 2021), it is unsurprising that for many individuals pornography serves as an initial source of exposure to BDSM (Walker & Kuperberg, 2022). As a result, it is likely that initial BDSM safety practices may be informed through representations in pornography. However, it is unknown how accurately practitioners believe pornography depictions are, and how these perceptions relate to their own activities. Therefore, in the current study we surveyed self-identified practitioners on their perception of the accuracy of BDSM-themed pornography's depictions of effective communication, affirmative consent, implementation of safe words/cues, ongoing negotiation, and general safety. We then examined how these perceptions, demographics, and BDSM-related attributes predicted the negotiation and usage of safe words in their own practices, and participation in cardiopulmonary

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resuscitation (CPR) and/or first-aid training, or having no safety training.

The Importance of Safety in BDSM Practices

The majority of BDSM activities carry minimal risk of significant injury; however, it is not uncommon for physical marks to be left on a person's body after the activity. In some circumstances these marks are unintended, while in others, they serve as a "badge of honor" or evidence of what has occurred (Drouin et al., 2023). These intentional and/or unintentional marks can be found across the body with the butt, neck, hips, back, arms, and legs being the most common areas. In addition to physical marks left, there are potential legal risks that can arise with BDSM activities. The three most common are whether an activity was consensual or assault/rape, whether age play is fantastical or evidence of predation, and whether a death was accidental or murder (Sheff, 2021). In situations of accidental death, the most common cause is asphyxiation through strangulation (Bauer et al., 2021). Examining 17 reported fatal cases related to BDSM, Schori et al. (2022) found that strangulation was the cause in 15. These included via rope (e.g., around the neck) six times, via a body part (e.g., hands, forearms) five times, and via other tools (e.g., belt, leash) four times.

Training in CPR and/or first aid can be beneficial for addressing minor injuries, such as minor burns, cuts, and sprains, and more serious issues such as loss of consciousness or not breathing. Within a BDSM scene—the term used to describe two (or more) people who engage in a BDSM activity together—safe words (e.g., red, banana) or physical cues (e.g., raising a leg/hand, dropping an item) serve as important communication mechanisms. When used, typically by the receiver of an activity (i.e., those on the right side of the D/s slash—submissive, bottom, etc.), safe words/cues can signify to the giver of an activity (i.e., those on the left side of the D/s slash—Dominant, Top, etc.) that the activity needs to be immediately stopped (i.e., consent has been revoked). As safe words can differ person to person, it is important that they are negotiated prior to participating in a scene. How people learn to negotiate and implement these safe words is unclear; however, Drouin et al. (2023) found that the use of safe words was positively associated with BDSM experience. This evidence suggests that safe word usage is learned over time, either through personal experiences, such as a scene going wrong and recognizing a need to implement them, or through shared experiences, such as someone teaching about their need/use.

Learning About BDSM

The implementation of safe BDSM practices, such as training in proper techniques for certain activities (e.g., impact,

bondage), is integral to ensuring safety. In-person mentorship and/or conversations through one's local community are integral for sharing knowledge of BDSM practices and protocols (Graham et al., 2016). One important way in which this occurs is through munches: Non-BDSM activity-focused social events typically held in restaurants or bars (Webster & Klaserner, 2019). BDSM courses and workshops on specific activities also serve as an important domain for education on topics such as safe practices (Sprott et al., 2019).

In the current digital age, the Internet also serves as an important domain for learning. While likely used to some degree by everyone, reliance on Internet-based sources, such as pornography, as the primary source of BDSM education may be more evidence in certain demographics. As people often become aware of their interest in BDSM during adolescence (Bezreh et al., 2012; Coppens et al., 2020; Sandnabba et al., 1999; Westlake & Mahan, 2023), their age precludes them from engaging in their local BDSM community. Therefore, the Internet can serve as an easily accessible source of BDSM information prior to being allowed to engage in their local community (Randall & McKee, 2017). The Internet may also be critical for learning for other demographics, including those new to BDSM, living in rural areas without a local BDSM community, or only wanting to participate in BDSM privately (e.g., with a romantic partner).

Learning from Pornography

Pornography is a common source of knowledge acquisition for topics related to sex. This is especially true for adolescents and young adults, who perceive pornography as the most helpful source for sex information (Rothman et al., 2021) and are more likely to integrate what they see in pornography into their real-world experiences (Banca et al., 2016; Sun et al., 2016). This learning can be problematic given that research suggests consumers of pornography can develop scripts for how to navigate real-world sexual encounters (Bridges et al., 2016) and learn negative lessons, including women being subservient to dominant men (Doornwaard et al., 2017), greater acceptance and engagement in sexualized violence and harassment (e.g., Rostad et al., 2019; Brown & L'Engle, 2009), and unrealistic and misleading attitudes (Tsitsika et al., 2009). Importantly, these negative patterns are not restricted to just male, heterosexual consumers. Research examining female (Johnson et al., 2019; Klein et al., 2022; Maas & Dewey, 2018) and LGBTQ+ (Goldstein, 2020) consumers have demonstrated similar negative lessons learned.

Learning from pornography is not inherently negative. A growing amount of research has demonstrated that positive lessons can be learned from pornography by males and females and various sexual orientations. These include a better understanding of the mechanics of sex (Litsou et al., 2021), developing new sexual techniques (McCormack &

Wignall, 2017), becoming less sexually repressed (McKee, 2007), increasing knowledge of sexual practices (Attwood, et al., 2018), and learning about sadomasochism (Kubicek et al., 2010).

When it comes to learning about BDSM from pornography specifically, Westlake et al. (2023) found mixed results. Interviewing community leaders in Canada and the USA, they found that pornography has become better at realistic depictions over time. In addition, it can help with teaching skills and reinforcing good negotiation and consent behaviors. However, community leaders expressed concern that if consumers could not delineate fantasy from reality, and attempted to reenact what they saw without understanding the training involved, pornography could have a negative effect on safety practices. When these reenactments occur in public settings, community leaders can provide mentorship and guidance; however, when these reenactments occur in private settings, there is no one present to correct the misconception.

Method

Participants

Participants came from a large, international, online survey of self-identified BDSM practitioners (see Westlake & Mahan, 2023 for detailed methodology). In total, 979 people attempted the survey (i.e., completed at least 5%), with 595 (61%) completing the full survey. The current study includes those who stated that they had viewed BDSM-themed pornography within the past year ($n = 556$). Participants came from 33 different countries, with the USA (61.4%), Canada (14.3%), and the UK (7.9%) the most prevalent. Participants ranged from 18 to 78 years old, with a mean of 39.6 ($S.D. = 13.9$). Regarding sex at birth, 58.2% were female and 41.2% were male, while for 46.1% their gender identity was woman, 36.9% was man, 4.5% was non-binary, 4.3% was gender fluid, and 2.2% was agender. Sexual orientations consisted of heterosexual (36.3%), followed by bisexual (31.8%), pansexual (15.0%), gay/lesbian (4.2%), and queer (3.1%). The sample was predominantly racially White (84.2%) followed by Hispanic/LatinX (3.1%), Black (2.5%), and South/East Asian (2.4%).

Measures and Procedures

Participants were recruited through the online discussion forums FetLife, Reddit, and Facebook and through advertisement by kink and sexuality organizations via their social media accounts (e.g., Instagram, Twitter) and mailing lists. Prospective respondents were directed to a 45-min survey on Qualtrics that covered the topics: demographics, participation in BDSM, local community dynamics, involvement in

sex work, consumption of pornography, upbringing, parenting, mental health and chronic pain, and trauma. All 102 questions were optional (i.e., no compulsory questions) while the sections on mental health and chronic pain and trauma could be skipped without seeing any of the questions. All tracking mechanisms of Qualtrics (e.g., IP address recording) were turned off to ensure responses were anonymous.

Three BDSM-related attribute questions were included in the current study. First, participants were asked via an open-ended question to select what BDSM role(s) they identified with. Responses were initially coded into 24 different categories, with Dominant, Top, and Daddy the most common on the left side of the D/s slash, and submissive, bottom, property/owned/slave the most common on the right side of the slash. In total, 21.2% identified with roles only on the left side, 49.8% only on the right, and 28.9% with roles on both sides (e.g., switch). Second, participants were asked at approximately what age they began participating in BDSM privately and publicly. These two questions were used to calculate whether a person had participated publicly or only privately, and their years of BDSM experience—age when completing survey minus age they began participating privately, as all participants identified participating privately prior to publicly. Years of BDSM experience were subsequently ordinally recoded into four groups 0 to 4 years (21.6%), 5 to 14 years (34.8%), 15 to 24 years (21.6%), and 25 or more years (22.0%). Regarding venue of participation, 59.3% identified participating both publicly and privately while 40.7% had only participated privately.

Eight survey questions related to safety were used in the current study. First, participants were asked whether they used safe words, safe signals, and/or other nonverbal cues ($n = 554$). Responses were given on a five-point Likert scale with 58.0% identifying “always,” 15.0% “often,” 14.1% “sometimes,” 10.2% “rarely,” and 2.7% “never.” Second, participants were asked through an open-ended question what safety training they had completed for participating in BDSM activities. Responses included munches, mentorship, online videos, community workshops, books, etc. Those who identified that they had completed CPR and/or first-aid training (29.9%) were compared to those without, while those who identified no safety training (29.5%) were compared to those with any safety training. Third, participants were asked through an open-ended question any pre-negotiations they engage in with potential new BDSM partners ($n = 515$). Responses included interests, sexual health, limits, etc. Those who explicitly identified negotiating safe words (27.4%) were compared to those who did not identify negotiating safe words. Fourth, participants were asked about how accurately (“not at all accurate” to “very accurate”) they felt five BDSM safety elements were depicted in pornography: “communication between participants,” “consent,” “safety,” “safe words,” and “negotiation process.” Despite 556 participants

responding “yes” to consuming BDSM-themed pornography within the past year, 24 respondents (4.3%) did not answer any of the five safety elements questions. This left a final sample size of 532 for subsequent analyses. Distribution of responses to these five safety elements, including “don’t know” responses, are summarized in Fig. 1.

Analyses

To determine which demographics predicted perceived accuracy of BDSM safety depictions in pornography, two ordinal regression analyses were conducted for each of the five safety elements: communication, consent, safety, safe words, and negotiation. In the first analysis, participant demographics were used. Specifically, gender (man, woman, gender diverse), sexual orientation (heterosexual, LGBTQ +), geographic region (USA, rest of the world), and race (White, People of Color). In the second analysis, BDSM-related attributes were used. Specifically, role (left side, right side, both sides/switch), participation venue (private only, public/private), and years of BDSM experience (0 to 4 years, 5 to 14 years, 15 to 24 years, and 25 or more years). As predictor variables were categorical, Pearson chi-square and deviance statistics were used to measure goodness of fit. While explained variance (*r*-squared) cannot be accurately calculated for logistic regression (because of heteroscedasticity), a pseudo-*r*-squared was still reported. The Nagelkerke pseudo-*r*-squared was chosen over Cox and Snell as it extends the possible range to 1.0. Finally, the proportional odds assumption was measured through a test of parallel lines.

To determine how perceptions of BDSM safety depicted in pornography predicts the practices of individual practitioners, five analyses were completed. First, two ordinal regression analyses were conducted with the three BDSM-related attributes and accuracy of safe words or safety

depictions in pornography predicting the use of safe words within practitioners’ activities. To minimize “zero frequencies,” use of safe words was recoded from five groups to three (never/rarely, sometimes, often/always). Second, three (binary) logistic regression analyses were conducted. The three BDSM-related attributes and the accuracy of safe word depictions were used to predict pre-negotiation of safe words while the three BDSM-related attributes and the accuracy of safety depictions were used to predict CPR and/or first-aid training or no safety training. Model fit was determined via the Hosmer and Lemeshow test, while, for the same reasons as the ordinal regression analyses, the Nagelkerke pseudo-*r*-squared was reported rather than the Cox and Snell.

Results

Differences in Perceived Accuracy of Pornography’s Depictions of BDSM Safety

The perceptions of BDSM practitioners of BDSM-themed pornography’s accurate depiction of communication, consent, safety, safe words, and negotiation were compared across gender, sexual orientation, race, and geographic region (Table 1). Each of the five models passed model fit and the assumption of proportional odds tests. However, none of the models demonstrated high explained variance, with each pseudo-*r*-squared being 0.02 or lower. There were no significant differences found between demographics. That is, the perception of pornography’s accuracy in depicting BDSM safety did not differ across groups. For BDSM-related attributes, the results were similar (Table 2). All five models passed model fit and the assumption of proportional odds tests; however, again explained variance was below 0.02 for each model. For years of BDSM experience, venue of

Fig. 1 Percentage of BDSM practitioners’ perception that BDSM-themed pornography accurately depicts safe practices

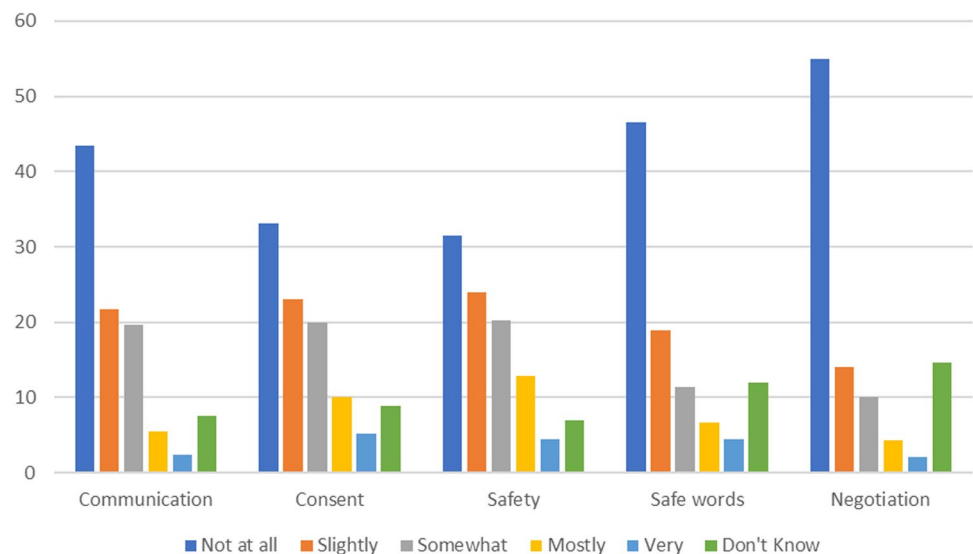


Table 1 Demographic differences in the perception of pornography's depiction of BDSM safety

	Depict communication	Depict consent	Depict safety	Depict safe words	Depict negotiation
<i>Sample size</i>					
n	477	470	480	451	438
<i>Gender</i>					
Man	0.25	0.05	0.27	0.12	0.12
Woman	0.23	0.09	0.22	−0.04	−0.19
Gender Diverse	REF	REF	REF	REF	REF
<i>Sexual orientation</i>					
Heterosexual	REF	REF	REF	REF	REF
LGBTQ+	0.04	−0.22	−0.15	−0.08	−0.11
<i>Race</i>					
White	REF	REF	REF	REF	REF
People of Color	−0.46	−0.09	0.06	−0.34	−0.49
<i>Geographic region</i>					
USA	REF	REF	REF	REF	REF
Rest of World	−0.24	−0.23	−0.24	−0.17	−0.31
<i>Goodness of fit</i>					
Pearson (df = 61)	58.72	41.07	55.65	52.74	55.36
Deviance (df = 61)	51.63	47.15	64.40	55.04	53.88
Nagelkerke R-squared	0.01	0.01	0.01	0.01	0.02
<i>Test of parallel lines</i>					
Chi-square (df = 10)	8.89	4.98	12.61	6.15	9.61

* <0.05, ** <0.01

Table 2 BDSM-related attribute differences in the perception of pornography's depiction of BDSM safety

	Depict communication	Depict consent	Depict safety	Depict safe words	Depict negotiation
<i>Sample size</i>					
n	468	460	471	441	430
<i>Years of BDSM experience</i>					
0 to 4 years	−0.05	0.17	−0.14	0.29	0.03
5 to 14 years	0.10	0.19	0.28	0.38	0.20
15 to 24 years	−0.07	−0.17	0.03	0.27	0.06
25 or more years	REF	REF	REF	REF	REF
<i>Venue of participation</i>					
Public & Private	0.09	−0.10	0.07	0.21	−0.16
Private Only	REF	REF	REF	REF	REF
<i>BDSM role</i>					
Left Only	REF	REF	REF	REF	REF
Right Only	−0.02	0.13	−0.14	−0.08	−0.07
Both Sides	−0.03	0.22	0.24	−0.01	−0.09
<i>Goodness of fit</i>					
Pearson (df = 63)	51.71	72.81	59.00	70.85	61.26
Deviance (df = 63)	54.71	78.49	64.40	78.33	69.77
Nagelkerke R-squared	> 0.01	0.01	0.02	0.01	0.01
<i>Test of parallel lines</i>					
Chi-square (df = 12)	13.37	8.95	17.90	18.15	8.71

* <0.05, ** <0.01

participation, and BDSM role, no statistical differences in perceived accuracy of pornography's depiction of BDSM safety elements were detected.

How Perceptions of Safety Depicted in Pornography Relate to Real-World Practices

Given that there were no demographical differences in perceptions of pornography's accurate depiction of BDSM safety, it is unsurprising that there was no relationship between the perceived depictions of safety and safe words in practitioners' own use of safe words (Table 3). However, years of BDSM experience and BDSM role predicted safe word usage. Those with 25 or more years of experience were more likely to use safe words than those with fewer years of experience. Likewise, those who identified with roles only on the right side of the slash (submissive roles) were more likely than those who identified with roles only on the left

side of the slash (dominant roles) to use safe words. Both models passed goodness of fit and proportional odds assumption tests.

Similar patterns for how perceived accuracy of pornography's depiction of safe words predicted negotiating safe words prior to engaging in BDSM with new partners were found (Table 4). However, here, BDSM-related attributes did not appear to predict pre-negotiation of safe words, despite good model fit (Hosmer and Lemeshow test). Where differences were found was regarding engaging in CPR and/or first-aid training or any form of safety training. Those who participated in BDSM in both a public and private setting, rather than just a private setting, were more likely to have

Table 3 Relationship between BDSM-related attributes, perceived accurate depiction of safety and safe words in pornography, with the use of safe words within one's BDSM activities

	Personal use of safe words	
<i>Sample size</i>		
n	Model 1:440	Model 2:468
<i>Perceived accuracy of safety depictions in pornography</i>		
Not at all	–	0.56
Slightly	–	0.36
Somewhat	–	–0.28
Mostly/Very	–	REF
<i>Perceived accuracy of safe words depictions in pornography</i>		
Not at all	0.26	–
Slightly	0.14	–
Somewhat	–0.13	–
Mostly/Very	REF	–
<i>Years of BDSM experience</i>		
0 to 4 years	1.97**	1.81**
5 to 14 years	1.42**	1.59**
15 to 24 years	1.37**	1.51**
25 or more years	REF	REF
<i>BDSM role</i>		
Left Only	REF	REF
Right Only	1.35**	1.35**
Both Sides	0.52	0.70
<i>Goodness of fit</i>		
Pearson (df)	67.33 (80)	66.90 (86)
Deviance (df)	73.35 (80)	72.73 (86)
Nagelkerke R-squared	0.15	0.16
Test of parallel lines		
Chi-square (df = 8)	7.55	7.77

* <0.05, ** <0.01

Table 4 Relationship between BDSM-related attributes, perceived accurate depiction of safety and safe words in pornography, and the pre-negotiation of safe words, CPR/first-aid training, or no safety training

	Pre-negotiation of safe words	CPR/first-aid safety training	No safety training
<i>Sample size</i>			
n	413	423	423
<i>Accuracy of safety depictions in pornography</i>			
Not at all	–	REF	REF
Slightly	–	0.24	–0.40
Somewhat	–	0.40	–0.42
Mostly/Very	–	–0.58	0.73*
<i>Accuracy of safe words depictions in pornography</i>			
Not at all	REF	–	–
Slightly	–0.77*	–	–
Somewhat	0.01	–	–
Mostly/Very	0.22	–	–
<i>Years of BDSM experience</i>			
0 to 4 years	–0.01	–0.18	0.01
5 to 14 years	–0.15	–0.54	0.04
15 to 24 years	0.25	0.02	0.08
25 or more years	REF	REF	REF
<i>Venue of participation</i>			
Public and Private	–0.29	0.59*	–1.32**
Private only	REF	REF	REF
<i>BDSM role</i>			
Left only	REF	REF	REF
Right only	0.05	–0.41	1.22**
Both sides	–0.06	–0.04	0.91*
<i>Hosmer and Lemeshow</i>			
Chi-square (df = 8)	6.72	8.00	5.03
<i>Nagelkerke R-squared</i>			
	0.04	0.08	0.19

* <0.05, ** <0.01

completed CPR and/or first-aid training. Additionally, those who believed that pornography mostly or very accurately depicted safe BDSM practices were more likely to have no safety training. Likewise, those who participated publicly and privately were significantly less likely to have no safety training. Finally, it might be assumed that the more years of BDSM experience a person possesses, the more likely they would be to have had some type of safety training. However, results demonstrate that this is not the case, as years of experience did not predict CPR and/or first-aid training or having no safety training.

Discussion

Pornography is cited as a common starting point for many interested in exploring BDSM (e.g., Walker & Kuperberg (2022)). However, it is unknown how consumers of BDSM-themed pornography perceive the accuracy of safe practices depicted in pornography. More importantly, whether their perceptions align with the safety practices—safe words and safety training—they incorporate into their own BDSM activities. In the current study, we found no differences in perceptions of pornography’s accurate depiction of communication, consent, safe words, safety, and negotiation across practitioner demographics or BDSM-related attributes. Additionally, perceptions of safe words and safety depictions did not predict the negotiation or use of safe words nor completion of CRP and/or first-aid training. However, safe word usage was predicted by years of BDSM experience and identification with right-side-only (submissive) roles. When it came to safety training, those who participated in BDSM only in private were less likely to have CRP and/or first-aid training and more likely to have no safety training. When it came to the role of perceptions of pornography’s accurate depiction of BDSM safety, those who felt it was mostly/very accurate were more likely to have no safety training. These results provide important new insights on the influence of BDSM-themed pornography on different demographics and its potential influence on the real-world safety practices within practitioners’ own activities.

The current study aligns with existing literature demonstrating that pornography has a similar effect on consumers, whether they are male or female (e.g., Johnson et al., 2019) or heterosexual or non-heterosexual (e.g., Goldstein, 2020). Importantly, practitioners largely perceived pornography to inaccurately represent safe practices, which coincides with Koletić et al.’s, (2021) and Scarelli’s (2015) findings that consumers believe they can recognize the “wrong” lessons in pornography. This finding also supports Shrage’s (2005) argument that consumers of pornography, including BDSM-themed, can distinguish between real (accurate) and fantasy (inaccurate) representations. Together, these findings may

suggest that for some topics, historic beliefs of the negative impacts of pornography on real-world behaviors may be waning, as emphasis on pornography literacy increases (e.g., Rothman et al., 2020).

Perceptions of pornography’s accurate depiction of BDSM safety also does not appear to be influenced by BDSM-related attributes. Those new to BDSM are just as likely as those with 25 or more years of experience to view pornography similarly, as are those who participate in BDSM only in private compared to those who also participate publicly. This is important as it suggests that consumers do not appear to initially believe that pornography accurately, or inaccurately, depicts BDSM, but then through personal experience (e.g., years of experience) and/or interactions with others (e.g., participating publicly) they come to change their belief of pornography’s accuracy. Instead, their perceptions, whether good or bad, remain consistent over time. This suggests that the driving force behind their belief system of pornography’s accuracy is unrelated to BDSM, potentially signaling it is from something developed earlier in their pornography consumption history.

Further supporting prior research (Drouin et al., 2023), the frequent use of safe words within one’s practices appears to be influenced by BDSM experience. This can be demonstrated in two different means of experience: first, in number of years, with those having more than 25 years of experience being more likely to use safe words more frequently than those with zero to four years; and second, in BDSM roles, with bottoms, submissives, and masochists (i.e., those more likely to say safe words during a BDSM scene) being more likely to use safe words than Tops, Masters, Sadists. However, unlike their usage, the pre-negotiation of safe words appears to be universal, whether a practitioner has three years or 30 years of experience, or whether they are on the left side or the right side of the slash. This common practice of negotiation may point to the inherent focus on safety within BDSM communities and/or it may be evidence of self-preservation behaviors. For those on the right side, typically the receivers of the action, there may be the recognition that they may need to stop a scene at some point and therefore prioritize putting into place a system that allows them to effectively communicate that. For those on the left side, typically the givers of the action, there may be fears of not having safe words in place leading to consent violations and potential legal ramifications (e.g., Sheff, 2021).

Graham et al. (2016) identified that the (in-person) BDSM community plays an important role in safe practices. While perceptions of BDSM safety depicted in pornography did not predict safety training, the venue of participation (private only or publicly and privately) did. When combined with the finding that years of experience did not predict safety training (neither CPR and/or first-aid training nor no safety training), it points to the impact the community may have on facilitating

safety practices. Although we cannot be certain of causality, this finding suggests that practitioners may come to believe they need additional safety training through conversations with other practitioners and/or have the opportunity to participate in safety training through community-led workshops. In contrast, those who participate only in private may believe they do not need safety training, given that they likely engage in BDSM alone and/or with a romantic or sexual partner. These findings operate in contrast to what is likely the most beneficial for safe BDSM practices. For those who engage in BDSM publicly, there is likely someone else at the public event, such as a dungeon monitor or event organizer, who has the responsibility of ensuring that safety practices are followed and likely have some form of safety training as a result. Therefore, one could argue that these individuals are less likely to need safety training; although of course, they still should. For those who engage in BDSM only in private, the additional safety measure of having someone else present with safety training does not exist. Therefore, it is potentially more important that practitioners who participate only in private have safety training in comparison with those who participate publicly.

Finally, while practitioners surveyed in the current study largely felt that pornography did not accurately depict the five elements of safety analyzed, this does not necessarily mean that pornography is a poor example of safety. In fact, Westlake et al. (2023) reported that BDSM community leaders believed some pornography did a good job at demonstrating safe practices. However, they also felt that when the “wrong” pornography was consumed, it could lead to poor safety practices. While we cannot state that pornography does a poor job of depicting safer BDSM practices based on the current study, we can state that those who believed pornography mostly or very accurately depicted safety were more likely to have no safety training. This may suggest that for general safety, pornography may send the wrong message: That safety training is not required for the BDSM activities they are depicting. If true in this circumstance, we could argue that pornography does a poor job of accurately depicting the importance of safety training.

Conclusions

Results have been mixed about the impact of pornography in learning about sexual activity. In the current study, we sought to shed light on pornography’s impact within the subject of BDSM safety through an online survey of self-identified BDSM practitioners. Results suggest that pornography’s depiction of safety has little impact on the negotiation and use of safe words. However, BDSM-related attributes, such as years of experience, do play a role in safe word usage, demonstrating that this is likely a learned behavior that comes

from engaging in BDSM rather than watching fantastical representations of it in pornography. Where pornography’s impact may emerge is in practitioners’ completion of safety training. Those who felt that pornography was a good representation of safe practices were more likely to have no safety training. Importantly, CRP and/or first-aid training was more common in those who engage in BDSM both publicly and privately. Again, this suggests that safety training is likely learned more through community engagement (e.g., conversations with more experienced participants) than from pornography. Therefore, for those that engage in BDSM in both public and private settings, it appears that the community does a good job at facilitating and modeling safe practices in BDSM. However, for those that do not interact with a local community, instead participating only in private, there may be increased concerns about the negative effect pornography may have on ensuring they include safety procedures into their BDSM activities. How those who participate in BDSM only in private acquire knowledge about safety is an area for further study. Additionally, given that this was an online survey, it would be beneficial for subsequent research to explore safe word learning and usage qualitatively through in-depth interviews, to better understand the detailed links between learning through pornography and implementation of safety practices.

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Availability of Data and Materials Data used for the analyses presented in this manuscript are available upon request, abiding by the requirements set forth by the institutional review board at San Jose State University.

Code Availability Not applicable.

Declarations

Conflict of interest Not applicable.

Ethical Approval This study was approved by the San Jose State University human subjects Institutional Review Board (Approval Number: 21-163).

Informed Consent All subjects completed informed consent prior to participating with this study.

References

- Attwood, F., Smith, C., & Barker, M. (2018). ‘I’m just curious and still exploring myself’: Young people and pornography. *New Media & Society*, 20(10), 3738–3759.

- Banca, P., Morris, L. S., Mitchell, S., Harrison, N. A., Potenza, M. N., & Voon, V. (2016). Novelty, conditioning and attentional bias to sexual rewards. *Journal of Psychiatric Research*, 72(1), 91–101.
- Bauer, K., Schön, C. A., & Jackowski, C. (2021). Fatal strangulation during consensual BDSM activity: Three case reports. *International Journal of Legal Medicine*, 135, 347–353.
- Bezreh, T., Weinberg, T. S., & Edgar, T. (2012). BDSM disclosure and stigma management: Identifying opportunities for sex education. *American Journal of Sexuality Education*, 7(1), 37–61.
- Bridges, A. J., Sun, C. F., Ezzell, M. B., & Johnson, J. (2016). Sexual scripts and the sexual behavior of men and women who use pornography. *Sexualization, Media, & Society*, 2(4).
- Brown, J. D., & L'Engle, K. L. (2009). X-rated: Sexual attitudes and behaviors associated with US early adolescents' exposure to sexually explicit media. *Communication Research*, 36(1), 129–151.
- Coppens, V., Brink, S. T., Huys, W., Fransen, E., & Morrens, M. (2020). A survey on BDSM-related activities: BDSM experience correlates with age of first exposure, interest profile, and role identity. *Journal of Sex Research*, 57(1), 129–136.
- Doornwaard, S. M., den Boer, F., Vanwesenbeeck, I., van Nijmegen, C. H., Ter Bogt, T. F., & van den Eijnden, R. J. (2017). Dutch adolescents' motives, perceptions, and reflections toward sex-related internet use: Results of a web-based focus-group study. *Journal of Sex Research*, 54(8), 1038–1050.
- Drouin, M., Hernandez, E., Machette, A., Garcia, J. R., & Boyd, R. L. (2023). An exploration of marks/injuries related to BDSM sexual experiences. *Sexual Medicine*, 11(3), qfad020. <https://doi.org/10.1093/sexmed/qfad020>
- Dunkley, C. R., & Brotto, L. A. (2020). The role of consent in the context of BDSM. *Sexual Abuse*, 32(6), 657–678.
- Faccio, E., Sarigu, D., & Iudici, A. (2020). What is it like to be a BDSM player? The role of sexuality and erotization of power in the BDSM experience. *Sexuality & Culture*, 24(5), 1641–1652.
- Fileborn, B., & Loney-Howes, R. (Eds.). (2019). *#MeToo and the politics of social change*. Springer Nature.
- Goldstein, A. (2020). Beyond porn literacy: Drawing on young people's pornography narratives to expand sex education pedagogies. *Sex Education*, 20(1), 59–74.
- Graham, B. C., Butler, S. E., McGraw, R., Cannes, S. M., & Smith, J. (2016). Member perspectives on the role of BDSM communities. *Journal of Sex Research*, 53(8), 895–909.
- Johnson, J. A., Ezzell, M. B., Bridges, A. J., & Sun, C. F. (2019). Pornography and heterosexual women's intimate experiences with a partner. *Journal of Women's Health*, 28(9), 1254–1265.
- Klein, V., Šević, S., Kohut, T., & Štulhofer, A. (2022). Longitudinal assessment of the association between the use of sexually explicit material, hyperfemininity, and sexual agency in adolescent women. *Psychology & Sexuality*, 13(2), 213–227.
- Koletić, G., Štulhofer, A., Hald, G. M., & Træen, B. (2021). Self-assessed effects of pornography use on personal sex life: Results from a large-scale study of Norwegian adults. *International Journal of Sexual Health*, 33(3), 342–356.
- Kubicek, K., Beyer, W. J., Weiss, G., Iverson, E., & Kipke, M. D. (2010). In the dark: Young men's stories of sexual initiation in the absence of relevant sexual health information. *Health Education & Behavior*, 37(2), 243–263.
- Litsou, K., Byron, P., McKee, A., & Ingham, R. (2021). Learning from pornography: Results of a mixed methods systematic review. *Sex Education*, 21(2), 236–252.
- Maas, M. K., & Dewey, S. (2018). Internet pornography use among collegiate women: Gender attitudes, body monitoring, and sexual behavior. *Sage Open*, 8(2). <https://doi.org/10.1177/2158244018786640>
- McCormack, M., & Wignall, L. (2017). Enjoyment, exploration and education: Understanding the consumption of pornography among young men with non-exclusive sexual orientations. *Sociology*, 51(5), 975–991.
- Randall, R. S., & McKee, A. (2017). Becoming BDSM in an online environment. In G. N. Paul & K. D. Isabel (Eds.), *Sex in the digital age* (pp. 168–178). Routledge.
- McKee, A. (2007). The positive and negative effects of pornography as attributed by consumers. *Australian Journal of Communication*, 34(1), 87–104.
- Newman, C. E., & Haire, B. (2019). A reckoning that is long overdue: Reconfiguring the work of progressive sex advice post #MeToo. In B. Fileborn & R. Loney-Howes (Eds.), *#MeToo and the politics of social change* (pp. 235–250). Palgrave Macmillan.
- Rostad, W. L., Gittins-Stone, D., Huntington, C., Rizzo, C. J., Pearlman, D., & Orchowski, L. (2019). The association between exposure to violent pornography and teen dating violence in grade 10 high school students. *Archives of Sexual Behavior*, 48, 2137–2147.
- Rothman, E. F., Daley, N., & Alder, J. (2020). A pornography literacy program for adolescents. *American Journal of Public Health*, 110(2), 154–156.
- Rothman, E. F., Beckmeyer, J. J., Herbenick, D., Fu, T. C., Dodge, B., & Fortenberry, J. D. (2021). The prevalence of using pornography for information about how to have sex: Findings from a nationally representative survey of U.S. adolescents and young adults. *Archives of Sexual Behavior*, 50(2), 629–646.
- Sandnabba, N. K., Santtila, P., & Nordling, N. (1999). Sexual behavior and social adaptation among sadomasochistically-oriented males. *Journal of Sex Research*, 36(3), 273–282.
- Scarcelli, C. M. (2015). 'It is disgusting, but...': Adolescent girls' relationship to internet pornography as gender performance. *Porn Studies*, 2(2–3), 237–249.
- Schori, A., Jackowski, C., & Schön, C. A. (2022). How safe is BDSM? A literature review on fatal outcome in BDSM play. *International Journal of Legal Medicine*, 136(1), 287–295.
- Shrage, L. (2005). Exposing the fallacies of anti-porn feminism. *Feminist Theory*, 6(1), 45–65.
- Sheff, E. (2021). Kinky sex gone wrong: Legal prosecutions concerning consent, age play, and death via BDSM [Commentary]. *Archives of Sexual Behavior*, 50(3), 761–771.
- Sprott, R. A., Meeker, C., & O'Brien, M. (2019). Kink community education: Experiential learning and communities of practice. *Journal of Positive Sexuality*, 5(2), 48–58.
- Sprott, R. A., Vivid, J., Vilkin, E., Swallow, L., Lev, E. M., Orejudos, J., & Schnittman, D. (2021). A queer boundary: How sex and BDSM interact for people who identify as kinky. *Sexualities*, 24(5–6), 708–732.
- Sun, C., Bridges, A., Johnson, J. A., & Ezzell, M. B. (2016). Pornography and the male sexual script: An analysis of consumption and sexual relations. *Archives of Sexual Behavior*, 45(4), 983–994.
- Tsitsika, A., Critselis, E., Kormas, G., Konstantoulaki, E., Constantinopoulos, A., & Kafetzis, D. (2009). Adolescent pornographic internet site use: A multivariate regression analysis of the predictive factors of use and psychosocial implications. *CyberPsychology & Behavior*, 12(5), 545–550.
- Walker, A. M., & Kuperberg, A. (2022). Pathways and patterns of entrance into BDSM. *Archives of Sexual Behavior*, 51(2), 1045–1062.
- Webster, C., & Klaserner, M. (2019). Fifty shades of socializing: Sloss and munch events in the BDSM Community. *Event Management*, 23(1), 135–147.
- Westlake, B., Kusz, J., & Afana, E. (2023). A double-edged sword: The role of pornography in learning about BDSM. *Sex Education*. <https://doi.org/10.1080/14681811.2023.2266808>
- Westlake, B., & Mahan, I. (2023). An international survey of BDSM practitioner demographics: The evolution of purpose for,

participation in, and engagement with, kink activities. *Journal of Sex Research*. <https://doi.org/10.1080/00224499.2023.2273266>

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