



“It Was Scary, But Then It Was Kind of Exciting”: Young Women’s Experiences with Choking During Sex

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Abstract

Choking/strangulation during sex is prevalent among young adults, with one study finding that 58% of women college students had ever been choked during sex. However, no qualitative study has examined women’s experiences with choking/strangulation during sex outside of intimate partner violence. The purpose of our qualitative interview study was to investigate women’s experiences with choking and/or being choked during partnered sex. Through in-depth interviews with 24 undergraduate and graduate women students ages 18 to 33, we sought to understand how women communicate about choking, their learning about and initiation into choking, their feelings about being choked and choking others, as well as consent and safety practices used in relation to choking. We found that women had first learned about choking through diverse sources including pornography, erotic stories, magazines, social media, friends, and partners. While all 24 women had been choked during sex, only 13 of 24 had ever choked a partner. They described having engaged in choking with men as well as women and with committed as well as more casual partner types. Participants described consensual and non-consensual choking experiences. While many women enjoyed choking, others did it largely to please their sexual partner. Women described different methods and intensities of having been choked. Although very few had ever sought out information on safety practices or risk reduction, and only some had established safe words or safe gestures with partners, participants consistently expressed a belief that the ways in which they and their partner(s) engaged in choking were safe.

Keywords Choking · Strangulation · Sexual asphyxia · Breath play · Kink · BDSM

Introduction

Partnered sexual asphyxiation in various forms (e.g., hanging, manual, ligature) has been observed across historical time and place, though it was long considered uncommon

(Tarr, 2016). A 2003/2004 convenience survey of lesbian, gay, and bisexual individuals found that 8% of bisexual and gay men had ever engaged in “breath play/asphyxiation” (Groves et al., 2010) as had 5% of bisexual women and lesbians (Tomassilli et al., 2009); the type(s) of breath play were not specified. A 2011/2012 online convenience survey from the United States (U.S.) and Germany, comprised mostly of university students, found that 23% of German heterosexual women and 13% of U.S. women had ever been choked by a partner, and that 18% of German heterosexual men and 16% of U.S. men had choked a partner (Bridges et al., 2016; Sun et al., 2017; Wright et al., 2015).

Two recent probability surveys suggest that one form of partnered sexual asphyxiation—choking—has become prevalent among young U.S. adults. In a 2016 U.S. probability survey, Herbenick et al. (2020) found that 21% of women and 11% of men ages 18 to 60 had ever been choked during sex and 12% of women and 20% of men had ever choked a partner during sex. Having ever been choked during sex was nearly twice as

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prevalent among adults under 40, demonstrating a cohort effect (Herbenick et al., 2020). In the 2020 Campus Sexual Health Survey (CSHS)—a probability survey of U.S. undergraduate students at a single campus—58% of women, 26% of men, and 45% of gender expansive students had ever been choked during sex (Herbenick, Patterson, et al., 2021).

Technically, choking during sex is a form of strangulation as it involves external pressure on the neck to restrict blood vessels and/or airways rather than an internal blockage of airways (Sauvageau & Boghossian, 2010). However, people often use the term *choking* to describe various forms of strangulation, including from the choking game (TCG) played by older children and adolescents, intimate partner violence (IPV), and sex (e.g., Doucette, 2014; Gilmour, 2017; Joshi et al., 2012; Pornhub.com, 2019; Sauvageau, 2010). Some scholars suggest that the fact that strangulation is often referred to as choking, even by IPV survivors, is not simply a misnomer. Rather they offer this as an example of epistemic oppression or disempowerment, facilitating the minimization of strangulation within relationships and legal systems (Ciurria, 2020; Manne, 2017).

Choking, Gender, and Sexual Identity

The existing research on choking during sex is limited to a handful of items in broad sexual behavior surveys; to our knowledge, there have been no qualitative investigations of choking during sex. These studies demonstrate that more women report having been choked as compared to men (Bridges et al., 2016; Herbenick et al., 2020; Herbenick, Patterson, et al., 2021; Sun et al., 2017; Wright et al., 2015). In this way, choking falls along similar gender lines as IPV strangulation which overwhelmingly targets women (Strack et al., 2001). In contrast, auto-erotic asphyxiation appears to mostly be engaged in by males (Sauvageau & Racette, 2006; Uva, 1995). It is unclear from the previous literature how choking/strangulation during sex may have crossed into the mainstream. Although several studies have found associations between viewing pornography and various sexual behaviors (including choking), these have been cross-sectional studies (Herbenick et al., 2020; Sun et al., 2017; Wright et al., 2015). It may also be that choking during sex—at least between women and men—reflects the heteronormativity of violence and ways that masculinity is performed (Smith et al., 2015; Ward, 2020) or the ways in which women are socialized into submissive sexual roles (McCreary & Rhodes, 2001), which for some women has been associated with a sense of reduced sexual autonomy, lower sexual arousal, and orgasm difficulty (Kiefer et al., 2006; Sanchez et al., 2006). That said, choking appears to be prevalent among LGBTQ+ college students (Herbenick, Patterson, et al., 2021), consistent with previously recognized intersections of LGBTQ+ and kink identities (Spratt & Benoit Hadcock, 2018) and qualitative research describing how kinky sex play can be an important

part of sexual pleasure, liberation, and challenging sexual norms (Bauer, 2009; Speciale & Khambatta, 2020).

Choking and Sexual Consent

Only one study has examined consent in regard to choking. Using a single item in the 2020 CSHS, Herbenick, Patterson, et al., (2021) found that half of college students who had been choked reported that they had never (21%) or only sometimes (32%) been asked for consent or if it was okay to be choked, prior to being choked. Considering how prevalent choking has become, it is striking how little is known about it—including how consent may be negotiated, communicated, or understood for choking. Prior research suggests that women may consider choking to be scary (Ashton et al., 2020; Herbenick et al., 2019), disgusting (Crosby et al., 2020), exciting/adventurous (Herbenick, Patterson, et al., 2021b), and/or erotic (Rehor, 2015). Yet, scientific knowledge of choking during sex is limited to a few empirical reports with investigator-driven response options, as well as numerous reports of sexual assault and fatalities (intentional or unintentional) of mostly women who were choked during sex (e.g., Bows & Herring, 2020; Mcquown et al., 2016; Olson, 2012; Sandler, 2018). Qualitative inquiry is needed to understand women's experiences with choking during sex, including the contexts of choking and its place along continuums of kink, pleasure, and/or violence.

Study Aims

The purpose of our research was to investigate women's experiences with choking and/or being choked during partnered sexual interactions. Through qualitative interviews with undergraduate and graduate women students between ages 18 and 33, we sought to understand how women first learned about and experienced choking, methods and characteristics of choking they've experienced, how they communicate and feel about choking, as well as efforts they and/or their partners have made related to safety while choking.

Method

Study protocols were reviewed and approved by the Institutional Review Board at the authors' university. An exploratory, qualitative design was used to address the study goals. In February and March 2020, individuals were recruited through a post on the university's classifieds website and a recruitment notice sent to one professor who shared it with their students. Recruitment messages indicated that we were interested in speaking with people of any gender who had choked someone, or been choked by someone, as part of sex whether the choking was consensual, non-consensual, or unclear; we also noted that

participants would receive a \$20 gift card to an online retailer. Those interested in learning more could email the first author and receive an electronic copy of the IRB approved Study Information Sheet. Although we recruited participants of various genders, here we focus on our interviews with women.

People could choose whether their interview took place in-person or via Zoom (Zoom Enterprise Video Communications, <https://www.zoom.us>, San Diego, CA) and stated their preference for the language in which their interview would be conducted (English, Spanish, or Hindi); all participants chose an English language interview. Interviews were conducted between February and April 2020. Eight of the 24 women who completed an interview selected a Zoom video interview; the rest were conducted in a private on-campus office. Interviews were audio recorded and transcribed; all Zoom interviews produced audio sufficient for transcription. Researchers reviewed the consent form with those who scheduled interviews; consent was provided verbally prior to the interview beginning. Interviews lasted 20 to 80 min, depending on the breadth of participants' experiences (e.g., a couple of participants had only a few experiences of choking). Participants who had only been choked, but had never choked a partner during sex, were asked substantially fewer questions. Those who had both choked and been choked had a longer interview.

The semi-structured interviews included open-ended questions about participants' gender and sexual identity and then asked about participants' experiences with and feelings about choking: how and at what ages participants first learned about or experienced choking, the extent to which participants wanted choking to occur or found it pleasurable, partner type(s) with whom choking occurred, how choking occurred (e.g., hand placement, sexual act, pressure), and the negotiation/communication of consent related to choking.

Participants

Participants had to (1) be between ages 18 and 40, (2) be an undergraduate or graduate student at the authors' university, and (3) have been choked during sex or have choked a partner, whether the choking was consensual, non-consensual, or unclear in terms of consent.

Analysis

Interviews were conducted by three of the authors (one is a professor with experience conducting qualitative and quantitative sexuality research; two are doctoral students with sexuality research and education experience). Interviews were audio recorded with an external audio digital recorder, then transcribed verbatim through Temi (an artificial intelligence transcription service). Three graduate research assistants reviewed each transcript for accuracy and redacted identifying information. Four research team members analyzed the interviews

using Atlas-ti 8; of those who coded the data, one is a medical anthropologist who has expertise in qualitative methodologies and sexual and reproductive health research and three are doctoral students with sexuality research experience.

We employed a thematic analysis approach consisting of five steps following Nowell et al. (2017). First, we became familiar with the data by engaging in a close reading of a random sample of interviews to create preliminary broad code categories. Second, we generated initial codes. The team coded the same first four interviews to develop an initial coding structure including emergent codes. The coding team divided into groups of two; each group coded the same 10 interviews, so all interviews were coded by at least two people. During this phase we added emerging codes to the initial structure as needed, marking codes as emergent. The coding team met to discuss emergent codes and harmonize coding structure through consensus twice. After each meeting, each coder received an updated copy of the project with an updated coding structure. After the second harmonization meeting, coders were instructed to keep adding codes if necessary, however no new codes were added after the second meeting. We achieved coding saturation at around 12 coded interviews (Hennink et al., 2017). Third, we searched for themes. Once coding was completed, patterns of recurring experiences and descriptions were assessed for each code. The first five authors met and discussed overall preliminary findings and then general patterns ascertained during coding for each of the major categories and codes within those categories. After this meeting, each team member took a category and set of codes to analyze for patterns and variability on a code-by-code basis. Higher order themes were discovered using recategorization, diagramming, and close analysis of the quotations generated by code. Fourth, we reviewed themes, discussing in a team debriefing meeting. Fifth, we defined and named themes through consensus. Finally, we produced narrative and descriptive results for each of the selected categories of interest.

Results

Participant Demographics

Twenty-four undergraduate and graduate women students completed interviews. Although more women described themselves as heterosexual and white, overall our participant sample was diverse in terms of both sexual identities and racial/ethnic identities (Table 1), though not sufficiently large for between-group comparisons. Participants' mean age was 21.6 (range 19–33 years) and their mean age at first partnered sexual experience, broadly defined, was 17.6 (range 14–21 years). Participants described themselves as women or as cisgender women. Although participants' sexual identities

Table 1 Participant characteristics

Participant	Age	Race/ethnicity	Sexual identity
1	23	White/caucasian	Straight
2	22	White/caucasian	Pansexual
3	19	Asian/Asian American	Straight
4	22	Asian/Asian American	Heterosexual
5	22	Black/African American	Heterosexual
6	22	Asian/Asian American	Heterosexual
7	19	Asian/Asian American	Straight
8	22	White/caucasian	Straight
9	20	White/caucasian	Bisexual
10	22	White/caucasian	Heterosexual
11	19	White/caucasian	Heterosexual
12	19	White/caucasian	Bisexual
13	22	African American	Heterosexual
14	20	Black/African American	Straight
15	20	Black/African American	Lesbian
16	22	Asian/Asian American	Heterosexual
17	23	Asian/Asian American	Straight
18	23	White/caucasian	Bicurious
19	19	Black/African American	Bisexual
20	22	White/caucasian	Pansexual
21	23	Latina	Straight
22	33	White/caucasian	Heterosexual
23	20	Asian/Asian American	Heterosexual
24	20	White/caucasian	Bicurious

In order to minimize the risk of identifying individual participants (especially at a predominantly white institution), we categorized participants as Asian/Asian American if they described their race/ethnicity as Asian, Asian American, Indian, Filipina American, or Vietnamese American; we categorized participants as Black/African American if they identified with either of these terms, although some participants were multiracial and held other identities but primarily identified as Black or African American. Participant 21 described her identity with her nationality, which we changed to Latina to minimize the chance of identification

were diverse, most of the choking experiences that participants described involved men partners.

Communicating About Choking

The ways in which participants described and communicated about choking, and where they placed it in their understanding of sexual repertoire, provides context to the experience narratives. All participants indicated that “choking” was the word they most commonly used to describe having a partner’s hands, or an object, on or around their neck or having their hands on or around their partner’s neck during sex. No women primarily described these behaviors as breath play, strangulation, or asphyxiation. One woman described a clear difference between

“choking,” as she experienced it, and “strangulation” with regard to perceptions of safety:

Yeah, just choking probably. Yeah, not like strangling. That’s, that’s too much. So that would be like a line. So I guess the connotations with words definitely have a thing. Cause I’ve seen some people like they like to be strangled. And I’m like, I don’t like that - choking is more safe to me. But I think we just, I would just say choking. (Participant 5, Black/African American, age 22, heterosexual)

Some interviewees suggested that the word choking did not accurately describe their experience of hands around the neck, as it may have violent connotations they did not experience as part of sex:

I was associating it with something more violent. Uh, something that you hear about like in crime stories, you know, Oh, they were choked to death and you’re strangled, whatever. [...]Um, whereas I feel like in reality it can be much more of a range. Um, but you just don’t realize that I feel like, because again, the word choking, I just associated it with something negative where I feel like if they had used some kind of different word, um, more related to like the sexual kink, then I may have been more receptive and kind of interested... Maybe like, I don’t know, now I’m used to always just saying choking... But like I feel like it’s more of just a hold... To where I am restrained and like my partner is putting that pressure and force on me, but it’s not to an extent where I’m uncomfortable where there is any association with like violence or non-consensual acts. (Participant 24, white/Caucasian, age 20, bicurious)

After experiencing choking with a partner, this participant did not feel that the act was necessarily violent; however she continues to use the word ‘choking’ because she lacks a better word to describe her experience.

Choking was often associated with rough sex, which participants defined as the opposite pole to gentle sex in their consideration of a sexual practice spectrum. Gentle sex was frequently described as intimate; rough sex was more often described as passionate. Where gentle sex was discussed as vanilla, rough sex was perceived as adventurous and a solution to monotonous sex. Most women specified elements of intimacy that were unique to what they would label gentle sex, including comfort, slow movements, soft kissing, expressions of affection, and an emphasis on foreplay. When participants were prompted about how they define rough sex, most gave examples of behaviors such as choking, slapping, spanking, hair-pulling, dirty talk, or having sex in a harder more vigorous

way. However, they recognized that other behaviors may be considered rough sex.

Choking I put in there is like the, so there's ways that that's like rough too. Um, hair-pulling. Oh, I just don't like hair-pulling. Um, so I guess I [put] that one in there and then slapping too probably. And I mean those are like, as far as my experience, I know there's like other things that people do, but for me that's like, those are like the roughest things like that. (Participant 1, white/caucasian, age 23, straight)

For some participants, gentle sex was described as indicating a partner being less masculine whereas rough sex was discussed as reflecting partners' confidence and strength.

Gentle sex, it's like, I feel like he's not as masculine. Like I'm just like, hmm. I don't know. It's just not as masculine. I don't feel as excited. Um, it's just like, "Oh, okay." Very normal, but it's not, I don't feel any type of strong emotion. [...] I think gentle would just be like gentle touching. Um, no choking, no being rough. Just very like soft and slow and intimate. That's what I think of gentle. It's not as exciting to me. That feels like they're less masculine. (Participant 5)

For these participants, rough sex—with its assertion and dominance—was equated with a stereotypical expected and desired masculine behavior, to the extent that some men who did not engage in rough sex were emasculated. Participants described multiple positive and desirable aspects of gentle sex, yet still did not consider it a masculine-type behavior.

Learning and Initiation into Choking

Most participants described first becoming aware of choking in high school or college, between 12 and 18 years of age, and cited friends, partners, pornography, media (e.g., fanfiction, Seventeen magazine), and other internet content as sources (Table 2).

Um, freshman year I learned about choking through one of my girlfriends who was more sexually active

than I was at the time and she was like, "Oh, I love it." Like "it makes it like so much better." And I, at that time when I reacted to her, I was like, "you're crazy"... She was like, yeah, it's so much fun. And I think one of the reasons why I didn't want to try is because I was afraid I was going to pass out. And so that's like why I never tried it until like now. But yeah, that was when I first learned of it. It was interesting. (Participant 16, Asian/Asian American, age 22, heterosexual)

Of participants who described having first learned about choking from a partner, there were two ways that learning occurred: (a) experiential (a partner choking them) and (b) through conversations about choking with partners:

I think the first I learned about it was just literally like I was hooking up with someone and they like kind of did it and like asked if I liked it or something. And like, that's like the first time that I had like done it. And then after that I just kind of was into it. (Participant 11, white/caucasian, age 19, heterosexual)

Um, I didn't first. I didn't hear about it until like, it was something that like. I mean like, yeah, I heard it, but I didn't learn anything. I think it was like from like a partner, like one of them said they like being choked and I'm like, "Oh really?" And then they had basically said, yeah, they like being choked in this way and then they wanted me to try it on them. (Participant 15, Black/African American, age 20, lesbian)

Participants who indicated that they had learned about choking from visual media could rarely provide specific examples within such media; for example, no participants who cited pornography as their primary source of learning about choking provided specific examples of a scene from which they remembered first seeing it. Similarly, although many women assumed that one of their first exposures to choking was *Fifty Shades of Grey*, none provided a specific example from the books or movies.

I feel like in TV, shows and sex scenes usually comes up. Um, or at least like touching the neck or a lot of emphasis on the neck. Maybe like, I'm trying to think, I dunno, I read *Fifty Shades of Grey* in high school, so maybe stuff like that. That's definitely represented there. Maybe that's where I got the idea that I was supposed to be doing that. Um, I'm not sure. I guess just media. (Participant 14, Black/African American, age 20, straight)

One participant said that she may have been exposed to choking as a part of sex as early as 12-years-old from reading fanfiction:

Yeah, I used to read One Direction fanfictions in like middle school. So I think that's probably when I first

Table 2 Learning about choking

Age participants first learned about choking	Range 12–18 years
Primary source of information	% (n)
Partner	37.5 (9)
Pornography	25.0 (6)
Media/movies/magazine	16.7 (4)
Social media	8.3 (2)
Friends	8.3 (2)
Fanfiction	4.2 (1)

came across it. I read the like real nasty stuff. [...] So I don't remember anything like passed, like his hand was like around my neck and like it being hot. I don't remember anything like the actual like physical sensation of it being ever mentioned. (Participant 9, white/caucasian, age 20, bisexual)

With the exception of Participant 2 (white/caucasian, age 22, pansexual), who began choking herself during masturbation at age 15 after reading about it in a magazine, most participants' initial experiences occurred with partners, mostly between ages 17 and 22. These initial choking experiences most often occurred without prior discussion or explicit consent. Participants described these first experiences as surprising, aggressive, scary, part of a sexual assault, or accidental. It was not uncommon for choking to occur with their first sexual partners and sometimes during the first time they had vaginal intercourse.

Uh, it's probably like when I like lost my virginity to my boyfriend, um, I just remember being at like, I was kinda like surprised by, and he's like, Oh, is this okay? And I was like, yeah, but like I guess I didn't want it to be like too hard at first 'cause it was kind of scary. Yeah. And after that, like I got more comfortable with it. (Participant 7, Asian/Asian American, age 19, straight)

After an initial experience, choking became part of Participant 7's sexual activities but, similar to others, it was introduced without prior discussion. In the moment her initial reaction involved fear, though she explains that it eventually subsided. Some participants described their initiations as mutual decisions or "natural" progressions, such as Participant 3 (Asian/Asian American, age 19, straight):

[...] before that happened we had also just almost in a joking manner just kind of talked about like, "Oh, like do you have any things you'd like to explore during sex or do you have any different things that you would prefer?" And we did have that conversation a couple of times before it happened... So it was when after we were more comfortable with each other, um, during sex... So it kind of happened naturally.

In discussing reasons that led them to choking during sex, participants shared both their own perspectives and those they surmised from partners. Most described reasons for engaging in choking that were related to enhancing arousal, both generating and receiving enjoyment. Interviewees often brought up the desire to dominate or to be dominated as part of that enjoyment.

Um, I guess it's kind of like the Dom- sub thing type of thing. I guess that can be a reason. If you're more dominant and you probably would like to choke more than if you were submissive, so yeah. [...]Mm, it can be

fun. Just like seeing that he's like enjoying it makes me happy too. So it makes me feel better and yeah, I, I enjoy it. Yeah. (Participant 19, Black/African American, age 19, bisexual)

Umm, if I'm being choked, it's a thing of like seeing the fact that you have that control over me and like bringing me back to, like, wake up calls. Like, "Hey, I'm here with you right now." Like, let this happen and you will be happy with how things pan out in terms of what this partner, um, if I'm the one choking, it makes me feel like, "Oh, I have power. I'm actually sexy right now." Like, yeah. (Participant 15)

Nevertheless, some interviewees discussed accepting being choked for their partners' pleasure, even when they didn't personally find it arousing:

It's, I kind of, it's like, it's okay. Like I don't get any pleasure from it, but it's fun for my partners so I'm like, I don't, it's not like he's doing it non consensually or anything like that, but like he, he likes to choke, so I'm like, okay. Sure. (Participant 20, white/caucasian, age 22, pansexual)

Participant: Because for him, if I come then he feels happy and I'm the same way. If he comes, I'm like happy about it, you know? So yeah, it makes him feel powerful if I come, but that does not work [with choking]. So I'm like, "okay, you can let go now."

Interviewer: Is there a reason that you haven't told him that?

Participant: Um, I don't want to hurt his feelings. Also, like I was just like, you know, it's nothing, you can say it, it doesn't harm, it's not harming me.

Interviewee: It makes him feel more excited.

Participant: That's why I just leave it cause I'm just like, you know, he's happy about it. So why, why ruin the happy? It's when it doesn't harm me. (Participant 16)

Overall, links between power, control, gender dynamics and stereotypical masculine and feminine roles were strong in participant narratives and influenced their desire, or at least their decision, to engage in choking. Most viewed choking as mirroring a relationship where men are expected to be dominant and therefore serve as the choker, while women were expected to play a more submissive role and be choked. Participants linked this to existing gender dynamics in their partnered relationships, either as a natural consequence of men being assertive/dominant in their relationships, or as re-establishing more traditionally stereotypical roles during sex when women are more dominant in day-to-day life:

[...] I'm a very like, outgoing and like I guess like dominant person [...] and like I've always got to like be in

control of like everything. It's like part of just like who I am. Like it makes me really anxious to like constantly have to be on top of things. So like whenever I am, like with my boyfriend for example, and we're like doing things and like to have him in control, especially like since I trust him and to have him in control is just like really like pleasing to me I guess. Like the fact that I don't have to be racking my brain about like what's going on [...] But I guess to have him take over, it's just like really nice. And like some aspect of my life. Just because it is like exhausting, like constantly being like, "ah, I've got to be on top of everything." (Participant 24)

Ideas of trust and control are also intimately linked with the desire to inhabit a more submissive role related to choking during sex. As shown above, Participant 24 expressed feeling relieved that during sex her partner takes control, allowing her to let go. These linkages between choking, dominance, assertiveness and masculinity are consistent with our findings that participants equate rough sex or aggression during sex as more stereotypically masculine, to the extent that men who did not engage in this or were wary of it, were criticized for their lack of maleness, as described earlier.

Experiences Being Choked and Choking Others

Choking narratives varied depending on whether the participant was being choked, doing the choking, or both. Although all 24 participants had been choked at least once, only 13 participants had ever choked a partner (Table 3).

Most participants generally described being choked as something that was either routine or a regular part of their sexual activities, or as something they found exciting. However, most participants shared that choking was something they did not ask for or initiate. Even if they ultimately enjoyed choking, for most it had either occurred without consent or with assumed consent from their partners, though in some cases, consent was sought during the act itself. A few described negative experiences because of experiencing non-consensual choking or, alternatively, because choking was at the time a new (and thus unfamiliar) activity.

...it was a little exhilarating like after afterwards, but... because I didn't really know what was going on or what to expect, it kind of took away from that. (Participant 23, Asian/Asian American, age 20, heterosexual)

"...the first time was actually nonconsensual, everything. Um, so it was a pretty bad experience. I didn't like it." (Participant 19)

When we asked women to describe how exactly the choking typically occurs (e.g., one or two hands, ligature, placement on neck, intensity), most women reported that choking

had occurred with the use of hands (though some described ligature use) and many described their experience of two hands as feeling more aggressive than sexy and also more like assault.

...I would prefer one hand. Yes. Just two hands feels really like I don't, I don't like that, feels very close to something else. (Participant 11, white/Caucasian, age 19, heterosexual)

Right, if you're using like two hands, I feel like you dang near trying to kill me. Or if like you're using your whole hand and putting like too much pressure, like, no, I need you to stop. Um, or if like, it feels like you're literally, 'cause some people will think you're supposed to be squeezing like really tight and everything like that. And I'm just like, no, you're literally crushing my windpipe. Like you can choke me and I'm still able to breathe. (Participant 15)

Participants described choking as being done for short lengths of time though sometimes this meant being choked multiple times during one sexual encounter.

Like it'll be like here and there for 30 s or so and then stop. (Participant 20)

Typically? Like probably a minute or less. Not that long. (Participant 19)

In reflecting on when they were most often choked, most women described being choked during vaginal intercourse (Table 4). The number of times participants had experienced choking depended on how long they had been engaging in partnered sex or because their current partner's preferences. For some, the absolute number of times they had been choked was low, but the regularity/frequency of being choked was high because they were relatively new to partnered sex, had thus far had only one partner, or because their experiences with being choked differed across partners.

Um, less frequently now. Um, than I have in the past. So I'd say, if I don't count this current sexual partner, I'd say probably like, I don't know, maybe 80% of the

Table 3 Number of partners engaged in choking with

# of Partners	Been choked by partner(s)	Have choked partner(s)
	% (n)	% (n)
One	29.2 (7)	29.2 (7)
Two-Five	54.2 (12)	21.0 (5)
Six or more	8.30 (3)	4.2 (1)

Because some participants provided estimates and not exact numbers, we have categorized these reports rather than use continuous figures

Table 4 Choking styles

<i>Sex act</i>	
While kissing	“...we were kissing and he had choked me... And then it happened when we had sex.” (P 5) “like basically like whether when like they’re kissing me or it’s like in the moment” (P 16)
Partner on top	“I’d say 90% of the time he’s on top.” (P 2) “It’s uh usually during intercourse, but um, it’s usually when he’s on top, so it’s in a position where he can easily do it and um, if he’s not on top, it’s never really happened.” (P 3) “So if, um, we’re in a position where I’m on the bottom and he’s on top of me, it’s pretty like natural...” (P3)
Partner behind	“...we were on the bed and um, like he was behind me and I was like, I was like face down into like the bed and then it was basically the same type of choke, like just, um, right on the back of my neck, fingers gripping to the side...” (P 14)
Athletic sex	“...there was definitely a lot of choking involved and it was like rough and like very like a huge physical workout. Um, and yeah, it really sweaty but it was like that was so different from anything I had had before because it like required a lot of um, flexibility and strength to do that. So that was definitely different and yeah, the choking was yeah, more intense and there was like, there was just a lot of things going on. It’s like the position I’m in like kind of hurts or requires a lot of muscle, plus I’m being choked plus also penetrated.” (P22)
<i>Type of restriction</i>	
Airway	“Um, one is more comfortable than the other. Um, like if too much pressure is put on the sides of my neck, then like my vision goes blurry and then, um, he sees that and like will quick let go... pressure on the front is ideal.” (P 2)
Blood vessels	“...what I prefer is that you actually like move your hand to slightly out and press hard with your fingers and like, it’s not just like, it’s not just like pushing in, it’s like pressure and out and that’s what feels the best. And then like leaving space for my trachea so that it’s not a thing about not breathing, it’s about of like, so yeah, I’m not getting oxygen to my brain, but it’s not because I’m not breathing. It’s because you’re like, just like shutting down like oxygenation a different way.” (P22)
<i>Hand position on neck</i>	
Lower (neck base)	“...So not like too high I think like around here [by collarbone]. (P6)” Interviewer: ...you’re kind of motioning towards the base of your neck Participant 5: Yeah, yeah. Like, like on the sides, the base. (P 5)
Middle	Participant 18: ...It’s just like, they’re like a hand pressing down Interviewer: Okay. So one hand around the middle Participant 18: Yeah. (P 18) “I’d say in the middle [of the neck]” (P 7)
Upper (by chin)	“...I think it was like high on my neck. (P16)” Interviewer: So it was kind of pressing flat then up higher up on your neck is kind of what you’re showing me. Participant: Yeah. (P 23)
<i>Choking implements</i>	
One hand	“It’s usually one hand, not two hands.” (P3) “...I would say most people use one [hand]... “(P5)
Two hands	“With a past hookup I’m pretty sure it was two [hands].” (P 7)
Arm	Interviewer: And then have you ever been choked by any of your partners with anything other than just their hands? Participant: So just like an arm, like, like the forearm, but like that’s all. Pressing. (P 11)
Belt	“The person was behind me...They actually used a belt... Yeah, I think I probably knew it was happening cause I like saw them grabbed for the belt, but it’s not like we like sat down and was like, Hey, is it cool if I choke you with my belt?” (P17)
Penis	“I have been choked by, um, for one, I didn’t know in terms of like when they come to, came to oral sex side, deep throating can cause you to choke, and that kind of made me know, like played into one of the reasons why I didn’t like to commit oral sex, but I like having it done on me because of like choking aspect and everything like that.” (P 15)

time, with, if I do include this partner, I would say probably like somewhere between 50 and 60% of the time. (Participant 14)

Others reported that they had been choked many times and that being choked was a frequent part of their sexual experiences:

Um, countless times. Um, definitely over a hundred times I would say. I think, I don’t know. (Participant 21, Latina, age 23, straight)

Um, I think, uh, so I’ve only been sexually active like for what, like two years now and my previous two partners, uh, they would choke me maybe, I dunno, like half the time. Um, yeah, at least around half. One of them like choked me probably, I don’t know, like 75%. And the other like now my current one now that he knows

Table 5 Choking intensity continuum

Light pressure	Medium pressure	Hard pressure
<p>“...I would say it’s just been around the throat with enough pressure that I can feel them kind of holding it almost as if you would like hold someone’s hand.” (P 24)</p> <p>“...like light, I just like, it’s just nice to have like warmth around your neck. It feels kind of affectionate I guess.” (P11)</p> <p>“... just like another place to like touch [during sex]...(P 1)”</p> <p>“...usually light, like it sometimes it gets like moderate...” (P 9)</p> <p>“I would basically describe that as like, I don’t want to be like choke choked, but I want to like, I want you to be like gentle with it.” (P16)</p>	<p>“like probably just like a six... it wasn’t like I couldn’t breathe.” (P 24)</p> <p>“Maybe, maybe five. Yeah. I usually like stop it if it was just like too much like a hands. Cause like you can’t really like breath after a while, you know.” (P 7)</p> <p>“...just like medium pressure on the front is ideal.” (P 2)</p> <p>“Probably like a good medium. I don’t want to, it’s too light where it’s like I don’t feel anything or like too hard for like, I’m like having a hard time breathing and it’s not enjoyable anymore.” (P 4)</p>	<p>“I like a lot of pressure.” (P6),</p> <p>“...like you’re putting on a lot of pressure on me, but not to the point where it’s actually like causing me pain, but also knowing like you have, you physically have more power, you’re refraining yourself.” (P 15)</p> <p>“We didn’t really know how much pressure to put. Um, and we both had this problem of like when you’re choking, um, like, um, like putting a little too much pressure on the trachea as opposed to like the carotid and jugular arteries and stuff. Um, so yeah, it was more painful and we like would cough a lot.” (P21)</p>

that I, that’s what I prefer, it is become more like regular often like probably every time we have intercourse. Um, so yeah, over the course of past or the past year. (Participant 6, Asian/Asian American, age 22, heterosexual)

Women described engaged in choking with both casual and relational partners, or only within a relationship. When referring to choking within a relationship one participant said,

That was the person that just did it. And that was somebody I was with for a long time. So I like did a lot of things with him and he just did it. Yeah. And then I was like, "Oh, I like this." And then I just continued to do it. (Participant 5)

There was a sense of safety or comfort for some participants in only engaging in choking with someone with whom they were more familiar:

Yeah, I feel like it’s usually with people I’ve seen more than one time and if it was just like a random hookup and I like didn’t really know them at all, I would be nervous to go there with them. (Participant 18, white/Caucasian, age 23, bicurious)

For other women, their experiences with choking included partners from a variety of intimacy and commitment types.

Overall women described various forms of choking, including the sex position or act that co-occurred with the choking, the type of restriction, hand positioning, and use of other elements varied among participants’ experiences. In Table 4 we summarize the main elements of choking styles we observed in the data. The intensity of choking was also described in different ways, we asked them to rate and describe their sensations in terms of numbers between 1 and 10, where 10 was the most intense and one the least.

In Table 5 we summarize how participants described low, medium and high intensity.

Physical reactions described by participants while being choked were also linked to levels of intensity. Many participants reported physical reactions during or after being choked such as coughing, difficulty swallowing, difficulty breathing, gasping for air, vision changes, and eyes tearing up. However, few described engaging in higher intensity choking with more pronounced reactions. No participants reported passing out, although one indicated that her boyfriend had once unintentionally choked a prior partner to the point of her passing out. Some participants also described not being able to breathe right away after choking had ended, anxiety related to being choked, and marks on their neck. One participant explained in detail how her body reacts during choking and the common experiences she has in relation to the physical reactions related to being choked.

Interviewer: So some people will talk about, for example, with, um, some levels of intensity will even experience things like vision changes or something like that?

Participant: Ohh yeah. Or crying, like tears, not crying tears of joy or sadness, like not for any emotion, but your eyes get watery, um, when feel like you can’t breathe. And I think it has something to do with like your, your brain, like sending signals or something like that. I don’t know. But yeah, it’s definitely an experience.... The tears or eyes watering is pretty common.

Interviewer: What else physical that you would think about?

Participant: Like my um, in my head, like not like a headache, but um, if you can imagine a feeling you’re sort of not like your, your breath going away and it kind of goes through your head like, cause I felt lightheaded at one time afterwards. Um, I’m trying to think like what do I feel it’s like in my head I think like a, not like

a headache but kind of like maybe like a cloudy feeling. Um, cloudy or you know how your brain kind of goes into fight or flight. That's what it feels like. Okay. Like I'm like fighting. Yeah. Fighting for air, fighting for air. Does that make sense?

Interviewer: And is it difficult to breathe?

Participant: Yeah. It's difficult when they do it to make it difficult cause sometimes they can like not really choke you and you can still breathe, but then that's not, really, that's not fun... Like difficult to breathe, but not, it's difficult to breathe but not like I feel like I'm being harmed or assaulted. Yeah. So it's not like at a 10 where I feel like I'm gonna, you know, die. But it's at an eight where I know I'm safe? Maybe they don't think I'm safe, but I know I'm safe[...] (Participant 5)

Experiences of Choking Others While the women in our study recounted multiple instances of being choked, only 13 of 24 had ever choked a partner. Most of these involved men partners; only three participants shared experiences of choking other women. For those who described having men partners, some reasons for never having choked a partner included that their partners did not want to be choked, perception of their own lack of dominance, and feeling they would not be able to have the same effect of danger/excitement on their partner due to lack of strength or size. Those who had choked men partner(s) said it was “awkward,” infrequent, or part of sexual power play. In their experiences as the person doing the choking, women often said they would start with a light amount of pressure and then increase if requested by their partner. Some started by choking their partner in the same way they enjoyed being choked. Depending on the sex position, some women would also frequently only use one hand for choking but occasionally used two hands.

I'm not one to like enjoy hurting people, so I'm always on the safer side. So he tells me like, "Hey, it's fine. Like go harder if you want" I'm like, okay, I'll do that. Yeah. (Participant 20)

Um, he likes, it seems like he likes it more when I have all my fingers, um, squeezing him, whereas I like just the three. He likes all of them. I don't put like an excessive amount of pressure or anything like that, but it's just like, um, he has like this little gasp and he'll say like, "yes," or "keep going" or something like that. (Participant 15)

Participants voiced concern for the safety of their partner, not wanting to hurt them. Those who choked also expressed wondering what their partner thought of them and how they were choking their partner:

I just make sure not to press like super hard cause I'm, I'm also like constantly thinking like I don't want anything to go wrong. I'm like constantly wondering like

what he would think of me and like my perceptions[...] (Participant 4, Asian/Asian American, age 22, heterosexual)

Feelings about Choking

Participants discussed their feelings about being choked, while choking someone else, and/or how they thought their partner felt during choking.

Feelings About Being Choked Women's feelings about being choked were varied. While most of their choking experiences were linked to positive feelings such as pleasure, excitement, intimacy, caring and enhanced emotional connection with partner during sex, others were described negatively as not pleasurable, uncomfortable, scary, or as neutral, such as accepting choking as part of a partner's pleasure rather than their own. Narratives of choking and related feelings were influenced by: (1) the specific partner, (e.g., as scary with one partner but pleasurable with another), (2) consent (those who were choked non-consensually more often expressed distress), and (3) communication, with those who communicated about choking with their partner before, during, or even after sex were more likely to describe choking in positive terms. Power, trust, control and dominance all feature prominently in participant narratives of choking.

Feeling pleasure was the emotion most often mentioned by participants. For some, it was part of normal sexual exploration and contributed to their arousal:

Um, and for myself now like with my boyfriend because it's not because like it's like more gentle and it's more of just like a place. Like more of like a hand placement thing I would say. Um, the good part I guess is just like, Oh, it's like just another place to be like aroused and like another place to be touched that you would like. (Participant 1)

Others sought choking because they linked excitement, anticipation and pleasure to the feelings of surrendering power and accepting the potential for harm:

Um, the fact that you're getting choked to me is pleasurable. Like, just like some, it's like, it's like, it's like excitement of somebody pretending to harm you. That like excites people apparently. Like I've like learned that from other people too, that the excitement of like somebody handcuffing you, somebody spanking you, somebody choking you, pretending to harm you basically. Um, and like as being more like aggressive towards you excites people and like I noticed that that does like, I like that too. Like my body gets aroused when he like spans me or like chokes me for some

reason. I just know how it is. (Participant 17, Asian/Asian American, age 23, straight)

[...]I would say it's something where I feel like I'm totally putting myself in that position of trust and vulnerability to say like you can restrain me or again, kind of giving them the okay, that like you can do whatever you want. Um, and just letting go of some of that control, which I like to be surprised. So I think some of that for me is by giving them that control. Then I also get to be surprised and I don't necessarily know what's coming... Um, which makes me excited and that's something I enjoy. (Participant 24)

For some choking was a way to achieve physical sensations they linked to improved arousal and longer orgasms, like lack of breath, rush of blood to the head, and lightheadedness:

Um, I'd say that it heightens everything of primarily the release. Like if he's pressing down for long enough and then let's go like right as I'm about to orgasm, like that just it prolongs it. [...] like cutting off blood flow isn't [what I like], what I'm searching for is just that little bit of breath restriction. And it creates a head rush and tightens everything. (Participant 2)

Um, I think while it was happening, like I remember being kind of scared, but then after like when he took the pressure off, it was kind of not exhilarating, but you got kind of like a rush, you got oxygen back I guess. Um, I think those would be the two big things. Like it was scary, but then it was kind of exciting so. [...] It was a little confusing. (Participant 23)

In some cases, physical sensations were heightened because of the psychological experience of being dominated or feeling less powerful than their partner.

Participant: Yeah, it's kind of just like a head rush thing and also like a dominance thing I like being dominated, so yeah. [...]

Interviewer: Gotcha. And what is the head rush like?

Participant: Um, it's I don't know, it just feels like an adrenaline rush. Like not like I'm going to pass out, but like just excitement, I guess, something new. (Participant 19)

Interviewer: Um, how does it make me feel? Yeah, it makes me feel like I'm being dominated. Like I said uh, it feels like at that moment everything is just like, uh, it's just like raw, very like carnal. Like there's no care in the world and that, um, this person, like is so into me that, you know, he's like doing what would typically be like a foul move. (Participant 6)

Powerlessness from being choked was also linked to feeling enhanced trust, safety and belonging:

It creates like a level of a new level of trust in your relationship because you trust them basically to like, not hurt you. And it's just like, like I said, it's something new and exciting and it creates that rush. (Participant 19)

I am, I am just, I liked, I don't know, I just feel that, like I said, it feels very warm. It feels affectionate. It feels like a security. I don't know. It's like when you hold someone's hand and it's just kind of like a possessive kind of thing. Um, and just like, "Oh, like I got you" kind of like a dominance thing as well. Like if it's being done to me, like, which is nice in the context of sex. (Participant 14)

Overall, many participants described excitement and pleasure in being choked during sex. Many also referred to potential for harm and danger, for most the danger made sexual encounters more exciting and pleasurable. However, some women expressed fear that was not linked to pleasure. These participants referenced choking that was unexpected or non-consensual. Participant 1, who was surprised by being choked during her first sexual encounter with her first sexual partner, said:

[...] I just immediately felt uncomfortable 'cause it was like, it just like kind of happened too fast. [...] I just felt like it was like really weird and uncomfortable and I was just like, so inexperienced and there was, I didn't have like open conversations about sex like at that point in time. [...] But yeah, I was like, I just felt like it was like really, um, one sided. Like, the enjoyment, and there wasn't like any question of like, would I enjoy this or like paying attention to if I'm enjoying it. It was just like, "Oh, I think this is hot. And I'm like a 19 year old boy." I was like, okay. (Participant 1)

As she describes it, she felt that she was not seen as a person in this encounter, and that her partner (the 19-year-old boy) was solely focused on himself. Participant 1 also contextualized her first choking experiences as part of larger relationship dynamics that she now views as unhealthy and aggressive. She endured these feelings and let the choking play out, while some like Participant 13 responded to non-consensual choking by trying to demonstrate their displeasure. Often this was through body language or moving the partner's hand away from the neck:

He just kinda like put it there. It was just the fact that like, you know how the like knuckles right here, it went right into like my pipe area and I was like, okay. So it was uncomfortable. The pressure was uncomfortable. [...] when he like first started initiat-

ing it, like, "no," like came into my head instantly, so I might've just like, you know, softly said like, no. Or like kind of like turned my head or something, but I did actually pull it away. (Participant 13, Black/African American, age 22, heterosexual)

Though some were scared, confused, or felt uncomfortable, many—as in Participant 1's case above and Participant 15 below—did not make their feelings known:

Participant: Um, and so I fake moaned a lot when he was choking me 'cause I felt like, 'cause I'm also like a people pleaser. I like to make people happy. So I felt like I had to make him feel comfortable and everything like that. Um, even though it's just like during that time I was just like, oh this is new, this is new, it's going to happen. Um, but also at the same time I'm just like, I don't necessarily fully like this. I wish it was different.

Interviewer: Yeah. So did you feel unsafe or just uncomfortable or comfortable?

Participant: Uncomfortable. (Participant 15)

Furthermore, some were surprised and uncomfortable at the beginning of being choked but found it pleasurable later on as described earlier by Participant 23. In almost all cases women went on to engage in choking either with the same partner or with different partners, and some reported finding enjoyment in it.

A central piece of feeling scared and uncomfortable during choking was lack of communication, for example Participant 19 had a first non-consensual experience she described as "*a pretty bad experience. I didn't like it. [...] basically I was like picked up and put on the counter and then he like choked me, but it felt more violent than like anything. Yeah. So it was kind of like, my head was up against the cabinets and forcefully.*" While this experience makes her somewhat uncomfortable with choking in general, she does enjoy choking with her current partner of two years:

Um, we were kind of just like going heavy at it and he was like, "is it okay if I do this?" And I said, "yeah, it's fine." And from there, it's just kinda been like an okay thing and it happens rarely, but when it does, like, it doesn't bother me and I actually enjoy it versus the first time when it wasn't. Yeah. [...] it made me feel good that he cared about my opinion. Just good. (Participant 19)

Several women discussed aggressive experiences of choking, however as in the above case they found that greater communication with their partners, which more often occurred within established relationships, led to a greater enjoyment of choking on their part, even if they had previously had negative experiences.

Women who were choked by male partners, most of those interviewed, assumed their partners found choking arousing because they felt powerful, dominant, or sought control:

Honestly, well the kind of people they are because um, I think they might like the control aspect of almost. Just because, uh, the kind of guys that they are, they do like to like be in control kind of. So I think feel like the, like the feeling of being like dominant in the moment. Um, and I think they also like that, you know, like I would get into when they would do that and they would see like my facial expressions and whatnot. (Participant 12, white/Caucasian, age 19, bisexual)

[...] then my partner, my partner says that he thinks is really hot, um, that I'm into it. But I don't know if that's because he's turned on because he sees that it's a turn on for me or because he himself likes it. I think it's the former where like it doesn't necessarily turn him on, but it turns him on to see that i'm getting turned on. [...] Um, and then, so that's my current partner and my partner before that one. The one I've like actually like really, really started, um, trying choking with, he, I think he likes it too. And he, he thinks it's um, uh, attractive because he likes taking the dominant position and he probably feels like, um, like maybe powerful. (Participant 6)

Relatedly, as in Participant 6 above, some participants shared that ensuring female-partner pleasure was also important for their male partners.

Um, I feel like he's amazed because it's just like in his words, I'm this beautiful being. Um, and it's like he's able to be able to assert his dominance. So he's just like amazed that he's able to do this and just like amazed that he's able to cause me such pleasure while he does it. [...] Yeah. His words not mine. Um, yeah. (Participant 15)

Others however felt that perhaps male partners were rather uninterested in their enjoyment and that choking for them was not necessarily pleasurable, but was emulating something they saw in porn:

I assume like, for men, I don't know. I'm like maybe they saw it in porn or like it's talked about a lot and I guess they just think this is what I'm supposed to do, so this is why I'm doing it. (Participant 10)

The first one, I mean I think his like past sexual experience played into stuff. And he also watched just like a ton of porn and I just like straight up, don't think he like respected women's bodies period.[...] And I think he just, I just honestly felt like he like watched too much

porn just because like the stuff he would be like, Oh I want you to say this, I want you to do this. And I'm like, but I don't even like naturally feel like I want to say these things at all or like make me feel like this would be a fun thing to say like, and not going to be like playing out these things[...] I think him, it was had a lot to do with like, that was like the main things that were going to like really, really turn him on was like the stuff that he'd been watching and I dunno. (Participant 1)

In Participant 1's case she brings up specific scenarios and language that her partner requested which she links to porn scenarios. She felt uncomfortable with them but felt that those were central to his enjoyment.

Feelings about choking others Of the 13 participants who had ever choked a partner during sex, three mentioned choking same sex partners. Participants who had choked male partners discussed that they did not feel that choking men put them at the same level of potential for harm or danger as they sometimes experienced, as women. They recurrently mentioned their small hands or bodies and the inability to affect men physically in the same way that men can affect women. Frequently, this assertion was imbued with language about dominance and submissiveness—that choking is a sign of dominance because it involves exerting power over someone. Many women felt they were not strong enough to assert this kind of dominance on male partners:

Interviewer: And have you ever choked someone during sex?

Participant: No, he won't let me. [...] Well the first thing is that his neck is really big cause it's really muscular. So my hands are really small so it will take both hands. And he's like, now I feel like you're killing me and it's not arousing like it's not pleasurable. And two he's like, this is just weird, you know, for me to choke him because most of the time he's, I'm the submissive one. So for me to him, for him to be the submissive one, I feel like he's like uncomfortable cause he's not most of the time that, and I know that that's what all of his relationships, he's always the dominant sex, but I'm the dominant one in the relationship. So it's like flipped, you know, when we're like in bed, but yeah, he doesn't like it. He says that this is uncomfortable. It feels like you're trying to kill me.

Interviewer: So, it sounds like you've tried.

Participant: Oh yeah. Oh yeah. I tried one hand, but it didn't, it didn't work because my hands are too small. So I tried to put my other hand and he was like, no. But yeah, he just doesn't like it because he feels like he says that like, um, his words, 'I'm not a girl, you cannot do that.' But then again, it's like the pride thing, the masculinity thing. (Participant 17)

As in the above case some participants felt their male partners were resistant to being choked because they saw dominance and choking as aligned with masculinity. To the point that even though women might feel unable to actually dominate male partners physically, the psychological aspect of being choked by a woman made it untenable for some men. However, for some participants and their male partners it was precisely this subversion of the expected power structure (power play) which made this act appealing:

And it's like you could see that pleasure and it's just like, I know for a fact he likes to keep his eyes open, but it seems like he has a difficulty and not in the terms of like, "Oh shit, I'm finna make this man pass out." But just like a situation where he's just like, he's so overwhelmed with pleasure, like it's one of those things where your body just naturally does that and it's just like, "wow, I have this kind of power over you. It's phenomenal." [...] Um, I think he feels like, I think he feels like it's okay. Like he's able to let someone be in control and everything like that apparently. Um, he doesn't let a lot of females dominate with him in bed. Um, and so it's just like he likes that, um, because a lot of people would just like lay there and not really like put up a struggle or anything like that. Um, cause he'll put up a struggle as well when I'm trying to be dominant and everything like that. [...] I'm feeling like, wow, he wants me to be in control and he likes it and he actually thinks I'm good at it. So it amazes me cause then it also makes me feel like that for once I'm actually like sexy and powerful and things like that. And um, he's not only verbally reassuring me, he's physically reassuring me, um, in that, uh, moment. So yeah. (Participant 15)

Similar feelings of being powerful when choking others were described by one woman in regard to choking a female partner while using a strap-on dildo to penetrate their partner: "*Um, I feel I feel dominant, but I guess I feel a greater sense of like, um, what's the word? Not accomplishment, but I get a greater sense of pleasure knowing that she is enjoying it.*" (Participant 21, Latina, age 23, straight).

As noted earlier, most interviewees described that their male partners felt uncomfortable or otherwise rejected being choked, either because they experienced feelings of emasculation, or because they did not experience any pleasure from the act when female partners suggested or tried it. When male partners had asked participants to choke them, the women assumed that their partners felt pleasure, or that feelings of euphoria would accelerate orgasm and enhance sex for their male partners, as it did for some of them.

Narratives of Consent and Safety Practices

Consent practices related to choking varied greatly and rarely involved explicit verbal consent. While some participants described choking that they recognized as fully non-consensual, most fell into a grey area where they had been surprised to be choked by a partner who then went on to seek consent during the act, or who sought to ascertain acceptability of choking after the fact. In other cases, consent was assumed and accepted as such. These were not recognized by participants as non-consensual.

We describe four major categories of consent, or lack thereof, found in the data: verbal consent, non-verbal consent, assumed consent, and non-consent.

Verbal consent, defined as when partners spoke about desires relating to choking, occurred before sex, during sex, and after sex. *Before sex* it was something that the participant and their partner(s) had discussed and therefore were expecting to happen. *During sex* are instances where the choker ‘checks-in’ with the chokee, such as asking ‘Is this okay?’ Verbal consent after sex occurs when the person doing the choking seeks confirmation that it was okay:

Yeah. So he was like, "Um, I know this already happened, but I didn't want to make you like uncomfortable by doing that. Um, I already asked, but I wanna make sure that it's okay in the future when we do it." And I was like, "Yeah, that's totally fine." Um, I didn't have a problem with it. (Participant 3)

Non-verbal consent generally happened during sex, and was described as gestures or facial expressions which indicated to the person doing the choking that the participant was okay with being choked:

[...] so if he asks me, he always kind of, um, just motions with his hand and he asks, like is this okay or um, do you want me to? And then I always usually say yes or no depending on scenario. And, um, when I ask him, it's the same thing where motion, either move his hands towards my neck and then say, um, like, can you, or something like that. Just to indicate that both of us are on the same page usually." (Participant 3)

As this indicates, non-verbal and verbal consent are sometimes mixed and participants identified these behaviors as constituting consent.

Within our data, we observed the existence of a category of assumed consent, when partners expect choking to be part of a regular sexual repertoire or have prior knowledge of their partners' desires for choking despite not directly discussing it with them: we called these ‘assumed because normal’ and ‘assumed because prior knowledge’. The latter included prior conversations, interest in other rough sex, slow build-ups to choking where neck touching was tested, or when partners

include choking regularly in sex and therefore don't explicitly discuss it each time as was the case for Participant 24: “*I would say I've asked him to... about maybe five times. And then from there he kind of just knows that that's something that I enjoy now. So he will do it without asking.*”

‘Assumed because normal’ was the most challenging of the types of consent to interpret because it was used to represent the intentions of the person doing the choking in the absence of any clear communication of consent in the cases where the person being choked did not categorize their or their partner's experience as non-consensual. Participant 17 shared that her first choking experience was “*unexpected, but it wasn't like not consensual. Like I didn't mind it, I just didn't expect it to happen*” which she later explained involved a man choking her from behind with a belt during sex with no prior discussion or warning. When asked how she responded, she replied, “*I feel like I enjoyed it 'cause it was new and then it was like it, it heightened my sensitivity and like made me feel more excited.*” The major distinguishing factor between ‘assumed because normal’ and non-consensual was the response of the person being choked.

Interestingly, all 24 participants perceived their experiences of choking to be safe or safer than other types of rough sex.

Well choking I think is like one of the like safest for kink, 'cause like I think like when you bring on like, like breath play, and like gagging into it and like, or like even like toys such as like nipple clamps and stuff like those can like actually genuinely like, like kind of leave bruises and like hurt more than my choking and show can give more control over it. 'Cause you can be like, "Oh, just loosen your grip." But like when it's something else, it's like, I don't know, it's kind of more risky I feel like. (Participant 11)

Most women we interviewed either perceived that they and their partner took sufficient precautions to protect themselves from negative consequences of choking or that the way they engaged in choking would not lead to harm.

I feel that I'm safe enough about it to where I wouldn't be concerned. (Participant 2)

Um, no. I mean I have like, I understand you're not supposed to like do it on the front where it would actually be like you're supposed to like do it on the side I guess. And also my partners are more, I feel like they never choked me in a way that like hurts me. (Participant 17)

The main thing to me is making sure like you're still able to breathe. Like I should still be able to feel air going in and out of your windpipe. Um, so that's my biggest thing. Like if I feel like there's not enough going through your windpipe then it's just like nuh uh.

I need to let up or we just need to stop this all together. (Participant 14)

Across women, there was a belief that their way of choking was safer than alternative methods of choking, which seems to suggest they had knowledge about safe ways to choke. Most indicated that pressure should be applied to the sides of the neck rather than the front of the neck and noted the potential for damage if the pressure was applied elsewhere. However, descriptions of the safe and unsafe ways to engage in choking differed slightly across participants:

I would say most people use one [hand] and it's usually like around your natural windpipe because if you choke too hard that will, it causes damage. But it's like something like on the side of your neck, on the sides of your neck that caused you to feel like you're choking and necessarily they don't have to choke hard. It's like a certain point on your neck where you don't have to choke hard, but like you can still feel it but you're not damaging your windpipe and stuff. (Participant 5)

Um, if you're not taught right, you can literally pass somebody out. Hurt somebody, um, puncture something. Yeah, I've um, I'm a, I'm afraid of people where they put their thumb in front of like the windpipe and like the fingers in the back of the neck because then when you like actually push down, you will like go like inside their, you know, trachea and windpipe and that actually can cause issues. (Participant 16)

However, most participants had never sought out any information about safety practices for choking. None had ever discussed choking with a doctor or nurse. Some indicated that they had unintentionally stumbled upon information on social media (e.g., Twitter, TikTok). Very few had searched online for information about engaging in choking safely; when that occurred, it was sometimes in response to physical symptoms from being choked.

I like researched it on Google. Like I was just actually really interested to see like is there a certain way, because I know like one time I, it was like, it was fine. It was fine. Like I consented to it, but I was like, "Oh, like my neck kinda hurts." So then I was like, okay, I should research a little more just to see like the actual correct, correct way that people do it. So I found that it's usually don't, you're supposed to use the sides and it's not all supposed to be forced on your windpipe because some people can pass out from that. (Participant 5)

Two participants learned about choking safety from a human sexuality course and another was informed from her coursework related to the anatomy of the throat. Most women were similar to Participant 14, who described that she learned about choking safety through her personal experiences of

being choked: "*I think it was more of a thing of trial and error, just like, um, cause I haven't really done my research and anything like that. It's been more so like based off of my partners, what I do like them to do, what I don't like them to do a lot of the time[...]*".

Most discussion around safety practices centered how to communicate with, or read, a partner about limitations.

Participants described two ways of non-verbally communicating with their partner to stop choking: specific physical cues such as a tap out or general physical cues such as changing positions.

I would just like place the guy's hand up. Like I'd say like I'm pretty good at like putting my foot down and like saying what I want and being direct, um, immediately. Like I don't want there to be any confusion. So yeah, I would just like kind of like direct the guy's hand and just slowly move away. Be like, Hey, like I just don't want this. Like, everything's fine. Just like don't do that. (Participant 4)

Verbal communication *during* choking was uncommon, but verbal discussions of meaning of tap or position change were sometimes communicated verbally before or after the fact. Some participants were unclear on how to indicate they wanted the choking to stop, or else indicated that they had only been choked for short periods of time and had never considered how they would communicate to someone that they wanted to stop being choked.

Most participants, when describing when they would stop or signal to stop, cited not being able to breathe, physical changes such as blurry vision or lightheadedness, or a general discomfort/pain.

If I started to like get dizzy or felt like I was losing consciousness, definitely I would say, be like, Oh, that's, that's not right. That shouldn't be happening. (Participant 20)

Some participants relied on their partner's perception of their alertness/consciousness to stop choking while others reported thinking they would experience an instinctive knowing when they should signify to their partner to stop choking. A few participants were unsure of how to know when to stop choking.

Um, I think he mostly picks up, like if I don't move as much or if my eyes kind of glaze over a little bit or I mean he can tell if I'm enjoying it or not. And then they lighten up or consent is throughout the entire thing, so [he] checks in on me...like he watches the entire time and super in tune or if my breathing changes or if I stop moving or move more, like he's really in tuned with it and knows when to stop. (Participant 2)

I guess I would trust my instincts. Um, I have a pretty touchy fear response. So, um, yeah, I guess if I started to feel adrenaline or fear I would, that would indicate to me, yeah.” (Participant 21)

Other explicit safety practices, boundaries, or limitations included choking in short spurts, engaging with only trusted people/people who respect you, sharing knowledge about how to choke, intensity levels, using preferred techniques such as placement on certain parts of the neck or number of hands, and stopping if difficult to talk, breathe, or if feeling dizzy. Some described boundaries around not engaging in additional rough sex practices or behavior considered degrading like Participant 5, “*Like the line would definitely be like hitting, or like, degrading. Um, I think the line, I think as far as I would like to go [is] choking, that’s it. I wouldn’t like to do anything other than that. Like nothing more physical than that.*”

Discussion

The present study extends the literature through a qualitative examination of women’s experiences with choking during sex. All study participants indicated they use the term “choking” to refer to the use of hands or ligatures to press or squeeze the neck during sex. One woman also provided an example of choking that appeared to be gagging rather than external pressure on the neck (strangulation); she described being “choked” by a partner with their penis. As various terms are used in the literature (e.g., sexual asphyxiation, breath play, choking, strangulation), having shared meaning around terms will be important to support valid measurement related to choking. Terminology may vary by age, culture, consent, or situational factors (e.g., intensity, pressure, perceived intention such as pleasure or harm) and should be investigated in subsequent research.

Consistent with prior research that found auto-erotic asphyxiation to be rare among women (Sauvageau & Racette, 2006), only one of our 24 women participants described choking herself during masturbation. It is curious how sexual asphyxiation, which has long been described as predominantly engaged in by/for men’s arousal (Tarr, 2016), has become so frequently enacted by men on women partners in the form of choking (Herbenick et al., 2020; Herbenick, Patterson, et al., 2021). Consistent with findings from a recent undergraduate survey (Herbenick, Fu, et al., 2021) most participants viewed choking as a form of rough sex. Choking was also considered a masculine and dominant behavior, with women—described by participants as having smaller hands and less physical strength—perceived as less effective at choking. One has to wonder, though—effective for what? Occluding the blood vessels is thought to require

less pressure than is used to open a soda can (Gwinn et al., 2017). Across genders, most adolescents and adults could likely choke a willing partner to the point of them experiencing physical responses such as lightheadedness or a head rush. Thus, participants’ focus on size/strength may reflect a psychological sense of gendered sex roles and/or how it would feel to them (one said “awkward”) or be perceived by a partner (some described their men partners laughing about the idea of women choking men).

Although participants engaged in choking in diverse ways (e.g., one or two hands, ligature; placement at base, top, or sides of neck; various intensities), most had never sought information about choking techniques, risks, or safety. Even so, participants consistently expressed a belief that the ways they and their partner(s) choked were safe. Prior research on non-fatal strangulation has shown that health risks are more often associated with choking/strangulation that uses a ligature, is intense, or occurs on multiple occasions (Busse et al., 2015; Michel et al., 2019; Ramowski et al., 2012; Smith et al., 2001). Consistent with recent research (Herbenick et al., 2020; Herbenick, Patterson, et al., 2021) we found that most participants had been choked multiple times and some had been choked dozens of times or more than 100 times.

Clinicians and educators need to be aware of contemporary sexual repertoires that involve choking. Given that health sequelae of non-fatal strangulation can be difficult to detect (De Boos, 2019), subsequent research should examine health sequelae of choking, including the potential for cumulative effects at higher frequencies and/or intensities. Such work may have implications especially for women’s health and LGBTQ+ health, given their disproportionate experiences of being choked (e.g., Herbenick, et al., Herbenick, Patterson, et al., 2021). Choking/strangulation in other contexts (e.g., TCG and IPV) has been associated with long-term risk of depression, anxiety, recurrent headaches, and other health sequelae (Gwinn et al., 2017; Mcquown et al., 2016; Zilkens et al., 2016).

Most of the women participants in our study did not initially ask to be choked or seek it out, even if they did eventually come to accept being choked or grow to enjoy it. We observed a pattern in which women were often initially choked by a partner without prior communication or consent; in these situations, the choking was often experienced as uncomfortable, scary (also seen in Herbenick et al., 2019), or was, in hindsight, perceived by participants as part of broader experiences of pressure, aggression, or unhealthy relationship dynamics. Yet, when the relationship ended, many women continued and even initiated choking with subsequent partners, whether because they liked being choked, it seemed a matter of routine, a subsequent partner initiated choking, or they found it contributed to their sexual pleasure, arousal, or sense of self as sexually submissive.

Women also described experiences of sexual compliance, in which they went along with being choked even though they didn't enjoy it. In research focused on sex more broadly, more women than men indicate that they have consented to unwanted sex (Impett & Peplau, 2002). The consistency of this gender difference has been attributed to how females are socialized to hide their own desires and instead focus on male partners' needs or desires, conflict avoidance, approach motivations (intimacy), and a decision to comply rather than be coerced or harmed (Fahs et al., 2015; Impett & Peplau, 2002, 2003; Katz & Tirone, 2010). Indeed, in one prospective study, women who reported partner coercion at Time 1 were more willing to report having consented to unwanted sex at Time 2 (Katz & Tirone, 2010). In another study of LGBTQ+ participants as well as those in polyamorous relationships and/or who engage in bondage, domination, or sadomasochism (BDSM), having consented to unwanted sex was associated with poorer mental health status in the prior month (Rubinsky, 2020). Subsequent research might focus on individuals who consent to being choked (or even to choking a partner) even though they do not want to.

Additionally, some women in our sample described finding pleasure and enjoyment in choking. Yet, few openly communicated with their partners about choking (e.g., about preferred intensity, hand placement, or other characteristics), instead relying on male partners to guide this aspect of sex. Expecting male partners to initiate choking may be related to perceptions of interest in rough sex as a masculine trait; this stereotype may inhibit women from openly asking for choking or negotiating boundaries for it.

Further, just as recent research has examined mechanisms in which pain can be interpreted in pleasurable ways (Dunkley et al., 2020), subsequent research might examine the characteristics of those who enjoy being choked and why—aside from headrush associated with reoxygenation following hypoxia (Linkletter et al., 2010). It may be that the enjoyment of choking is associated with feelings of empowerment, submission or surrendering to someone else's power (e.g., Hargons et al., 2020), love (Herbenick, Fu, et al., 2021a), trust and intimacy (e.g., Fortenberry, 2019; Goldey et al., 2016), or sexual identity exploration.

Few women referenced pornography as a direct influence on their own initial learning about choking, although most referenced having seen choking in pornography at some point. However, many women described pornography as playing a role in their partner choking them; for example, women often talked about the first person who choked them being someone who watched pornography and who the women felt did sexual things to them that the partner had seen in pornography. Thus, our findings build on to several prior studies in the U.S. and Germany that have suggested an association between watching pornography and enacting various sexual behaviors common to pornography, including choking

(Herbenick et al., 2020; Sun et al., 2017; Wright et al., 2015). That said, our findings clearly indicate that pornography is not the sole source of learning about choking during sex; indeed, participants described noticing references to choking within a large and diverse body of media, including magazines, social media, mainstream television and movies, and popular erotica—all of which were cited as ways that participants had learned about choking as adolescents or young adults. Our findings are limited by having asked participants where they had first learned about choking, which assumes some external source of learning; the way we phrased that question may have obscured experiences from those who began engaging in choking more organically.

Clinicians, sexuality educators, and those with policy interests for college campuses or adolescent health need to grapple with contemporary sexual repertoires, which appear to often include choking during sex. Sex educators, for example, need to become knowledgeable about choking/strangulation, reasons for engaging in choking, relevant health sequelae, ways that consent may be negotiated, and then create and evaluate educational curricula related to choking and other rough sex behaviors that are prevalent among young adults (e.g., Burch & Salmon, 2019; Herbenick, Fu, et al., 2021a; Vogels & O'Sullivan, 2019). This is particularly important in light of the fact that choking/strangulation appears to be increasing as part of sexual assaults (Cannon et al., 2020; Patch et al., 2021). Young people may benefit from learning how to talk about and negotiate consent related to choking and also how to mitigate health risks if they choose to engage in choking.

Considering that people may enjoy one type of choking but not another, and that ligature strangulation has been found to be riskier than using hands (though either can be fatal) (De Boos, 2019; Zilkens et al., 2016), it may be important for sexuality educators to teach explicit ways of communicating about choking. Doing so may help people to understand the diverse ways people engage in choking and consider what they are, or are not, willing to try. Sexual health educators would be wise to discuss safe words as well as safe gestures, given that people who are being choked may be unable to speak and thus unable to effectively use words to end choking that they want to end.

In addition to choking perhaps presenting health risks for those being choked, there are also potential legal consequences to choking one's partner (e.g., Sendler, 2018). Although recent research has found that intimate partners of women killed during rough sex often have shorter sentences than non-relational partners, people have been convicted for choking partners during sex and for unintentionally killing them by choking them during sex. Given the apparent lack of explicit verbal consent in regard to choking, it is perhaps not surprising that in a U.S. probability survey, women frequently

cited choking as an example of something scary that had happened to them during sex (Herbenick et al., 2019).

Choking/strangulation is also a feature of many sexual assaults (especially by dating, hookup, or relationship partners), including among college students, and may be increasing in prevalence (Bult, 2016; Cannon et al., 2020; Kale, 2019; McDonough, 2014; Moore & Kahn, 2019; Patch et al., 2021), and causes many victims to fear for their lives (White et al., 2021). Although participants largely described wanted and/or consensual choking experiences, several women in our study described incidents of choking in which they felt scared or wondered if their partner might hurt or kill them. Subsequent research might focus more directly on how choking is perceived in terms of pleasure, violence, masculinity performance, and pornographic sexual scripts which have been shown to center sexual aggression (Tranchese & Sugiura, 2021; Vera-Gray et al., 2021).

We were also struck that most participants did not describe choking during sex as connected to power exchange, kink, or BDSM—even though some women used terms like dominant or submissive. Most participants were not connected to kink or BDSM communities nor had they attended kink events. They often described approaches to choking that were not supportive of safer, pleasurable exploration; for example, choking was often initiated without conversation or consent, occurred while intoxicated or drunk, and involved little to no effort to learn technical skills to reduce risk or call for help if needed. One woman—after the interview closed—mentioned that her boyfriend had a prior partner who once passed out while he was choking her. He didn't know what to do, so he just waited to see if she revived. Others did not know that it was possible for people to die from being choked. Subsequent research might examine the benefits of being connected to BDSM/kink communities in terms of supporting sexual play that is more risk-aware, informed, and incorporates specific forms of consent, safe words/gestures, and aftercare.

Strengths and Limitations

Among our strengths, we conducted in-depth interviews on a novel, understudied sexuality topic. Our participants were diverse in terms of race/ethnicity and sexual identity. We asked about diverse issues including language to refer to choking, communication, learning, consent, and feelings about choking. While we consider it a strength that we recruited women into the study regardless of whether the choking they experienced was consensual, non-consensual, or unclear in terms of consent, we made this choice because our research was needed and will be foundational for subsequent research on this topic. Our broad, exploratory approach is a strength, in that we acquired new information on a variety of choking-related issues that may support subsequent research on more specific experience (e.g., non-consensual

choking); it is also a limitation in that we did not go into significant depth on any one topic across all participants.

Among our limitations are that we recruited only those under age 40 and our oldest participant was age 33; findings presented here are limited to women, likely all of whom were cisgender. Subsequent research should examine experiences with choking during sex across more age cohorts and genders. We also limited recruitment to students from one college campus; subsequent research might examine experiences with choking among non-college samples as well as with college samples at other campuses. While our sample size was sufficient for our aims, we had initially hoped to recruit at least 25 women into the study but stopped recruitment at 24 due to the COVID-19 pandemic and its resulting disruptions at our university. While many of our participants identified as bisexual or pansexual, most of their descriptions about choking involved male partners. Given other research that suggests choking is prevalent among women partners, too, subsequent research might specifically examine choking during sex occurring between women, or among women and gender expansive partners.

The present research is also limited to these women and their experiences. Subsequent research might examine how the increase in choking during sex, which far more often occurs to women as compared to men, may be situated within social and/or political conditions that are hostile to reproductive health and rights, changing ideas about gender and masculinities, greater access to pornography during adolescence, misogynistic political climates, and conversations about what female sexual empowerment looks like (e.g., Herbenick et al., 2020; Jaroszewski et al., 2018; Jones et al., 2018; Lamb & Peterson, 2012; McCauley et al., 2018).

Conclusions

Women in our study described complex experiences with choking that were influenced by communication, consent, as well as choking methods and intensities. Participants tended to view choking as a masculine and dominant sexual behavior that they had learned from various media as well as from sexual partners, including during their first coital experience. Clinicians and educators need to be aware of the role of choking in young adults' sexual repertoires. Given the need to understand choking/strangulation within the contexts and continuums of kink, pleasure, and sexual violence, we urge subsequent research on this topic.

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and Wagner analyzed and interpreted data. All authors contributed to manuscript preparation, review, and approval.

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Availability of Data and Materials If accepted for publication, a limited data set may be archived at Indiana University.

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval The research involved human subjects, and the institutional review board at the authors' university reviewed and approved study protocols and measures (Protocol 1911051552).

Informed Consent Participants reviewed an IRB-approved Study Information Sheet and indicated consent to participate prior to participating in an interview.

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