

Article

The Role of Partner Gender: How Sexual Expectations Shape the Pursuit of an Orgasm Goal for Heterosexual, Lesbian, and Bisexual Women

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Abstract

Previous research has established that gendered sexual scripts shape sexual behavior. This study seeks to expand prior work on orgasm disparities for women across sexual orientations by exploring the role of partner gender. Across two studies, we examined how the gender of women's sexual partners influenced their orgasm goal pursuit. We compared lesbian and heterosexual women's experience with their most recent partner in Study I, and experimentally compared bisexual women partnered with a woman or a man in a hypothetical sexual encounter in Study 2. In both studies, women reported higher clitoral stimulation and orgasm expectations when partnered with a woman compared to a man. Moreover, partner gender had a significant indirect effect on women's orgasm goal pursuit through clitoral stimulation and expectations for orgasm. These results suggest that sexual scripts associated with partner gender play a key role in the orgasm gap for women who have sex with men.

Keywords

goal pursuit, sexual scripts, sexual orientation, sexuality, close relationships, orgasm

Orgasm plays an important role in sex and relationships, as one of the strongest predictors of sexual satisfaction and thereby an indirect predictor of relationship satisfaction for couples (Byers, 2005; Haning et al., 2007; Sprecher, 2002). Yet, research consistently shows that cisgender men have significantly more orgasms than cisgender women during partnered sex (Mahar et al., 2020). This orgasm disparity should be viewed as a gender equity issue, much like gender disparities in pay and housework (e.g., Fetterolf & Rudman, 2014; Glauber, 2018), as women often come to expect pleasure and enjoy sex less than their male partners (Blumenstock, 2021; Conley & Klein, 2022; Klein & Conley, 2022).

Researchers refer to this well-established gender disparity as the "orgasm gap" (e.g., Garcia et al., 2014; Piemonte et al., 2019; Wetzel & Sanchez, 2022). In heterosexual contexts, about 95% of men report usually or always experiencing orgasm in their sexual encounters, compared to only 65% of women (Frederick et al., 2018). However, the orgasm gap almost or completely disappears during masturbation, and when a greater variety of sexual practices are incorporated in a sexual encounter, particularly those involving clitoral stimulation (Andrejek et al., 2022; Frederick et al., 2018; Richters et al., 2006; Wade et al., 2005; Wetzel & Sanchez, 2022).

Variation in Orgasm by Sexual Orientation

Unlike men, women's orgasm frequency varies by sexual orientation. For example, 86% of lesbian women reported usually or always experiencing orgasm, compared to 65% of heterosexual women, which starkly contrasts the 6% difference in orgasm rates between heterosexual and gay men (Frederick et al., 2018). While bisexual women report a similarly low orgasm frequency to heterosexual women (Frederick et al., 2018; Garcia et al., 2014), which may be due to the high prevalence of bisexual women with male partners (e.g., 82%; Frederick & Fales, 2016), analyses in a small subsample of bisexual women found that 64% of bisexual women reported usually experiencing orgasm when their casual sex partner was a woman, compared to 7% when their partner was a man (Eschler, 2004; Mahar et al., 2020). These findings suggest that the gender of women's sexual partners may be an important factor in understanding the orgasm gap.

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Grace M. Wetzel, Department of Psychology, Rutgers, The State University of New Jersey, Tillett Hall, 53 Avenue E, Piscataway, NJ 08854-8040, USA. Email: grace.wetzel@rutgers.edu Though lesbian women report having sex less frequently compared to heterosexual women, lesbian women report a longer duration of their sexual encounters (Blair & Pukall, 2014). Moreover, women having sex with women (WSW) engage in a variety of activities during their sexual encounters, including those which have been shown to increase women's orgasm frequency, such as manual stimulation and oral sex (Cohen & Byers, 2014; Schick et al., 2011, 2015). Thus, differences in orgasm frequency may be partially explained by differences in the activities typically experienced during a sexual encounter, reflecting different sexual scripts for WSW compared to women having sex with men (WSM; Simon & Gagnon, 1986).

Sexual Scripts and Expectations

The dominant heterosexual sexual script consists of foreplay, which is typically brief, followed by vaginal intercourse, from which the man orgasms, which signals the end of sex (Mahar et al., 2020). This heterosexual script prioritizes the man's orgasm, as intercourse alone is associated with the lowest orgasm frequency for women (Frederick et al., 2018; Willis et al., 2018). WSW, however, are more likely to engage in non-penetrative practices and define them as "sex" (Schick et al., 2011, 2015). When comparing gendered sexual scripts by sexual orientation group, men have been found to adhere to them more strongly than women, and heterosexual people more strongly than those in sexual minority groups (Fournier et al., 2023). Thus, WSW appear to adhere less to any particular sexual script, or at least one based on gender roles. Freedom from "performing gender" in the bedroom (i.e., enacting specific gendered expectations) has been associated with greater sexual satisfaction and orgasm frequency (Sanchez et al., 2005, 2012).

Different sexual scripts likely shape expectations and outcomes in a sexual encounter. When women orgasm less frequently, they often come to value and expect orgasm less as a result (McClelland, 2010; Wetzel et al., 2022). Orgasm expectations measure how much participants expect to experience orgasm, and these expectations can differ from situation to situation (Wetzel et al., 2023). For example, subtle cues from a woman's partner can shift her orgasm expectations in that encounter, such as when the sexual encounter feels rushed (Wetzel et al., 2023). Women report less orgasm pursuit when they expect orgasm less in a particular sexual scenario (Wetzel et al., 2023). Heterosexual women report lower expectations for orgasm in their partnered sexual encounters compared to lesbian women (Goldey et al., 2016). Thus, differences in sexual scripts and resulting expectations between WSW and WSM likely influence variations in orgasm frequency by sexual orientation.

Orgasm Goal Pursuit

Goal pursuit research generally finds that setting and striving for clearly defined goals is essential for their achievement (Rogers et al., 2015). Women do not pursue orgasm to the same degree as men (Braun et al., 2003; Wetzel et al., 2023), but when women do pursue orgasm intentionally, they are more likely to experience orgasm (Gusakova et al., 2020). This relationship is unique to women; men experience high orgasm frequency regardless of their pursuit (Wetzel et al., 2023).

According to the expectancy-value theory of motivation, the subjective value of the outcome and an expectation that the outcome can be achieved drive effort toward a goal, which impacts subsequent performance (Eccles, 1983; Eccles & Harold, 1991; Wigfield & Eccles, 2000; see Supplemental Material for visual model). In other words, importance of the outcome and expectations of success both simultaneously serve as parallel predictors of goal pursuit. This theory has been applied to the pursuit of orgasm as a goal; orgasm importance and orgasm expectations predict greater orgasm goal pursuit, which predicts greater orgasm frequency (Gusakova et al., 2020; Wetzel et al., 2023).

Because women, but not men, who pursue orgasm more strongly are more likely to experience orgasm (Gusakova et al., 2020; Wetzel et al., 2023), the expectancy-value theory of motivation may explain gender differences in orgasm frequency. If women have lower expectations for orgasm when partnered with men, and subsequently pursue orgasm less as a result, this framework could help to explain (and ultimately diminish) the discrepancies in orgasm frequency between WSW and WSM.

Current Project

Based on previous research, we expect WSW to have higher expectations for clitoral stimulation and orgasm compared to WSM. These differing scripts and expectations should predict greater orgasm goal pursuit for WSW compared to WSM. In Study 1, we compared heterosexual and lesbian women's orgasm expectations, importance, goal pursuit, and frequency, as well as the frequency of clitoral stimulation, with their current or most recent sexual partner. In Study 2, we used an experimental design with hypothetical vignettes to examine these variables for bisexual women when randomly partnered with a man versus a woman. In both studies, we used serial mediation analysis to test whether partner gender had an indirect effect on orgasm goal pursuit through the corresponding changes in clitoral stimulation and orgasm expectations.

Study I

Method

Participants and Procedure. We recruited a sample of cisgender, heterosexual, and lesbian women from the ResearchMatch and Prolific online recruitment platforms. ResearchMatch participants (77.7%) were volunteers and Prolific participants (22.3%) were compensated for their

Table 1. Demographics of the Samples

Sample Demographics	Study I	Study 2
N	476	482
Age M (SD)	39.2 (14.9)	29.8 (8.2)
Sexual orientation (%)	, ,	, ,
Heterosexual	59.5	_
Lesbian	40.5	_
Bisexual	_	100.0
Currently in a relationship (%)		
Yes	82.8	84.8
No	14.1	14.8
Other	2.5	0.4
Length of relationship in years M (SD)	10.2 (10.9)	6.2 (5.8)
Relationship type (%)		
Monogamous	50.6	58.6
Married	40.1	26.2
Open/Polyamorous	2.9	8.3
Prefer not to disclose	0.2	0.4
In addition to or not listed above	3.6	2.3
Race/ethnicity (%)		
White	88.0	86.3
Black/African American	5.7	6.4
Latinx	5.0	10.8
Asian	2.9	4.0
Native American/Alaska Native	1.5	1.9
Multiracial	1.5	3.7
Middle Eastern	0.8	0.8
Hawaiian/Pacific Islander	0.4	0
Not listed above	0.2	0
Prefer not to disclose	0.2	0.2

Note. Participants could select more than one relationship type and more than one racial/ethnic group. Relationship length and type were answered only by participants who responded "Yes" to indicate that they were currently in a relationship.

participation in the study. The ResearchMatch sample consisted of 75.4% heterosexual women; thus, the Prolific sample was used to obtain a sufficient sample of lesbian women (96.2% lesbian women). G*Power analysis indicated that a sample of 470 participants would be needed to detect a small effect size of 0.3 with 90% power for comparisons between two independent groups. Eligible participants (N = 503) were at least 18 years old and sexually active within the past year. Twenty-seven (5.4%) participants were removed for failing an attention check. The final sample consisted of 476 participants (59.5% heterosexual). Participant demographics can be found in Table 1. After the eligibility screener, participants completed study measures in the order presented below followed by demographic questions and a debriefing. The full surveys, materials, datasets, and code for analyses for both studies can be found at https://osf.io/f3s5w/.

Measures. Participants were asked to respond to all questions in reference to their own sexual encounters with their current or most recent sexual partner. A sexual encounter was defined throughout the study as "an interaction"

between you and your partner(s) which includes any kind of sexual activity (e.g., oral sex, penetrative sex, etc.) that could potentially lead to orgasm for you or your partner(s)."

Orgasm Measures. To measure orgasm importance (adapted from Gusakova et al., 2020), participants were asked to indicate the extent to which they agreed with the statement, "Orgasm is important to my sexual satisfaction" on a scale from 1 (strongly disagree) to 7 (strongly agree). The orgasm expectations measure (adapted from Blumenstock, 2021) asked, "In your sexual encounters, how much do you expect to experience orgasm, in general or on average?" on a scale from 1 (definitely would not experience) to 7 (definitely would experience).

To measure orgasm goal pursuit (adapted from Gusakova et al., 2020), participants rated the extent to which they agreed with three statements (e.g., "In my sexual encounters, I try to have an orgasm") on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Responses were averaged, with higher scores indicating greater orgasm goal pursuit ($\alpha = .87$). To measure orgasm frequency, we asked participants, "What percentage of the time do you experience orgasm with your current (or most recent) sexual partner?" on a sliding scale from 0 to 100 (Wetzel & Sanchez, 2022).

Sex Frequency, Duration, and Acts. Participants were also asked a series of questions relating to their sexual behavior with their sexual partner, including sex frequency, duration, and sex acts. We assessed sex frequency (adapted from Cohen & Byers, 2014) by asking participants how often they engaged in sexual encounters with their partner on a scale from 1 (less than once a month) to 7 (more than once a day). To measure sex duration (adapted from Blair & Pukall, 2014), we asked participants how long their sexual encounters with their partner lasted, in their most recent sexual encounter and on average, on a scale from 1 (less than 10 minutes) to 7 (more than 2 hours). Adapting and expanding measures of sex acts by Frederick et al. (2018), we asked participants, "During your sexual encounters with your current (or most recent) sexual partner, how often do you engage in the following sexual activities" (e.g., gave oral sex). Participants responded on a scale from 1 (never) to 7 (always).

Clitoral Stimulation. To determine the frequency of clitoral stimulation in participants' encounters with their partner, we created a composite score of relevant sex acts from the measure mentioned earlier (i.e., those that could refer to clitoral stimulation received by the participant): vaginal intercourse with simultaneous clitoral stimulation, received oral sex from partner, received manual stimulation of genitals from partner, and use of a vibrator or other sex toy on self.

Results

Differences by Sexual Orientation. Independent samples *t*-tests (see Figure 1) indicated that lesbian women reported

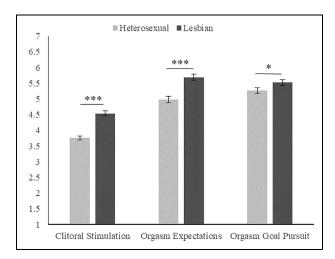


Figure 1. Independent Samples t-Test Comparisons Between Heterosexual and Lesbian Women (Study 1) p < .05. *p < .01. ***p < .001.

experiencing a higher frequency of clitoral stimulation in their sexual encounters, higher orgasm expectations, greater orgasm pursuit, and a greater orgasm frequency than heterosexual women. There was no difference in orgasm importance by sexual orientation. See Table 2 for all comparisons, including specific sex acts, and Table 3 for correlations between all variables. Women's orgasm expectations and orgasm goal pursuit predicted their orgasm frequency above and beyond sexual orientation (see Supplemental Material).

Mediation Analysis. We conducted mediation analyses using the PROCESS macro (Hayes, 2022) to test the indirect relationship between sexual orientation (a proxy for partner gender in Study 1) and orgasm goal pursuit. Based on expectancy-value theory, we examined an initial mediation: the effect of sexual orientation on orgasm goal pursuit through orgasm expectations. Then, we tested the effect of sexual orientation on orgasm expectations through clitoral stimulation to investigate a potential mechanism for the difference in orgasm expectations. Both initial mediation analyses were supported (see Supplemental Material). Given these results, we conducted a serial mediation in which sexual orientation predicted orgasm goal pursuit through clitoral stimulation frequency and orgasm expectations (Figure 2). Sexual orientation (heterosexual = 1, lesbian = 2) was a significant predictor of clitoral stimulation, B = 0.77, SE =0.10, p < .001, 95% CI [0.58, 0.97]. Clitoral stimulation was a significant predictor of orgasm expectations, B = 0.46, SE = 0.06, p < .001, 95% CI [0.34, 0.58], and orgasm expectations significantly predicted orgasm goal pursuit, B = 0.53, SE = 0.03, p < .001, 95% CI [0.47, 0.59]. Sexual orientation significantly predicted orgasm goal pursuit directly, such that identifying as a lesbian predicted greater orgasm pursuit, B = 0.25, SE = 0.13, p = .047, 95% CI [0.00, 0.50]. After accounting for the mediators (i.e., clitoral stimulation and

Table 2. Sexual Orientation Differences for All Study Measures (Study 1)

		Heterosex	ual women	Lesbian	women				
Study Measure	Range	М	SD	М	SD	t	df	Þ	d
Orgasm importance	I <i>-</i> 7	5.64	1.38	5.55	1.38	0.73	474	.234	0.07
Orgasm expectations	1–7	4.98	1.65	5.69	1.38	-5.09	454.74	<.001***	0.46
Orgasm goal pursuit	I-7	5.27	1.42	5.52	1.28	-1.99	474	.023*	0.19
Orgasm frequency	I-I00	65.55	32.55	78.47	26.77	-4.73	457.74	<.001***	0.43
Sex frequency	1–7	4.75	1.43	4.29	1.62	3.18	377.34	<.001***	0.30
Sex duration (recent)	I-7	2.90	1.14	4.42	1.36	-12.73	363.36	<.001***	1.23
Sex duration (average)	1–7	3.07	1.12	4.51	1.21	-13.10	390.29	<.001***	1.24
Clitoral stimulation	1–7	3.76	1.12	4.54	1.04	-7.64	474	<.001***	0.71
Sex acts									
Vaginal intercourse with simultaneous clitoral stimulation ^a	I-7	4.04	1.87	4.46	1.96	-2.40	474	.009**	0.22
Vaginal intercourse without simultaneous clitoral stimulation	I–7	4.48	1.92	3.06	1.76	8.32	435.45	<.001***	0.76
Anal intercourse	1–7	1.36	0.82	1.33	0.81	0.49	474	.311	0.05
Gave oral sex	1–7	4.15	1.84	4.72	1.89	-3.28	473	<.001***	0.31
Received oral sex a	1–7	3.71	1.91	4.67	1.92	-5.42	474	<.001***	0.51
Manual stimulation of partner's genitals	1–7	5.21	1.64	5.73	1.58	-3.43	474	<.001***	0.32
Received manual stimulation of genitals from partner a	1–7	4.96	1.75	5.69	1.62	-4.67	432.58	<.001***	0.43
Gentle kissing	1–7	5.37	1.69	6.19	1.20	-6.16	473.14	<.001***	0.54
Deep kissing	1–7	4.84	1.96	6.05	1.30	-8.05	473.72	<.001***	0.70
Use of a vibrator or other sex toy on self a	1–7	2.34	1.62	3.31	1.95	-5.74	360.07	<.001***	0.56
Use of a vibrator or other sex toy on partner	I-7	1.65	1.17	3.51	2.01	-11.62	281.24	<.001***	1.19

Note. Independent samples t-tests between heterosexual and lesbian women are reported for each study variable. Degrees of freedom were reduced for some analyses due to significant results for Levene's test for equality of variances.

a Included in the clitoral stimulation composite measure. *p < .05. **p < .01. ***p < .001.

Table 3. Correlations Between Study Variables (Study 1)

Study Measure	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(I) Orgasm frequency	_							
(2) Orgasm importance	.5 I ***	_						
(3) Orgasm expectations	.90***	.49***	_					
(4) Orgasm goal pursuit	.65***	.71***	.64***	_				
(5) Clitoral stimulation	.36***	.16***	.37***	.33***	_			
(6) Sex duration (recent)	.21***	02	.20***	.07	.35***	_		
(7) Sex duration (average)	.23***	.01	.22***	.11*	.38***	.83***	_	
(8) Sex frequency	.12**	.07	.14***	.08	.15***	.14**	.18***	_
(9) Age	.03	.03	.04	04	24 ***	19***	24 ***	I5* [*]

^{*}p < .05. **p < .01. ***p < .001.

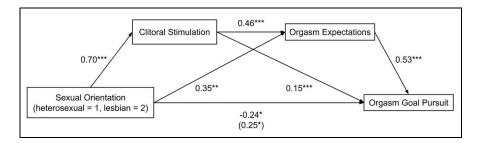


Figure 2. Serial Mediation Model for the Effect of Sexual Orientation on Orgasm Goal Pursuit Via Clitoral Stimulation and Orgasm Expectations (Study 1)

Note. Indirect effect I = 0.12 [0.04, 0.21]. Indirect effect 2 = 0.19 [0.05, 0.33]. Indirect effect 3 (serial) = 0.19 [0.11, 0.28]. Unstandardized coefficients are shown.

$$*p < .05. **p < .01. ***p < .001.$$

orgasm expectations), this relationship changed such that identifying as heterosexual predicted greater orgasm pursuit, B = -0.24, SE = 0.10, p = .022, 95% CI [-0.44, -0.04], which is likely a statistical artifact (e.g., suppression effect) emerging from controlling for two significant predictors of orgasm pursuit. Importantly, the serial mediation was significant, such that the relationship between identifying as lesbian and greater orgasm goal pursuit was explained by lesbian women's greater likelihood of clitoral stimulation and greater orgasm expectations, B (indirect effect) = 0.19, SE = 0.04, 95% CI [0.11, 0.28] (see Figure 2). We also tested this mediation with orgasm importance as a covariate in both studies, due to its role in the expectancy-value theory of goal pursuit, and the serial mediations remained significant (see Supplemental Material).

Study I Discussion

Overall, Study 1 provided evidence that lesbian women report a greater frequency of clitoral stimulation, as well as greater orgasm expectations, orgasm goal pursuit, and orgasm frequency than heterosexual women. Clitoral stimulation and orgasm expectations significantly mediated the relationship between sexual orientation (i.e., partner gender) and orgasm goal pursuit. Given the correlational nature of this study, these mediation analyses cannot support causal claims.

Study 2

Overview of Study

Study 1 found that lesbian women score higher than heterosexual women on measures of clitoral stimulation and orgasm expectations, which are important predictors of orgasm goal pursuit and orgasm frequency. Partner gender likely drives these differences between heterosexual and lesbian women, due to differences in sexual scripts when women have sex with other women compared to men (Cohen & Byers, 2014). Therefore, Study 2 experimentally tested the influence of partner gender on orgasm goal pursuit by manipulating the gender of bisexual participants' partners in a hypothetical sexual scenario. Research on gender differences in sexuality which utilizes heterosexual men and women confounds the gender of the sexual partner with the gender of the participant (Conley et al., 2014). Conducting experiments with bisexual participants in which partner gender can be manipulated provides a useful method to directly determine the influence of partner gender on sexual outcomes (Conley et al., 2014).

Based on the results of Study 1, we expected bisexual women to indicate greater expected clitoral stimulation, orgasm expectations, and orgasm goal pursuit when imagining a hypothetical sexual encounter with a woman compared to a man. We tested the same serial mediation model in Study 2 as in Study 1, and we expected partner gender to predict orgasm goal pursuit through the associated change in expectations for clitoral stimulation and orgasm.

Method

Participants and Procedure. We recruited a sample of cisgender, bisexual women from the Prolific online platform. Using the same G^*Power analysis as in Study 1, eligible participants (N=483) were at least 18 years of age and sexually active within the past year. Two participants were removed for failing an attention check related to the manipulation; the final sample consisted of 481 participants (see Table 1 for demographics). Participants completed study measures in the order presented below followed by demographic questions and debriefing. Hypotheses, measures, and planned analyses for Study 2 were pre-registered before data collection began (see pre-registration at https://osf.io/f3s5w/).

Measures

Vignette. Participants were asked to imagine themselves in the following hypothetical scenario, which differed based on the gender of the hypothetical partner:

"You are out to dinner with a [man/woman] who you feel comfortable with and find very attractive. You've been seeing this [man/woman] for a while and have an established sexual relationship with [him/her]. When you get home from dinner, things start heating up and you make your way to the bedroom together. You are in the mood and are looking forward to beginning sexual activity with [him/her]."

Participants were randomly assigned to one of the two conditions. Participants were told to respond to all subsequent questions in reference to the sexual encounter with their hypothetical partner. After completing the study measures, participants were asked to confirm the gender of the partner from the vignette they had read, as an attention check.

Orgasm Measures. The same orgasm importance measure was used in Study 2 as in Study 1. Orgasm expectations and orgasm goal pursuit measures were adapted to refer to the hypothetical sexual encounter described (e.g., "In the sexual encounter described, my goal would be to orgasm"; $\alpha = .83$).

Sex Acts. Participants were asked about their expectation to engage in various sexual activities in the hypothetical encounter (e.g., "In the sexual encounter described,

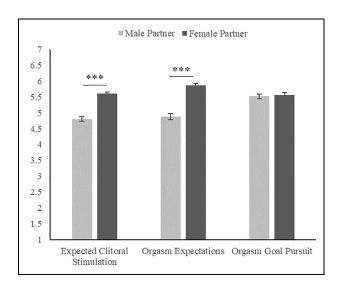


Figure 3. Independent Samples t-Test Comparisons for Bisexual Women Partnered With Men Versus Women in the Hypothetical Scenario (Study 2).

*p < .05. **p < .01. ***p < .001.

how much would you expect to experience each of the following sexual activities") using the same measure from Study 1 (adapted from Frederick et al., 2018). In Study 2, vaginal versus clitoral stimulation was distinguished for the "receive manual stimulation" and "use of a vibrator or sex toy" items.

Clitoral Stimulation. To determine women's expectations for clitoral stimulation in the encounter, we created a composite expected clitoral stimulation measure in the same manner as Study 1, which included the following items: vaginal intercourse with simultaneous clitoral stimulation, received oral sex from partner, received manual stimulation of clitoris from partner, and use of a vibrator or other sex toy on clitoris.

Results

Differences by Partner Gender. Independent *t*-tests (see Table 4) by condition indicated that bisexual women in the female partner condition reported higher expectations for clitoral stimulation and orgasm compared to those in the male partner condition (Figure 3). There were no significant differences for orgasm goal pursuit or orgasm importance. See Table 4 for all comparisons by condition, including specific sex acts, and Table 5 for correlations between variables.

Mediation Analysis. Despite the non-significant relationship between partner gender and orgasm goal pursuit, we conducted a serial mediation model to test for indirect effects. Following Study 1, we first examined two initial mediations (using the PROCESS macro; Hayes, 2022), one of which

 Table 4. Condition Differences for All Study Measures (Study 2)

		Male partner condition	. condition	Female partner condition	er condition				
Study Measure	Range	W	SD	W	SD	t	дĮ	ф	Р
Orgasm expectations	1-1	4.88	1.44	5.86	0.98	-8.73	418.66	***I00'>	0.80
Orgasm importance	1–7	5.56	1.31	5.45	1.27	0.97	479	.330	0.0
Orgasm goal pursuit	1–7	5.52	1.15	5.56	1.12	-0.34	479	.736	0.03
Expected clitoral stimulation	1–7	4.80	1.12	5.61	0.80	-9.14	430.63	***100'>	0.84
Vaginal intercourse with simultaneous clitoral	1-7	5.05	- 4-	5.12	1.49	-0.52	479	.603	0.05
stimulation ^a									
Vaginal intercourse without simultaneous clitoral stimulation	1–7	5.51	1.56	4.03	N8.I	9.63	471.55	*** 100. >	0.88
Anal intercourse	1–7	2.26	1.45	1.98	1.31	2.19	472.70	*070	0.20
Give oral sex to partner	1–7	5.44	1.37	5.91	1.17	-4.04	465.72	**100'>	0.37
Receive oral sex from partner a	1–7	4.80	1.49	5.74	1.17	-7.66	450.72	***100'>	0.70
Manual stimulation of partner's genitals	1–7	5.82	1.22	61.9	1.09	-3.59	479	***100'>	0.33
Receive manual stimulation of clitoris from partner ^a	1–7	5.39	1.38	6.22	0.85	-7.95	395.14	**100'>	0.91
Receive manual stimulation of vagina from partner	1–7	5.26	1.36	6.12	0.88	-8.21	407.83	***100'>	0.94
Gentle kissing	1–7	5.70	1.39	6.15	1.22	-3.81	470.46	***100'>	0.35
Deep kissing	1–7	80.9	1.25	6.36	60°I	-2.61	479	**600.	0.24
Use of a vibrator or other sex toy on clitoris ^a	1–7	3.95	1.78	5.36	1.29	-9.95	432.90	***100'>	0.91
Use of a vibrator or other sex toy on vagina	1–7	3.70	1.74	5.24	1.29	-10.98	438.04	***100'>	<u>8</u>
Use of a vibrator or other sex toy on partner	1–7	2.88	1.59	5.15		-16.41	472.91	***100'>	1.50
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Table 5.	Correlations E	Between Study	Variables	(Studv 2)
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Study Measure	(1)	(2)	(3)	(4)	(5)
(1) Imagined partner gender	_				
(2) Orgasm importance	04	_			
(3) Orgasm expectations	.37***	.32***	_		
(4) Orgasm goal pursuit	.02	.60***	.56***	_	
(5) Clitoral stimulation	.39***	.16***	.51***	.33***	_
(6) Age	.02	.09*	.19***	.15***	.04

Note. For imagined partner gender: I = man, 2 = woman. p < .05. **p < .01. ***p < .001.

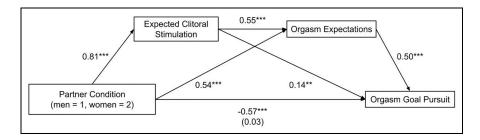


Figure 4. Serial Mediation Model for the Effect of Partner Condition on Orgasm Goal Pursuit Via Expected Clitoral Stimulation and Orgasm Expectations (Study 2)

Note. Indirect effect 2 = 0.27 [0.16, 0.39]. Indirect effect 3 (serial) = 0.22 [0.15, 0.31]. Unstandardized coefficients are shown. *p < .05. **p < .01. ***p < .001.

was pre-registered and both of which were supported (see Supplemental Material). Based on these initial mediation models, we added expected clitoral stimulation to our pre-registered mediation model to replicate the serial mediation model from Study 1. While the serial mediation was not pre-registered, expected sex acts (i.e., clitoral stimulation) were pre-registered as an exploratory variable.

The serial mediation tested the indirect relationship between partner gender and orgasm goal pursuit, mediated by expected clitoral stimulation and orgasm expectations (Figure 4). Partner gender (man = 1, woman = 2) was a significant predictor of expected clitoral stimulation, B =0.81, SE = 0.09, p < .001, 95% CI [0.64, 0.99]. Expected clitoral stimulation predicted orgasm expectations, B =0.55, SE = 0.05, p < .001, 95% CI [0.44, 0.65], and orgasm expectations predicted orgasm goal pursuit, B = 0.50, SE= 0.04, p < .001, 95% CI [0.42, 0.57]. Partner condition did not directly predict orgasm goal pursuit, p = .736. Similar to Study 1, after accounting for the higher expected clitoral stimulation and orgasm expectations with a female partner, having a female partner was associated with less orgasm goal pursuit, B = -0.57, SE = 0.09, p < .001, 95% CI [-0.75, -0.39]. Importantly, the serial mediation was significant, such that having a female partner was indirectly associated with greater orgasm goal pursuit due to greater anticipated clitoral stimulation and orgasm expectations, B (indirect effect) = 0.22, SE = 0.04, 95%CI [0.15, 0.31] (see Figure 4).

Study 2 Discussion

In Study 2, bisexual women in the female partner condition reported higher expectations for clitoral stimulation and orgasm than those in the male partner condition. There was no difference in orgasm goal pursuit by partner gender. For bisexual women, partner gender had an indirect effect on orgasm goal pursuit through an increase in expected clitoral stimulation and expectations for orgasm, which predicted greater orgasm pursuit.

General Discussion

The current project provides insight into the role of partner gender in informing sexual scripts and expectations which shape orgasm outcomes. Across two studies focusing on heterosexual, lesbian, and bisexual women, we explored how partner gender is indirectly associated with orgasm goal pursuit through differences in clitoral stimulation and orgasm expectations. WSW reported greater clitoral stimulation and orgasm expectations than WSM, and the indirect of partner gender on orgasm goal pursuit through clitoral stimulation and orgasm expectations was significant, in both studies. These findings expand on previous work which finds that heterosexual women report lower orgasm expectations compared to lesbian women, that WSW are more likely to expect or engage in clitoral stimulation than WSM, and that orgasm expectations predict

orgasm goal pursuit (Cohen & Byers, 2014; Goldey et al., 2016; Wetzel et al., 2023).

These findings provide explanations for the variation in orgasm frequency between heterosexual, bisexual, and lesbian women, and show that these explanations are determined by partner gender rather than differences inherent to any sexual orientation group. Because differences by partner gender were influenced by sexual scripts (i.e., the sex acts expected or experienced in that encounter), the orgasm gap can be addressed by shifting the sexual script for WSM, particularly by increasing clitoral stimulation. According to our results, if women expected more clitoral stimulation with men and thus, expected orgasm, women would be more likely to pursue (and experience) orgasm. These findings are in line with previous research on predictors of women's orgasm (Frederick et al., 2018; Garcia et al., 2014; Gusakova et al., 2020; Wetzel et al., 2023).

Additional comparisons between WSW and WSM in both of our studies found that WSW engaged in or expected to engage in almost all of the sex acts more frequently than WSM, although the reverse was true for intercourse without clitoral stimulation. Previous research has found that heterosexual women have a greater sex frequency than lesbian women, while lesbian women have a greater sex duration than heterosexual women (Blair & Pukall, 2014). These findings were replicated in the results of Study 1, although the effect for sex frequency was small (d = 0.3), while the effect for sex duration was large (ds >1.2). These comparisons provide further explanations for orgasm differences between WSW and WSM, as greater diversity of sex acts and longer sex duration have been shown to predict greater orgasm frequency for women, while intercourse alone is associated with the lowest orgasm frequency for women (Blair & Pukall, 2014; Frederick et al., 2018).

In addition, there were no partner gender differences on the measure of orgasm importance in either study. While WSM have been shown to prioritize their male partner's orgasm over their own (Braun et al., 2003; Salisbury & Fisher, 2014), this ambivalence toward their own orgasm, in favor of their partner's, could reflect an adjustment in line with lower orgasm expectations (Goldey et al., 2016; Wetzel & Sanchez, 2022). The fact that there were no differences in orgasm importance in our studies thus runs counter to the idea that the orgasm gap between men and women exists because (heterosexual) women do not care about orgasm.

In Study 1, lesbian women reported greater orgasm goal pursuit than heterosexual women. In Study 2, partner gender was not a significant predictor of orgasm goal pursuit for bisexual women. In both studies, being partnered with a woman had an indirect effect on orgasm goal pursuit in the direction expected (i.e., being partnered with a woman predicted greater clitoral stimulation, which predicted greater orgasm expectations, which predicted greater orgasm pursuit; see Figures 2 and 4). However, being partnered with a

woman had a negative direct effect on orgasm goal pursuit after accounting for these mediators. This relationship only emerges while controlling for two strong predictors of orgasm pursuit. Thus, it is unclear whether this statistical artifact (e.g., suppression effect) is particularly meaningful. We contend that these non-intuitive findings suggest that there is a remaining variance in orgasm goal pursuit that cannot be explained by our study. Our findings are in line with expectancy-value theory (i.e., those who expect success put stronger effort into the pursuit of that outcome) and sexual scripts theory (i.e., women expect different sex acts when having sex with women versus men), but when we account for these theories, there are likely additional variables at play that account for unexplained variance in the relationship between partner gender and orgasm goal pursuit.

In other words, orgasm goal pursuit and orgasm frequency are likely informed by additional variables beyond clitoral stimulation and orgasm expectations (e.g., perceived partner's orgasm pursuit, entitlement to pleasure, sexual communication; Conley & Klein, 2022; Klein & Conley, 2022; Jones et al., 2018; Wolfer & Carmichael, 2022). These additional factors may contribute to orgasm differences between sexual orientation groups of women, and between men and women. For example, even when clitoral stimulation is included, heterosexual couples may not prioritize it to the point where orgasm is feasible (e.g., not enough focus or duration). While our measure captures the occurrence of clitoral sex acts, not enough or not the right kind of clitoral stimulation is theorized to be the source of 78% of orgasm difficulty for WSM (Mintz, 2017). In addition, when women have sex with men, it may take more intentional effort to overcome the prioritization of men's orgasm in the typical heterosexual script (Willis et al., 2018).

Implications

These results suggest that partner gender plays a vital role in orgasm differences between WSW and WSM; specifically, women expect more clitoral stimulation and thus, more orgasms when they have sex with other women, which predicts their own pursuit of orgasm. Thus, these results have implications for the orgasm gap for WSM. Men who are partnered with women could help to increase orgasm frequency for their partners by engaging in clitorally focused activities more often and for a longer duration. Replacing typical heterosexual sexual scripts with those that prioritize turn-taking and the incorporation of sufficient clitoral stimulation is vital to close the heterosexual orgasm gap (Mahar et al., 2020). Men should also work to create sexual environments that are conducive to their partners' orgasm goal pursuit (Wetzel et al., 2023) and to open sexual communication. Men can also prioritize the stimulation of their partner before or after their own orgasm, rather than letting their orgasm signal the end of sex (Mahar et al., 2020). The orgasm gap for WSM is reflective of a larger gender equity issue, in which women are socialized into an experience of sexuality that is inherently less desirable than men's (see Conley & Klein, 2022). By addressing some of the issues in the heterosexual sexual script which shape these differing expectations, we can begin to work toward pleasure equity in the gendered sexual experience.

Limitations and Future Directions

This research should be interpreted in the context of limitations. Importantly, Study 1 utilized a correlational design and cannot provide causal explanations. Mediation analyses illustrate relationships between these variables but cannot establish the predictive direction between them. The current study was limited to cisgender women's experiences with orgasm when partnered with women or men and does not consider the experience of gender minorities (i.e., transgender and gender non-conforming individuals).

In addition, while most of the sex acts included in the clitoral stimulation measure directly referenced clitoral stimulation, some of the acts were included based on inferred clitoral stimulation (e.g., oral sex). The items included in the clitoral stimulation measure were also refined between Studies 1 and 2, meaning that differences in reports between actual (Study 1) and expected (Study 2) clitoral stimulation could have been due to differences in the measure or to differences in expectations versus experiences.

In Study 2, participants responded to a short, hypothetical vignette that does not reflect the complexity of real-world sexual encounters. While expectations are vital for informing behaviors, they cannot substitute for the actual behaviors themselves, nor the other complex factors and competing goals at play in real-life sexual encounters. In addition, the experiences of bisexual women, who may engage in sexual encounters with women and men, are not a direct replication of lesbian or heterosexual women's experiences. Future research should further examine the influence of partner gender and orgasm goal pursuit on orgasm frequency in an experimental context.

Conclusion

Overall, the current research provides information to further explain orgasm differences between WSW and WSM by utilizing samples of lesbian, bisexual, and heterosexual women. We find that WSW report greater clitoral stimulation and orgasm expectations than WSM, which influence orgasm goal pursuit and orgasm frequency. These results suggest that partner gender plays an important role in the sexual orientation differences that have been observed in women's orgasm frequency, because of the differing expectations and sexual scripts associated with sexual encounters with women versus men.

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Data Statement

Data and materials are available at https://osf.io/f3s5w/.

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Supplemental Material

Supplemental material is available online with this article.

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