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# Differences in Orgasm Frequency Between Gay, Lesbian, Bisexual, and Heterosexual Men and Women in a U.S. National Sample

## **Comments**

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Differences in Orgasm Frequency Between Gay, Lesbian, Bisexual, and Heterosexual  
Men and Women in a U.S. National Sample

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24 **ABSTRACT**

25 There is a notable gap between heterosexual men and women in frequency of orgasm during sex.  
26 Little is known, however, about sexual orientation differences in orgasm frequency. We  
27 examined how over 30 different traits or behaviors were associated with frequency of orgasm  
28 when *sexually intimate* during the past month. We analyzed a large U.S. sample of adults ( $N =$   
29 52,588) who identified as heterosexual men ( $n = 26,032$ ), gay men ( $n = 452$ ), bisexual men ( $n =$   
30 550), lesbian women ( $n = 340$ ), bisexual women ( $n = 1112$ ), and heterosexual women ( $n =$   
31 24,102). Heterosexual men were most likely to say they usually-always orgasmed when sexually  
32 intimate (95%), followed by gay men (89%), bisexual men (88%), lesbian women (86%),  
33 bisexual women (66%), and heterosexual women (65%). Compared to women who orgasmed  
34 less frequently, women who orgasmed more frequently were more likely to: receive more oral  
35 sex, have longer duration of last sex, be more satisfied with their relationship, ask for what they  
36 want in bed, praise their partner for something they did in bed, call/email to tease about doing  
37 something sexual, wear sexy lingerie, try new sexual positions, anal stimulation, act out  
38 fantasies, incorporate sexy talk, and express love during sex. Women were more likely to orgasm  
39 if their last sexual encounter included deep kissing, manual genital stimulation, and/or oral sex in  
40 addition to vaginal intercourse. We consider sociocultural and evolutionary explanations for  
41 these orgasm gaps. The results suggest a variety of behaviors couples can try to increase orgasm  
42 frequency.

43

44 **KEYWORDS:** orgasm; orgasm frequency; communication; relationship length; sex differences,  
45 sexual orientation

46

## 47 INTRODUCTION

48 A wide array of magazines and sex guides promise to help women achieve orgasm more  
49 reliably during sexual activity with their partners (Solot & Miller, 2007). This stream of tips,  
50 tricks, and strategies designed to elicit the “elusive female orgasm” suggests that people believe  
51 that the female orgasm is far more challenging to attain than the male orgasm (Cass, 2007). The  
52 research literature bears this out, with findings from several U.S. national studies showing men  
53 report experiencing orgasm during sexual activity much more frequently than women (Garcia,  
54 Lloyd, Wallen, Fisher, 2014; Herbenick et al., 2010; Laumann, Gagnon, Michael, & Michaels,  
55 1994). Scientists and social commentators have offered a variety of explanations for this “orgasm  
56 gap” between men and women, ranging from sociocultural (Armstrong, England, & Fogerty,  
57 2012; Gerhard, 2000) to biological (Lloyd, 2005, 2015; Puts, Dawood, & Welling, 2012; Wallen  
58 & Lloyd, 2011). There appear to be, however, multiple orgasm gaps: lesbian women orgasm  
59 substantially more frequently than heterosexual women, and heterosexual men orgasm more  
60 frequently than lesbian women (Coleman, Hoon, & Hoon, 1983; Garcia et al., 2014). But these  
61 findings require further investigation, because nearly all research on the topic of orgasm has  
62 focused on heterosexual men and women.

63 Examining the factors linked to orgasm frequency has practical implications for  
64 understanding and promoting sexual health, and can also inform theoretical debates on the  
65 etiology of orgasm. Women report more satisfaction with their relationships when their orgasms  
66 were more frequent (Young, Denny, Luquis, & Young, 1998) and more consistent (Klapilová,  
67 Brody, Krejčová, Husárová, & Binter, 2015). Furthermore, people who orgasm more frequently  
68 report more sexual satisfaction (Haavio-Mannila & Kontula, 1997; Hurlbert, White, Powell, &  
69 Apt, 1993). The factors that promote and inhibit orgasm as a desired outcome of partnered sexual  
70 activity, particularly among women, have been hotly debated, especially by evolutionary

71 scientists interested in whether or not orgasm is an adaptation (Lloyd, 2005) and by scholars  
72 interested in psychosocial barriers to women's sexual pleasure (Armstrong, England, & Fogarty,  
73 2012; Basson, 2003).

74 The first goal of the current research was to use a broad U.S. national sample of adults to  
75 examine gender and sexual orientation differences in orgasm frequency. The second goal was to  
76 examine several of the factors and practices that are potentially linked to orgasm frequency,  
77 including sociodemographic characteristics, oral sex frequency, sexual communication  
78 strategies, mood setting, trying a greater variety of sexual practices with their partner,  
79 incorporating specific sex behaviors into their last sexual encounters, and relationship  
80 satisfaction.

### 81 **Gender Differences and Sexual Orientation Differences in Orgasm Frequency**

82 An orgasm is characterized by a series of muscle contractions in the genital area resulting  
83 in the release of sexual tension and is accompanied by the subjective experience of pleasurable  
84 sensations (Masters & Johnson, 1966). It has long been known that men report more frequent  
85 and more predictable orgasms than women (Kinsey, Pomeroy, Martin, & Gebhard, 1953;  
86 Laumann et al., 1994; Masters & Johnson, 1966). This difference in orgasm frequency has been  
87 shown repeatedly across different studies (for a review, see Lloyd, 2005). For example, the  
88 National Survey of Sexual Health and Behavior found that 91% of men and 64% of women aged  
89 18-59 reported orgasm during their most recent sexual event (Herbenick et al., 2010).  
90 Heterosexual men do not necessarily recognize the extent to which they orgasm more frequently  
91 than women. Researchers have concluded that men systematically overestimate the orgasm  
92 frequency of their female partners (Laumann et al., 1994; Roberts, Kippax, Waldby, &  
93 Crawford, 1995; Von Sydow, 2002).

94           There has been substantial focus on the difference in orgasm frequency between  
95 heterosexual men and women, but how orgasm varies across sexual orientations is not well  
96 understood. In one recent large scale national study of 6,151 single men and women in the U.S.,  
97 participants were asked what percentage of the time they orgasm “when having sex with a  
98 familiar partner” (Garcia et al., 2014, p. 3). Lesbian women reported experiencing orgasms at a  
99 significantly higher rate (75%) than heterosexual (62%) or bisexual (58%) women. Among men,  
100 there were no significant differences between heterosexual (86%), gay (85%), or bisexual (78%)  
101 men. The current study provides the opportunity to further examine sexual orientation  
102 differences among men and women, with respect to the sexual practices they engage in with their  
103 current relationship partner.

#### 104 **Sexual Practices Linked to Orgasm Frequency**

105           MacNeil and Byers (2005) proposed that communication about sexuality is elemental to  
106 the “development and maintenance of satisfying sexual relationships.” Communication allows  
107 couples to articulate and explore their sexual desires and interests. Sexual communication tends  
108 to be lacking among couples experiencing orgasmic difficulty (Kelly, Strassberg, & Turner,  
109 2004), and communication skills are a part of cognitive-behavioral therapy in the treatment of  
110 anorgasmia (Meston, Hull, Levin, & Sipski, 2004). There has been relatively little empirical  
111 research, however, on the role of partner communication in promoting orgasm (Meston, Levin,  
112 Sipski, Hull, & Heiman, 2004). Nonetheless, researchers have proposed that communication  
113 helps couples promote behaviors that increase the likelihood of orgasm occurrence, such as  
114 manual stimulation and oral sex. In one national study of Australian women, participants were  
115 asked about the sexual practices they engaged in during their last sexual encounter and whether  
116 they orgasmed. Of women who had only vaginal intercourse during their last sexual encounter,  
117 50% reported an orgasm. In contrast, orgasms were reported by 73% of women who reported

118 vaginal intercourse and manual stimulation, and by 86% of women who reported vaginal  
119 intercourse, manual stimulation, and oral sex (Richters, de Visser, Rissel, & Smith, 2006).

120 Behaviors that promote orgasm extend far beyond vaginal intercourse, oral sex, and  
121 manual stimulation. Neglected in most research are common behaviors that likely increase  
122 orgasm frequency, including acts of sexual variety (e.g., trying new sexual positions, wearing  
123 lingerie, anal stimulation) and mood setting (e.g., using candles or music to create a romantic  
124 mood). As people become habituated to sex with their partner, the feeling of novelty and  
125 accompanying arousal may diminish, and keeping things varied could promote more frequent  
126 orgasms. Furthermore, several recent studies have pointed to other intimate behaviors that  
127 promote sexual satisfaction, but whether that directly impacts orgasm is not yet known. For  
128 instance, kissing/cuddling is linked to sexual satisfaction for both men and women (Heiman et  
129 al., 2011). More generally, people report greater sexual satisfaction when they engage in more  
130 foreplay, have longer sexual encounters, and engage in more affectionate behaviors after sex  
131 (Muisse, Giang, & Impett, 2014), but there has been limited recent research on these aspects of  
132 people's sex lives.

133 In terms of personal characteristics, some research has found that women with more  
134 education have more frequent orgasm (González, Viáfara, Caba, Molina, & Ortiz, 2006). In two  
135 studies, relative to younger women in the samples, older women were more likely to orgasm (age  
136 range, 18-44; Boroditsky, Fisher, & Bridges, 1999; age range, 18-59; Herbenick et al., 2010).  
137 Older women may have become more comfortable with their sexuality and learned what works  
138 to make them orgasm with their partner(s). In contrast, younger men are more likely to report  
139 more frequent orgasms (Herbenick et al., 2010), possibly due to older men having age-related  
140 decreases in sexual motivation and more problems with erectile function (see Gray & Garcia,  
141 2012). Finally, the association between orgasm frequency and relationship satisfaction is likely



142 bidirectional: people who are more satisfied with their relationships are likely motivated to  
143 engage in more intimate practices that enhance sexual experiences and orgasm frequency, and  
144 more frequent orgasms enhance positive feelings about the relationship overall (Young, Denny,  
145 Luquis, & Young, 1998).

## 146 **Aims and Hypotheses**

147       The present study provided the opportunity to explore what differentiates gay, lesbian,  
148 bisexual, and heterosexual men and women who are relatively high and low in orgasm frequency  
149 in a large and diverse sample. Consistent with the existing literature, we hypothesized an overall  
150 gender difference, with men reporting more frequent orgasms, but that this gender difference was  
151 particularly likely to emerge among heterosexual participants (*H1a*). With respect to the effects  
152 of sexual orientation within each gender, we did not expect differences among men (*H1b*), but  
153 did hypothesize that lesbian women would report more frequent orgasms than heterosexual  
154 women (*H1c*). We also asked participants about their partner's orgasm frequencies. We expected  
155 that reports of male partner orgasm frequencies would be higher than female partner orgasm  
156 frequencies. Therefore, we expected that heterosexual women and gay men would report higher  
157 rates of orgasm for their partner than would heterosexual men and lesbian women (*H2*).

158       Further, this study extends the literature on sexual practices and demographic factors that  
159 are associated with greater orgasm frequency in men and women. One purpose of this study was  
160 to create a profile of what differentiates men and women who orgasm more or less frequently.  
161 Compared to people with less frequent orgasms, we predicted that people with more frequent  
162 orgasms would report: being younger (men only; *H3a*); being in a relationship with their partner  
163 for a longer period of time (women only; *H3b*); engaging in more oral sex, acts of sexual variety  
164 in their sexual lives, communication, and mood setting techniques (*H4*); combining multiple  
165 sexual activities during their last sexual encounter (e.g., vaginal intercourse, oral sex, manual

166 stimulation of genitals, and deep kissing) (*H5*); longer duration of their last sexual encounter  
167 (*H6*); and greater relationship satisfaction (*H7*).

168 Post-hoc analyses were conducted to compare orgasm frequency between lesbian and  
169 heterosexual women.

## 170 **METHOD**

### 171 **Participants**

172 The present study was based on secondary analyses of anonymous data collected via a  
173 survey posted on the official website of NBC News for ten days. The sample included 52,588  
174 men and women who fit the following criteria: aged 18-65 years; completed the full survey via  
175 the NBC News entry portal; indicated they were married, remarried, cohabiting, or dating/seeing  
176 one person; and reported being intimate in the past month in response to the question about  
177 orgasm frequency over the last month.

178 The average age in the analyzed sample ( $N = 52,588$ ) was 37.2 years ( $SD = 10.6$ ) for  
179 women and 42.4 years ( $SD = 9.7$ ) for men. The sample included participants who identified as  
180 heterosexual men ( $n = 26,032$ ), gay men ( $n = 452$ ), bisexual men ( $n = 550$ ), lesbian women ( $n =$   
181 340), bisexual women ( $n = 1112$ ), or heterosexual women ( $n = 24,102$ ). Table 1 shows key  
182 demographics for the overall sample and for men and women of different sexual orientations.  
183 Unfortunately, we did not have information on the gender of the person's partner. In a different  
184 dataset collected via the same website (Frederick & Fales, 2016), most bisexual men reported a  
185 female partner (83%), followed by no partner (9%) or male partner (8%). Most bisexual women  
186 reported a male partner (82%), followed by no partner (10%) or a female partner (8%).

187 The study was advertised as being on "Love and Sex" in order to attract a diverse group  
188 of men and women. Market research on NBCNews.com (formerly msnbc.com) shows that, at the  
189 time of the surveys, it routinely ranked among one of the most popular websites in the United

190 States. Its 58 million unique monthly visitors included a broad diversity of people in terms of  
191 age, income, and political orientation (NBCNews.com Media Kit, 2012). It is important to note  
192 that msnbc.com, the general news website, was a different entity than MSNBC TV and had  
193 substantially different demographics, including approximately equal numbers of Democrat and  
194 Republican visitors. Datasets on various topics garnered through this site between 2002 and 2012  
195 have been used to examine mate preferences (Fales et al., 2016), sexual jealousy (Frederick &  
196 Fales, 2016), sexual regrets (Galperin et al., 2013), sexual experience (Frederick & Jenkins,  
197 2015), sexual satisfaction (Frederick, Lever, Gillespie, & Garcia, 2016), gender differences in  
198 beliefs about who should pay for dates (Lever, Frederick, & Hertz, 2015), friendship (Gillespie,  
199 Frederick, Harari, & Grov, 2015; Gillespie, Lever, Frederick, & Royce, 2015), personality,  
200 attachment style, and body satisfaction (Frederick, Sandhu, Morse, & Swami, 2016), and aspects  
201 of body image (Frederick, Lever, & Peplau, 2007; Frederick, Peplau, & Lever, 2006, 2008;  
202 Lever, Frederick, Laird, & Sadeghi-Azar, 2007; Lever, Frederick, & Peplau, 2006; Peplau et al.,  
203 2009).

## 204 **Outcome Variables**

### 205 **Own and partner orgasm frequency in past month**

206 Participants were asked, “During the past month, how often did [you]/[your partner]  
207 reach orgasm when you and he or she were intimate?” (1 = Never, 2 = Rarely, 3 = About half of  
208 the time, 4 = Usually, 5 = Always). Participants could also indicate “not applicable, we were not  
209 intimate” and these participants were excluded from the dataset. The full continuous variable was  
210 used in the regression. A major goal of the study was to create a profile of the attitudes and  
211 behaviors of people who orgasm frequently versus rarely. We divided participants into those  
212 whose have orgasms *Never-Rarely* (1-2; Never-Rarely), *Half of Time* (3; Half of the Time), or

213 *Usually-Always* (4-5; Usually-Always). These groupings enabled us to compare the practices and  
214 attitudes of people with differing orgasm frequencies.

## 215 **Predictor Variables**

### 216 **Personal characteristics**

217 In order to retain the relative ordering of the education levels when using education as a  
218 predictor variable in regression analyses, education was coded from lower (1 = some high school  
219 education or less) to higher (5 = graduate degree). Participants indicated if their relationship  
220 length was less than 6 months, more than 6 months but less than one year, 1 year, 2 years, 3-5  
221 years, 6-10 years, 11-20 years, > 20 years. These were recoded into years as: .25, .75, 1, 2, 4, 8,  
222 16, and 30 years, respectively. Participants indicated the number of children in their home under  
223 age 21 who lived in their home at least part of the month. Response options ranged from 0 to 6+.

### 224 **Receiving and giving oral sex**

225 Participants were asked, “During your lovemaking in the past month, how often did you  
226 [*give oral sex to your partner*]/[*receive oral sex from your partner*].” Responses options (1 =  
227 Never; 5 = Always) and treatment in analyses were the same as those for the orgasm items.

### 228 **Sexual communication**

229 Participants were given a list of six different communication strategies and were asked  
230 “In the past month, have you and your partner talked about sex in any of these ways? Please  
231 select all that apply.” The full list of communication strategies are shown in Table 3. We coded  
232 affirmative responses as 1, and created a communication variable by summing the responses for  
233 the 6 items (range, 0-6).

### 234 **Acts of sexual variety**

235 Participants were given a list of 17 different activities and were asked “Have you done  
236 any of the following in the past year to improve your sex life? If so, select all that apply.” The

237 full list of activities are shown in Table 3. We coded each affirmative response as 1, and then  
238 created an acts of sexual variety variable by summing the responses for the 17 items (range, 0-  
239 17, with 0 indicating doing none of these activities and 17 indicating doing all of these  
240 activities).

#### 241 **Relationship satisfaction**

242 Participants responded to the item “I feel happy with my relationship overall” using a  
243 four point Likert scale (1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Somewhat Agree, 4  
244 = Strongly Agree). The full continuous variable was used in regression analyses. To facilitate  
245 data presentation, we also identified the percentage of participants who disagreed (1-2) versus  
246 agreed (3-4) with the statement.

#### 247 **Activities during last sexual encounter variables**

248 We also examined event-level data, which may be less prone to recall biases. Participants  
249 were asked about their activities during the last time they had sex. If these behaviors are  
250 representative of what couples typically do, they may provide information about which practices  
251 are linked to greater orgasm frequency. Consistent with the proposal that event level data is  
252 informative about general practices, 87% of women and 92% of men in this dataset who received  
253 oral sex during their last sexual encounter reported usually-always receiving oral sex in the past  
254 month. Also consistent with this proposal, reports of oral sex during last encounter were lower if  
255 they reported oral sex half of the time (50% women; 60% men) and lowest if they reported oral  
256 sex never-rarely (10% women; 12% men) during the past month. The full list of items can be  
257 seen in Table 4.

258 **Mood setting during last sexual encounter.** Five of the items described things people  
259 might have done to set the mood (e.g., by playing music in the background or lighting a candle),

260 and they could check all that applied. We coded affirmative responses as 1, and created a mood  
261 setting variable by summing up the responses for the 5 items (range 0-5).

262 **Specific acts during last sexual encounter.** Eight of the items described actions that  
263 people might have engaged in during their last sexual encounter, such as gentle kissing and  
264 receiving oral sex, and they could check all that applied. These were not summed but were  
265 examined individually.

266 **Duration of last sexual encounter.** One item assessed time spent for the last sexual  
267 encounter. Specifically, participants were asked "How much time was spent on that occasion,  
268 from time physical contact began until it ended (including kissing, petting, etc.)? The options  
269 were less than 15 minutes, 15-30 minutes, 30-60 minutes, 1-2 hours, or greater than 2 hours. For  
270 regression analyses, these were recoded as 7.5, 22.5, 45, 90, and 120 minutes, respectively.

## 271 **Data Analysis**

272 Due to the large sample size, even minuscule effects emerged as statistically significant  
273 in the full sample (e.g.,  $\beta$ s as small as .02 and percentage differences as small as 1 percentage  
274 point), making effect size relatively important to emphasize. For regression analyses, we present  
275 the standardized regression coefficients ( $\beta$ ), and we elected to highlight statistically significant  
276 results in the text when they reflected  $\beta$  values greater than  $|\cdot 09|$ .

277 We conducted regression analyses examining the predictors of own orgasm frequency  
278 and of partner orgasm frequency (Table 2). Model 1 includes all of the relevant predictors,  
279 including relationship satisfaction. Model 2 again presents the links between the predictors and  
280 outcomes, but with relationship satisfaction removed. This is due to the fact that orgasm  
281 frequency might be a component of overall relationship satisfaction, and thus controlling for  
282 relationship satisfaction presents the logical problem of partially controlling for orgasm  
283 frequency when attempting to predict orgasm frequency. The pattern of results was generally

284 similar in Model 1 and Model 2, except the effects of the other predictors generally became  
285 stronger when relationship satisfaction was removed. We show the results for both models in  
286 Table 2, but focus on the patterns found in Model 2 in the Results section. Skewness was low for  
287 all continuous variables ( $< |1.6|$  for all variables and  $< |1.0|$  for majority of variables), as was  
288 kurtosis ( $< |2.0|$ , except for sex frequency = 2.4). Collinearity diagnostics revealed that  
289 multicollinearity was low for all predictors (all Tolerance values .50-1.0, all VIF values 1.0-2.0).

290 We also divided the participants into three groups of men and women who experienced  
291 orgasms never-rarely, half of the time, or usually-always. We then conducted chi-square analyses  
292 (or Fisher's Exact Tests when appropriate) when examining the associations between orgasm  
293 frequency and other variables. This allowed us to create a profile of the behaviors that men and  
294 women who never-rarely versus usually-always experience orgasm (see Tables 3-4). Finally, we  
295 present how orgasm frequency was associated with different combinations of behaviors for  
296 women (vaginal intercourse, oral sex, manual stimulation of genitals, deep kissing).

297 We do not present results separately by ethnicity because a series of one-way ANOVAs  
298 examining the effects of ethnicity on all of the continuous predictor and outcome variables  
299 showed that even when the effects were statistically significant, they were minuscule in size (all  
300  $partial\ eta^2 < .01$ , except for age,  $partial\ eta^2 = .013$ ).

## 301 RESULTS

302 **Hypothesis 1. Men Will Report More Frequent Orgasms than Heterosexual Women (1a),**  
303 **No Differences Are Hypothesized Among Men (1b), Lesbian Women Will Orgasm More**  
304 **Often than Heterosexual Women (1c)**

305 The results were consistent with the hypotheses 1a-c (Fig. 1). Heterosexual men were  
306 more likely than heterosexual women to always orgasm (75% HM vs. 33% HW;  $p < .001$ ) and  
307 always-usually orgasm (95% HM vs. 65% HW;  $p < .001$ ) when "sexually intimate" during the

308 past month. Lesbian women were less likely than heterosexual men to always orgasm (59% LW  
309 vs. 75% HM;  $p < .001$ ) or usually-always orgasm (86% LW vs. 95% HM;  $p < .001$ ). Lesbian  
310 women were, however, more likely than heterosexual women to always orgasm (59% LW vs.  
311 33% HW;  $p < .001$ ) or usually-always orgasm (86% LW vs. 65% HW;  $p < .001$ ). The patterns  
312 for bisexual women were similar to heterosexual women, and patterns for gay and bisexual men  
313 were similar to those of heterosexual men, except that they were slightly less likely to always  
314 orgasm when sexually intimate.

315 **Hypothesis 2. People With Male Partners Will Report More Orgasms By Partners, and**  
316 **Lesbian Women Will Report More Frequent Partner Orgasms than Heterosexual Men**

317 Consistent with the hypothesis, heterosexual women were more likely than heterosexual  
318 men to say their partners always orgasm (80% HW vs. 41% HM;  $p < .001$ ) or usually-always  
319 orgasm (95% HW vs. 73% HM;  $p < .001$ ; Figure 2). Gay men were also more likely than  
320 heterosexual men to say their partners always orgasm (69% GM vs. 41% HM;  $p < .001$ ) or  
321 usually-always orgasm (89% GM vs. 73% HM;  $p < .001$ ). Also consistent with the hypotheses,  
322 lesbian women were more likely than heterosexual men to report that their partners always (66%  
323 LW vs. 41% HM;  $p < .001$ ) or usually-always orgasm (87% LW vs. 73% HM;  $p < .001$ ).

324 Heterosexual men's estimates of their partner's orgasm frequencies were somewhat  
325 higher than heterosexual women's own reported orgasm frequency. One-third (33%) of  
326 heterosexual women reported that they usually-always orgasm, whereas 41% of heterosexual  
327 men estimated that their partners orgasm usually-always ( $p < .001$ ).

328 **Hypothesis 3. Age and Relationship Length Will Relate to Orgasm Frequency**

329 In the regression analyses (Table 2, top half), none of the associations between  
330 demographic characteristics and own orgasm frequency exceeded  $\beta = |.09|$  for women.  
331 Consistent with the hypotheses, younger heterosexual, gay, and bisexual men were more likely to



332 orgasm. Men who were in relationships longer were also more likely to orgasm, although this  
333 association did not exceed  $\beta = .09$  for heterosexual men.

334 **Hypothesis 4. People Who Have More Oral Sex, Acts of Sexual Variety, Communication,**  
335 **and Mood Setting Techniques Will Orgasm More Frequently**

336 **Oral sex**

337 Consistent with the hypotheses, regression analyses showed that people who received  
338 oral sex more frequently had orgasms more frequently (Table 2, top half). This was true for  
339 heterosexual women ( $\beta = .19$ ), lesbian women ( $\beta = .26$ ), bisexual women ( $\beta = .24$ ), gay men ( $\beta$   
340  $= .18$ ), and bisexual men ( $\beta = .13$ ). The only association that did not exceed  $\beta = .09$  was for  
341 heterosexual men ( $\beta = .06$ ). In parallel, people who gave oral sex more frequently generally  
342 reported that their partner orgasmed more frequently (Table 2, bottom half). This was true for  
343 lesbian women ( $\beta = .29$ ), heterosexual men ( $\beta = .20$ ), gay men ( $\beta = .11$ ), and bisexual men ( $\beta =$   
344  $.22$ ). As shown on Table 3, women who usually-always orgasm were more likely than women  
345 who never-rarely orgasm to report that they usually-always receive oral sex (36% vs. 13%;  $p <$   
346  $.001$ ). In contrast, women who usually-always orgasm were much less likely to report that they  
347 never-rarely receive oral sex (38%) than women who never-rarely orgasm (71%;  $p < .001$ ).

348 **Communication techniques**

349 The association between number of communication strategies and orgasm frequency did  
350 not exceed  $\beta = .09$  for any group when controlling for other variables (Table 2). As shown in  
351 Table 3, women and men who orgasmed more frequently were more likely to engage in five of  
352 the six communication strategies. In particular, men and women who orgasmed more frequently  
353 were more likely to ask for something they wanted in bed, praise their partner for something they  
354 did in bed, and call/email to tease about doing something sexual.

355 **Acts of sexual variety**

356           Although the associations between number of acts of sexual variety and orgasm  
357 frequency were generally in the predicted direction, none exceed  $\beta = |.09|$  when controlling for  
358 other variables (Table 2). As shown in Table 3, women and men who orgasmed more frequently  
359 were more likely to engage in almost all of the acts of sexual variety. Women who usually-  
360 always orgasm were especially more likely than women who never-rarely orgasm say that they  
361 involved the following in their sex lives: wearing sexy lingerie (+21%), trying a new sexual  
362 position (+19%), talking or acting out fantasies (+16%), or trying anal stimulation (+14%). Men  
363 who usually-always orgasm were more likely than men who never-rarely orgasm say that they  
364 involved the following in their sex lives: lingerie/underwear (+24%), mini-massage or backrub  
365 (+17%), taking shower/bath (+21%), or a date night to make sure they had sex (+14%).

#### 366 **Mood setting**

367           There were no statistically significant associations between number of mood setting  
368 techniques and orgasm frequency that exceeded  $\beta = |.09|$  (Table 2). As shown in Table 4, men  
369 who orgasmed more frequently were more likely to engage in two of the mood setting strategies,  
370 and women were more likely to engage in all of them. Women who usually-always orgasm were  
371 especially more likely than women who never-rarely orgasm to report saying “I love you”  
372 (+17%) or engaging in sexy talk (+24%) during their last sexual encounter. The same was true  
373 for men (“I love you,” +15%; engaging in sexy talk, +15%).

#### 374 **Hypothesis 5. Women Who Had Longer Duration of Sex During Their Last Sexual** 375 **Encounter Will Orgasm More Frequently**

376           Consistent with the hypothesis, heterosexual women ( $\beta = .13$ ) and bisexual women ( $\beta =$   
377  $.17$ ) who had longer sex sessions were more likely to orgasm (Table 2, top half). The same did  
378 not hold true for lesbian women ( $\beta = .08$ ). Consistent with this pattern, heterosexual men ( $\beta =$   
379  $.12$ ) and bisexual men ( $\beta = .11$ ) who had longer sex sessions reported that their partners were

380 more likely to orgasm. As shown in Table 4, women who usually-always orgasm were more  
381 likely than women who never-rarely orgasm to report that their last sexual encounter lasted 1+  
382 hour (13% vs. 6%) or 30-60 minutes (37% vs. 19%). In contrast, women who usually/always  
383 orgasm compared with women who never-rarely orgasm were much less likely to report that sex  
384 lasted 15 minutes or less (11% vs. 39%). Men who usually-always orgasm were also less likely  
385 than men who never-rarely orgasm to report that sex lasted 15 minutes or less (17% vs. 28%).

### 386 **Hypothesis 6. People with Greater Relationship Satisfaction Will Orgasm More Frequently**

387 When we added relationship satisfaction to the regression model (Model 2), relationship  
388 satisfaction became one of the strongest predictors for women (Table 2, top half). Consistent  
389 with the hypothesis, heterosexual women ( $\beta = .18$ ), lesbian women ( $\beta = .27$ ), bisexual women ( $\beta$   
390  $= .20$ ), and heterosexual men ( $\beta = .13$ ) who had higher relationship satisfaction orgasmed more  
391 frequently. The same pattern did not hold for gay and bisexual men. Heterosexual women who  
392 were more satisfied with their relationships also reported that their partner orgasmed more  
393 frequently ( $\beta = .12$ ) (Table 2, bottom half). These findings should be interpreted with caution,  
394 however, because orgasm frequency may be an element that makes up relationship satisfaction.  
395 As shown in Table 4, women who usually-always orgasm were more likely than women who  
396 never-rarely orgasm to be satisfied with their relationship, as were men.

### 397 **Hypothesis 7. Women Who Combine Multiple Sexual Acts Will Orgasm More Frequently**

398 Women who incorporated multiple behaviors into their last sexual encounter reported  
399 higher overall orgasm frequency over the last month (Table 4). Women who received oral sex  
400 during their last sexual encounter were systematically more likely to report more frequent  
401 orgasms than women who did not, regardless of what other behaviors they engaged in (Table 5).  
402 Relatively few heterosexual women who engaging orgasmed usually-always (35%) compared to  
403 62% of women who engaged only oral sex. Most heterosexual women who combined oral sex,

404 manual genital stimulation, and deep kissing reported usually-always orgasming (80%), as did  
405 women who added vaginal intercourse to that combination (77%).

406 Lesbian women were more likely than heterosexual women to orgasm when they  
407 engaged in comparable behaviors, including oral sex, manual genital stimulation, and deep  
408 kissing (91% vs. 80%;  $p = .003$ ), genital stimulation and deep kissing (80% vs. 60%;  $p = .007$ ),  
409 or only manual genital stimulation (74% vs. 52%;  $p = .050$ ). For some combinations of  
410 behaviors, the patterns were in the direction of lesbian women reporting more frequent orgasms,  
411 but the differences did not reach statistical significance: oral-vaginal-genital-kissing (90% vs.  
412 77%;  $p = .056$ ); vaginal-genital-kissing (79% vs. 67%;  $p = .077$ ).

### 413 **Further Comparisons of Lesbian and Heterosexual Women**

414 The differences between lesbian and heterosexual women are worth further investigation.  
415 We conducted a linear regression examining the size of differences between heterosexual and  
416 lesbian women in orgasm frequency when covariates were added to the model (all predictors  
417 listed in Table 2). Heterosexual women were coded as 0 and lesbian women as 1. We also  
418 conducted a logistic regression examining the likelihood of reporting always orgasming. Even  
419 with all of these additional predictors in the model, lesbian women reported more frequent  
420 orgasms than heterosexual women in the linear regression ( $\beta = .05$ ,  $p < .001$ ). In the logistic  
421 regression, lesbian women had three times greater odds than heterosexual women of always  
422 experiencing orgasm ( $OR = 2.98$ ,  $p < .001$ ).

## 423 **DISCUSSION**

### 424 **Who Experiences Orgasm More Frequently When Sexually Intimate?**

425 The results of the current study provide a clear picture of who is most likely to orgasm  
426 during partnered sexual activity and which factors predict orgasm frequency. Overall, men were  
427 more likely to orgasm than women, which replicates a wide body of existing literature (Garcia et

428 al., 2014; Herbenick et al., 2010; Laumann et al., 1994; Lloyd, 2005). Consistent with the  
429 findings of Garcia et al., we found multiple orgasm gaps across sexual orientations: lesbian  
430 women reported more frequent orgasms than heterosexual women, and men reported more  
431 frequent orgasms than lesbian women. People's reports of their partner's orgasm frequencies  
432 mirrored these patterns: people with male partners report more frequent orgasm for their partners  
433 than people with female partners, and lesbian women report higher orgasm frequency for their  
434 partners than heterosexual men report for their partners.

435         Women who orgasmed more frequently reported receiving more oral sex, having sex for  
436 longer durations, and being more satisfied with their relationships. Of particular importance for  
437 women was incorporating oral sex along with other activities during a sexual encounter. Some of  
438 the other behaviors that most strongly differentiated women who orgasmed frequently from  
439 women who did not were: asking for what they wanted in bed, praising their partner for  
440 something they did in bed, calling or emailing to tease about doing something sexual, wearing  
441 sexy lingerie, trying new sexual positions, anal stimulation, and talking about or acting out  
442 sexual fantasies, engaging in sexy talk, and expressions of love during sex.

443         Consistent with past research, older men reported less frequent orgasms than younger  
444 men, which may reflect men's age-related declines in health and in androgen levels (Gray &  
445 Garcia, 2012). Some of the behaviors that most strongly differentiated men who orgasm  
446 frequently from men who did not included incorporating a mini-massage or backrub, taking  
447 shower/bath with a partner, and a date night to make sure they had planned sexual activity.

448         One interesting finding of note was that 41% of heterosexual men reported that their  
449 partner orgasms usually-always compared to 33% of heterosexual women reporting that they  
450 usually-always orgasm. Part of this difference in perception could be due to women "faking"  
451 orgasms, which research has suggested women will do for a variety of reasons, including out of

452 love for their partner, to protect their partner's self-esteem, intoxication, or to bring the sexual  
453 encounter to an end (Cooper, Fenigstein, & Fauber, 2014; Kaighobadi, Shackelford, & Weekes-  
454 Shackelford, 2012; Muehlenhard & Shippee, 2010). It is promising, however, considering sexual  
455 double standards surrounding sexual pleasure (e.g., Armstrong, England, & Fogarty, 2012), that  
456 the difference in heterosexual men's perceptions and heterosexual women's reports was small (8  
457 percentage points), suggesting most men have good awareness of women's orgasm frequency.

### 458 **Limitations and Strengths**

459 Self-selection into surveys is a typical problem in studies conducted with college and  
460 community samples. The study was advertised as being on "sex and love" in an attempt to draw  
461 in a diverse range of people. Internet samples, however, have the advantage of being more  
462 diverse with respect to gender, sexual orientation, age, socioeconomic status, and geographic  
463 region than most convenience samples (Gosling, Vazire, Srivastava, & John 2004). Surveys can  
464 be completed with ease from the privacy of respondents' homes or workplaces, reaching  
465 individuals who would not otherwise have the opportunity to participate in research.

466 Another limitation of the current study was the reliance on one-item measures of orgasm  
467 frequency. Furthermore, when supplementing the regression analyses with reports of  
468 percentages, we divided the orgasm measure into three categories, which has the benefit of  
469 reducing the amount of information displayed but at some cost of precision in describing the  
470 results. Confidence in our measures was gained from the fact that we replicated and extended the  
471 gender and sexual orientation differences identified in the study by Garcia et al. (2014).

472 Despite these limitations, a unique aspect of the present study was inclusion of measures  
473 for a wide variety of personal characteristics and behaviors, and testing the relative strength of  
474 these as predictors of orgasm frequency. Furthermore, we assessed behaviors not routinely  
475 measured in past research, such as acts of sexual variety, mood setting techniques, expressions of

476 love during sex, and specific communication strategies. Future research should examine a  
477 broader set of communication strategies beyond the specific positive communication styles we  
478 assessed. The large sample size provided sufficient power to include a variety of predictors in the  
479 regression models and to segment women into different groups in order to examine how different  
480 combinations of behaviors during sexual activity were linked to orgasm frequency.

### 481 **Explaining Gender Differences in Orgasm Frequency**

482 A range of hypotheses have been advanced to explain the difference in men's and  
483 women's orgasm rates. These can be characterized as "sociocultural," "byproduct," and  
484 "adaptationist." We present these perspectives, and then discuss implications of the current study  
485 for reducing the orgasm discrepancy between heterosexual men and women.

#### 486 *Sociocultural explanations for the male-female orgasm gap*

487 Sociocultural researchers have emphasized how different societal attitudes, such as  
488 sexual double standards and inconsistent practices during sexual encounters, produce the orgasm  
489 gap between heterosexual men and women (Rudman, Fetterolf, & Sanchez, 2013). The stigma  
490 against women expressing sexual desire and the pressure on men to take an active role during  
491 sexual activity can prevent couples from engaging in the behaviors that are most likely to elicit  
492 orgasm in women. This stigma can lead women to not explore their own sexuality, to learn what  
493 brings them to orgasm, or to express to their partners what their sexual preferences are.

494 Due to stigma against female pleasure, some people place greater importance on men's  
495 orgasm than women's orgasm (Fahs & Frank, 2014). In interview studies, however, college men  
496 reported feeling it was their responsibility to bring their female partner to orgasm, that this is  
497 very satisfying for men, and that the absence of female orgasm is distressing (Salisbury & Fisher,  
498 2014). Some men and women, however, have mistaken beliefs about the underlying

499 physiological causes of orgasm. Nearly one-third of men incorrectly assume that most women  
500 will orgasm from penile-vaginal intercourse alone (Wade, Kremer, & Brown, 2005).

501 Many women are dissatisfied with their appearance (Forbes & Frederick, 2008;  
502 Frederick, Kelly, Latner, Sandhu, & Tsong, 2016) and weight (Frederick, Forbes, &  
503 Berozovskaya, 2008; Gray & Frederick, 2012; Swami et al., 2010), are less satisfied with their  
504 appearance than men (Frederick, Forbes, Grigorian, & Jarcho, 2007; Frederick, Jafary, Daniels,  
505 & Gruys, 2011), and are more likely than men to be self-conscious about their bodies during sex  
506 (Peplau et al., 2009). More generally, popular media promotes stigmatization of heavier men and  
507 women (Frederick, Saguy, Sandhu, & Mann, 2016; Frederick, Saguy, & Gruys, 2016; Saguy,  
508 Frederick, & Gruys, 2014) and sexualization of slender women (Roberts & Muta, 2017), and  
509 women internalize these thin-ideals as important to attain (Schaefer et al., 2015). Body  
510 dissatisfaction interferes with ability to orgasm (Erbil, 2012; Satinsky, Reece, Dennis, Sanders,  
511 & Bardzell, 2012) and body image interventions to improve body satisfaction and counteract the  
512 effects of thin ideal media could help increase orgasm frequency.

### 513 *Adaptationist explanations for the male-female orgasm gap*

514 Evolutionary perspectives have been widely applied to understand human sexuality and  
515 mate preferences (Gallup & Frederick, 2010), and multiple evolutionary explanations for  
516 understanding orgasm have been advanced. For males, insofar as male orgasm and ejaculation  
517 are tightly linked, orgasm rewards men for ejaculating and for seeking intercourse with one or  
518 more partners. A motivational system that promotes seeking a greater number or variety of  
519 reproductive opportunities can be adaptive because men's reproductive lives are not constrained  
520 by long periods of gestation and lactation, as well as biologically limiting interbirth intervals  
521 (Trivers, 1972; but see Brown, Laland, & Mulder, 2009).



522           Some evolutionary researchers propose that female orgasm also serves an adaptive  
523 function (for reviews, see Puts et al., 2012; Wheatley & Puts, 2015). One possible adaptive  
524 function is that orgasm in women facilitates bonding with a long-term romantic partner. A  
525 second hypothesis is that orgasm in women functions to promote reproduction with males with  
526 heritable traits associated with attractiveness or health, which can then be passed onto offspring.  
527 For example, women exhibit preferences for relatively taller partners (Salska et al., 2008) and for  
528 men who are muscular and toned (Frederick, Fessler, & Haselton, 2005; Frederick & Haselton,  
529 2007; Gray & Frederick, 2012), traits that are heritable. The female orgasm, therefore, is  
530 expected to be more sensitive to context and partner characteristics than male orgasm. This  
531 perspective would explain why orgasm frequency varies across women and why orgasm  
532 frequency is lower among women than among men.

533 *Byproduct explanations for the male-female orgasm gap*

534           An alternative evolutionary explanation for the lower orgasm frequency in women is that  
535 orgasm has little or no adaptive value in females: it does not promote survival or reproduction.  
536 Rather, it is an evolutionary byproduct of the male orgasm, much like male nipples are a  
537 byproduct of the female nipple (Lloyd, 2005; Symons, 1979). Consistent with the byproduct  
538 perspective, the clitoris is not necessarily directly stimulated during sexual intercourse, few  
539 women reliably achieve orgasm through penile-vaginal intercourse, there is substantial variation  
540 between women in orgasm rates, and most orgasm has not been clearly linked to fitness-relevant  
541 outcomes such as survival or number of offspring (for reviews, see Lloyd, 2005, 2015).

542           One proximate biological explanation consistent with the byproduct hypothesis has been  
543 offered to explain women's substantial variation in orgasm rates. The distance between the  
544 clitoris and the urinary meatus (Clitoris-Urinary-Meatus-Distance; CUMD) places the clitoris  
545 farther from the vaginal opening for some women than others (Wallen & Lloyd 2011). Women

546 with longer CUMDs do not reliably have orgasms with intercourse, whereas women with shorter  
547 CUMDs (2.0 cm or less) have more reliable orgasms. These findings are consistent with the view  
548 that a woman's likelihood of orgasm arises from hormonal mechanisms that direct the  
549 development of the penis (and therefore clitoris) in the fetus and infant, rather than female  
550 orgasm providing an adaptive benefit for reproduction.

### 551 **Explaining Differences in Orgasm Rate Between Lesbian and Heterosexual Women**

552       Lesbian women were more likely to orgasm than heterosexual women, even when  
553 controlling for important contributors to orgasm frequency that might vary by sexual orientation  
554 (oral sex frequency, acts of sexual variety, communication, etc). This raises the question of why  
555 lesbian women orgasm more frequently. One possibility is that lesbian women are in a better  
556 position to understand how different behaviors feel for their partner (e.g., stimulating the clitoris)  
557 and how these sensations build towards orgasm. It is quite possible that lesbian women are less  
558 likely than heterosexual men to believe that orgasms are elicited primarily by vaginal sex.  
559 Lesbian women may be more likely to hold sexual script norms regarding equity in orgasm  
560 occurrence, including a "turn-taking culture" where lesbian women are more likely to take turns  
561 receiving pleasure until each is satiated (insofar as orgasm is a desired outcome).

562       If men desire sex more frequently than women (Lippa, 2007), then there could be more  
563 sexual encounters in heterosexual relationships explicitly intended to satisfy the desires of the  
564 male partner. As a result, higher rates of orgasm in heterosexual men reflect, in part, couples  
565 creating equality in their sexual relationships by engaging in activities designed to satiate the  
566 partner experiencing intense sexual desire, rather than having a tit-for-tat expectation for orgasm.

### 567 **Conclusions**

568       Consistent with both feminist and evolutionary perspectives, orgasm frequency was  
569 lower among women than men. Relatively few heterosexual women orgasmed through vaginal

570 sex alone. Orgasm frequencies for heterosexual women only approached those for men when  
571 other behaviors were added to sexual intercourse (e.g., oral sex, manual stimulation). These  
572 findings are consistent with the view that there are biological differences between men and  
573 women in likelihood of orgasm during intercourse. The findings, however, indicate that this  
574 orgasm gap can be reduced by addressing sociocultural factors and by encouraging a wider  
575 variety of activities when men and women are sexually intimate. The fact that lesbian women  
576 orgasmed more often than heterosexual women indicates that many heterosexual women could  
577 experience higher rates of orgasm.  
578

579 **COMPLIANCE WITH ETHICAL STANDARDS**  
580

581 Ethical approval: All procedures performed in studies involving human participants  
582 were in accordance with the ethical standards of the institutional and/or national  
583 research committee and with the 1964 Helsinki declaration and its later amendments  
584 or comparable ethical standards

585 **REFERENCES**

- 586 Armstrong, E. A., England, P., & Fogarty, A. C. K. (2012). Accounting for women's orgasm and  
587 sexual enjoyment in college hookups and relationships. *American Sociological Review*,  
588 77, 435–462. doi:10.1177/0003122412445802
- 589 Basson, R. (2003). Biopsychosocial models of women's sexual response: Applications to  
590 management of 'desire disorders.' *Sexual and Relationship Therapy*, 18, 107-115.  
591 doi:10.1080/1468199031000061308
- 592 Boroditsky, R., Fisher, W. A., & Bridges, M. L. (1999). Measures of sexual and reproductive  
593 health among Canadian women [1998 Canadian Contraception Study]. *Canadian Journal*  
594 *of Human Sexuality*, 8, 175–182. doi:10.1363/3925107
- 595 Brown, G. R., Laland, K. N., & Mulder, M. B. (2009). Bateman's principles and human sex roles.  
596 *Trends in Ecology and Evolution*, 24, 297-304. doi:10.1016/j.tree.2009.02.005
- 597 Cass, V. (2007). *The elusive orgasm: A woman's guide to why she can't and how she can*  
598 *orgasm*. Boston: De Capo.
- 599 Cooper, E. B., Fenigstein, A., & Fauber, R. L. (2014). The Faking Orgasm Scale for Women:  
600 Psychometric properties. *Archives of Sexual Behavior*, 43, 423-435.  
601 doi:10.1007/s10508-013-0212-z
- 602 Erbil, N. (2013). The relationships between sexual function, body image, and body mass index  
603 among women. *Sexuality and Disability*, 31, 63-70. doi:10.1007/s11195-012-9258-4
- 604 Fahs, B., & Frank, E. (2014). Notes from the back room: Gender, power, and (in)visibility in  
605 women's experiences of masturbation. *Journal of Sex Research*, 51, 241-252.  
606 doi:10.1080/00224499.2012.745474
- 607 Fales, M. R., Frederick, D. A., Garcia, J. R., Gildersleeve, K. A., Haselton, M. G., & Fisher, H.  
608 E. (2016). Mating markets and bargaining hands: Mate preferences for attractiveness and

- 609 resources in two national U.S. studies. *Personality and Individual Differences*, 88, 78-87.  
610 doi:10.1016/j.paid.2015.08.041
- 611 Forbes, G. B., & Frederick, D. A. (2008). The UCLA Body Project II: Breast and body  
612 dissatisfaction among African, Asian, European, and Hispanic American college women.  
613 *Sex Roles*, 58, 449-457. doi:10.1007/s11199-007-9362-6
- 614 Frederick, D. A., & Essayli, J. H. (2016). Male body image: The roles of sexual orientation and  
615 body mass index across five national U.S. studies. *Psychology of Men and Masculinity*,  
616 17, 336-351. doi:10.1037/men0000031
- 617 Frederick, D. A., & Fales, M. R. (2016). Upset over sexual versus emotional infidelity among  
618 gay, lesbian, bisexual, and heterosexual adults. *Archives of Sexual Behavior*, 45, 175-191.  
619 doi:10.1007/s10508-014-0409-9
- 620 Frederick, D. A., Fessler, D. M. T., & Haselton, M. G. (2005). Do representations of male  
621 muscularity differ in men's and women's magazines? *Body Image*, 2, 81-86.  
622 doi:10.1016/j.bodyim.2004.12.002
- 623 Frederick, D. A., Forbes, G. B., & Berezovskaya, A. (2008). Body dissatisfaction and  
624 perceptions of the attractive female body among women and men from the Ukraine,  
625 Ghana, and the United States. *Psychological Topics*, 17, 203-219.  
626 doi:hrcak.srce.hr/index.php?show=clanak&id\_clanak\_jezik=51637
- 627 Frederick, D. A., Forbes, G. B., Grigorian, K. E., & Jarcho, J. M. (2007). The UCLA Body  
628 Project I: Gender and ethnic differences in self-objectification and body satisfaction  
629 among 2,206 undergraduates. *Sex Roles*, 57, 317-327. doi:10.1007/s11199-007-9251-z

- 630 Frederick, D. A., & Haselton, M. G. (2007). Why is muscularity sexy? Tests of the fitness  
631 indicator hypothesis. *Personality and Social Psychology Bulletin*, *33*, 1167-1183.  
632 doi:10.1177/0146167207303022
- 633 Frederick, D. A., Jafary, A., Daniels, E. A., & Gruys, K. (2011). Surveys and the epidemiology  
634 of body image. In T. F. Cash (Ed.), *The encyclopedia of body image and human*  
635 *appearance* (Vol. 2, pp. 766-773). San Diego: Academic Press. doi:10.1016/B978-0-12-  
636 384925-0.00121-8
- 637 Frederick, D. A., & Jenkins, B. N. (2015). Height and body mass on the mating market:  
638 Associations with number of sex partners and extra-pair sex among heterosexual men and  
639 women aged 18-65. *Evolutionary Psychology*, *13*, 1-26. doi:10.1177/1474704915604563
- 640 Frederick, D. A., Kelly, M. C., Latner, J. D., Sandhu, G., & Tsong, Y. (2016). Appearance  
641 concerns among White and Asian American women: Sociocultural predictors of body,  
642 face, and eye satisfaction. *Body Image*, *16*, 113-125. doi:10.1016/j.bodyim.2015.12.002
- 643 Frederick, D. A., Lever, J., Gillespie, B. J., & Garcia, J. R. (2016). What keeps passion alive?  
644 Sexual satisfaction is associated with sexual communication, mood setting, variety of sex  
645 acts, and frequency of sex, oral sex, and orgasm among U.S. adults. *Journal of Sex*  
646 *Research*. doi:10.1080/00224499.2015.1137854
- 647 Frederick, D. A., Lever, J., & Peplau, L. A. (2007). Interest in cosmetic surgery and body image:  
648 Views of men and women across the lifespan. *Plastic and Reconstructive Surgery*, *120*,  
649 1407-1415. doi:10.1097/01.prs.0000279375.26157.64
- 650 Frederick, D. A., Peplau, L. A., & Lever, J. (2006). The swimsuit issue: Correlates of body  
651 image in a sample of 52,677 heterosexual adults. *Body Image*, *3*, 413-419.  
652 doi:10.1016/j.bodyim.2006.08.002
- 653 Frederick, D. A., Peplau, L. A., & Lever, J. (2008). The Barbie mystique: Satisfaction with

- 654 breast size and shape across the lifespan. *International Journal of Sexual Health*, 20, 200-  
655 211. doi:10.1080/19317610802240170
- 656 Frederick, D. A., Saguy, A. C., Sandhu, G., & Mann, T. (2016). Effects of competing news  
657 media frames of weight on antifat stigma, beliefs about weight, and support for obesity-  
658 related public policies. *International Journal of Obesity*, 40, 543-549.  
659 doi:10.1038/ijo.2015.195
- 660 Frederick, D. A., Saguy, A. C., & Gruys, K. (2016). Culture, health, and bigotry: How exposure  
661 to cultural accounts of fatness shape attitudes about health risk, health policies, and  
662 weight-based prejudice. *Social Science and Medicine*, 165, 271-279.  
663 doi:10.1016/j.socscimed.2015.12.031
- 664 Frederick, D. A., Sandhu, G., Morse, P. J., & Swami, V. (2016). Correlates of appearance and  
665 weight satisfaction in a U.S. national sample: Personality, attachment style, television  
666 viewing, self-esteem, and life satisfaction. *Body Image*, 17, 191-203.
- 667 Gallup, G. G., Jr., & Frederick, D. A. (2010). The science of sex appeal: An evolutionary  
668 perspective. *Review of General Psychology*, 14, 240-250. doi:10.1037/a0020451
- 669 Galperin, A., Haselton, M. G., Frederick, D. A., Poore, J., von Hippel, W., Buss, D. M., &  
670 Gonzaga, G. C. (2013). Sexual regret: Evidence for evolved sex differences. *Archives of*  
671 *Sexual Behavior*, 42, 1145-1161. doi:10.1007/s10508-012-0019-3
- 672 Garcia, J. R., Lloyd, E. A., Wallen, K., & Fisher, H. E. (2014). Variation in orgasm occurrence  
673 by sexual orientation in a sample of US singles. *Journal of Sexual Medicine*, 11,  
674 2645-2652. doi:10.1111/jsm.12669
- 675 Gerhard, J. (2000). Revisiting "The Myth of the Vaginal Orgasm": The female orgasm in  
676 American sexual thought and second wave feminism. *Feminist Studies*, 26, 449-476.  
677 doi:10.2307/3178545



- 678 Gillespie, B. J., Frederick, D., Harari, L., & Grov, C. (2015). Homophily, close friendship, and  
679 life satisfaction among gay, lesbian, heterosexual, and bisexual men and women. *PLoS*  
680 *ONE*, *10*, e0128900. doi:10.1371/journal.pone.0128900
- 681 Gillespie, B. J., Lever, J., Frederick, D. A., & Royce, T. (2015). Close adult friendships, gender,  
682 and the life cycle. *Journal of Personal and Social Relationships*, *32*, 709-736.  
683 doi:10.1177/0265407514546977
- 684 González, M., Viáfara, G., Caba, F., Molina, T., & Ortiz, C. (2006). Libido and orgasm in  
685 middle-aged woman. *Maturitas*, *53*, 1-10. doi:10.1016/j.maturitas.2004.07.003
- 686 Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five  
687 personality domains. *Journal of Research in Personality*, *37*, 504-528.  
688 doi:10.1016/s0092-6566(03)00046-1
- 689 Gray, P. B., & Frederick, D. A. (2012). Body image and body type preferences in St. Kitts,  
690 Caribbean: A cross-cultural comparison with U.S. samples regarding attitudes towards  
691 muscularity, body fat, and breast size. *Evolutionary Psychology*, *10*, 631-655.  
692 doi:10.1177/147470491201000319
- 693 Haavio-Mannila, E., & Kontula, O. (1997). Correlates of increased sexual satisfaction. *Archives*  
694 *of Sexual Behavior*, *26*, 399-419. doi:10.1016/j.urology.2005.06.093
- 695 Heiman, J. R., Long, J. S., Smith, S. N., Fisher, W. A., Sand, M. S., & Rosen, R. C. (2011).  
696 Sexual satisfaction and relationship happiness in midlife and older couples in five  
697 countries. *Archives of Sexual Behavior*, *40*, 741-753. doi:10.1007/s10508-010-9703-3
- 698 Herbenick D., Reece M., Schick V., Sanders S. A., Dodge B., Fortenberry, J. D. (2010). An  
699 event-level analysis of the sexual characteristic sand composition among adults ages 18  
700 to 59: Results from a national probability sample in the United States. *Journal of Sexual*  
701 *Medicine*, *7*, 346-361. doi:10.1111/j.1743-6109.2010.02020.x

- 702 Hurlbert, D. F., White, L. C., Powell, R. D., & Apt, C. (1993). Orgasm consistency training in  
703 the treatment of women reporting hypoactive sexual desire: An outcome comparison of  
704 women-only groups and couples-only groups. *Journal of Behavior Therapy and*  
705 *Experimental Psychiatry, 24*, 3-13. doi:10.1016/0005-7916(93)90003-f
- 706 Kaighobadi, F., Shackelford, T. K., & Weekes-Shackelford, V. A. (2012). Do women pretend  
707 orgasm to retain a mate? *Archives of Sexual Behavior, 41*, 1121-1125.  
708 doi:10.1007/s10508-011-9874-6
- 709 Kelly, M. P., Strassberg, D. S., & Turner, C. M. (2004). Communication and associated  
710 relationship issues in female anorgasmia. *Journal of Sex and Marital Therapy, 30*, 263–  
711 276. doi:10.1007/s10508-011-9874-6
- 712 Kinsey, A. C., Pomeroy, W., Martin, C., & Gebhard, P. (1953). *Sexual behavior in the human*  
713 *female*. Philadelphia: W. B. Saunders.
- 714 Klapilová, K., Brody, S., Krejčová, L., Husárová, B., & Binter, J. (2015). Sexual satisfaction,  
715 sexual compatibility, and relationship adjustment in couples: The role of sexual  
716 behaviors, orgasm, and men's discernment of women's intercourse orgasm. *Journal of*  
717 *Sexual Medicine, 12*, 667-675. doi:10.1111/jsm.12766
- 718 Laumann, E. O., Gagnon, J. H., Michael, R. T., & Michaels, S. (1994). *The social organization*  
719 *of sexuality: Sexual practices in the United States*. Chicago: University of Chicago Press.
- 720 Lever, J., Frederick, D. A., Laird, K., & Sadeghi-Azar, L. (2007). Tall women's satisfaction with  
721 their height: General population data challenge assumptions behind medical interventions  
722 to stunt girls' growth. *Journal of Adolescent Health, 40*, 192-194.  
723 doi:10.1016/j.jadohealth.2006.09.004
- 724 Lever, J., Frederick, D. A., & Peplau, L. A. (2006). Does size matter? Men's and women's views  
725 on penis size across the lifespan. *Psychology of Men and Masculinity, 7*, 129-143.

- 726 doi:10.1037/1524-9220.7.3.129
- 727 Lippa, R. A. (2007). The relation between sex drive and sexual attraction to men and women: A  
728 cross-national study of heterosexual, bisexual, and homosexual men and women.  
729 *Archives of Sexual Behavior*, *36*, 209-222. doi:10.1007/s10508-006-9146-z
- 730 Lloyd, E.A. (2005). *The case of the female orgasm: Bias in the science of evolution*. Cambridge,  
731 MA: Harvard University Press.
- 732 Lloyd, E.A. (2015). Adaptationism and the logic of research questions: How to think clearly  
733 about evolutionary causes. *Biological Theory*, *10*, 343-362. doi:10.1007/s13752-015-  
734 0214-2
- 735 MacNeil, S., & Byers, E. S. (2005). Dyadic assessment of sexual self-disclosure and sexual  
736 satisfaction in heterosexual dating couples. *Journal of Social and Personal*  
737 *Relationships*, *22*, 169-181. doi:10.1177/0265407505050942
- 738 Masters, W. H., & Johnson, V. E. (1966). *Human sexual response*. Little, Brown: Boston,  
739 MA.
- 740 Meston, C. M., Hull, E., Levin, R. J. & Sipski, M. (2004). Disorders of orgasm in women.  
741 *Journal of Sexual Medicine*, *1*, 66–68. doi:10.1111/j.1743-6109.2004.10110.x
- 742 Meston, C. M., Levin, R. J., Sipski, M. L., Hull, E. M., & Heiman, J. R. (2004). Women's  
743 orgasm. *Annual Review of Sex Research*, *15*, 173-257.  
744 doi:10.1080/10532528.2004.10559820
- 745 Muise, A., Giang, E., & Impett, E. A. (2014). Post sex affectionate exchanges promote sexual  
746 and relationship satisfaction. *Archives of Sexual Behavior*, *43*, 1391-1402.  
747 doi:10.1007/s10508-014-0305-3
- 748 Muehlenhard, C. L., & Shippee, S. K. (2010). Men's and women's reports of pretending  
749 orgasm. *Journal of Sex Research*, *47*, 552-567. doi:10.1080/00224490903171794

- 750 NBC News. (2012). *Media kit*. Retrieved from [www.nbcnews.com/id/31066137](http://www.nbcnews.com/id/31066137)
- 751 Pavlicev, M., & Wagner, G. (2016). The evolutionary origin of female orgasm. *Journal of*  
752 *Experimental Zoology Part B: Molecular and Developmental Evolution*, 326, 326-337.
- 753 Peplau, L. A., Frederick, D. A., Yee, C., Maisel, N., Lever, J., & Ghavami, N. (2009). Body  
754 image satisfaction in heterosexual, gay, and lesbian adults. *Archives of Sexual*  
755 *Behavior*, 38, 713-725. doi:10.1007/s10508-008-9378-1
- 756 Puts, D. A., Dawood, K., & Welling, L. L. (2012). Why women have orgasms: An evolutionary  
757 analysis. *Archives of Sexual Behavior*, 41, 1127-1143. doi:10.1007/s10508-012-9967-x
- 758 Richters, J., de Visser, R., Rissel, C., & Smith, A. (2006). Sexual practices at last heterosexual  
759 encounter and occurrence of orgasm in a national survey. *Journal of Sex Research*,  
760 43, 217-226. doi:10.1007/s10508-012-9967-x
- 761 Roberts, A., & Muta, S. (2017). Representations of female body weight in the media: An update  
762 of Playboy magazine from 2000 to 2014. *Body Image*, 20, 16-19.  
763 doi:10.1016/j.bodyim.2016.08.009
- 764 Roberts, C., Kippax, S., Waldby, C., & Crawford, J. (1995). Faking it: The story of  
765 “Ohh!” *Women’s Studies International Forum*, 18, 523–532.  
766 doi:10.1016/0277-5395(95)00047-x
- 767 Rudman, L. A., Fetterolf, J. C., & Sanchez, D. T. (2013). What motivates the sexual double  
768 standard? More support for male versus female control theory. *Personality and Social*  
769 *Psychology Bulletin*, 39, 250-263. doi:10.1177/0146167212472375
- 770 Saguy, A., Frederick, D. A., & Gruys, K. (2014). Reporting risk, producing prejudice: How  
771 news reporting on obesity shapes attitudes about health risk, policy, and prejudice. *Social*  
772 *Science and Medicine*, 111, 125-133. doi:10.1016/j.socscimed.2014.03.026
- 773 Salisbury, C. M., & Fisher, W. A. (2014). “Did you come?” A qualitative exploration of gender

- 774 differences in beliefs, experiences, and concerns regarding female orgasm occurrence  
775 during heterosexual sexual interactions. *Journal of Sex Research*, 51, 616-631.  
776 doi:10.1080/00224499.2013.838934
- 777 Salska, I., Frederick, D. A., Pawlowski, B., Reilly, A., Laird, K., & Rudd, N. (2008). Conditional  
778 mate preferences: Factors influencing preferences for height. *Personality and Individual  
779 Differences*, 44, 203-215. doi:10.1016/j.paid.2007.08.008
- 780 Satinsky, S., Reece, M., Dennis, B., Sanders, S., & Bardzell, S. (2012). An assessment of body  
781 appreciation and its relationship to sexual function in women. *Body Image*, 9, 137-144.  
782 doi:10.1016/j.bodyim.2011.09.007
- 783 Schaefer, L. M., Burke, N. L., Thompson, J. K., Dedrick, R. F., Heinberg, L. J., Calogero, R. M.,  
784 Bardone-Cone, A. M., Higgins, M. K., Frederick, D. A. et al. (2015). Development and  
785 validation of the Sociocultural Attitudes Towards Appearance Questionnaire-4  
786 (SATAQ-4). *Psychological Assessment*, 27, 54-67. doi: 10.1037/a0037917
- 787 Solot, D. & Miller, M. (2007). *I love female orgasm: An extraordinary guide*. Boston: De Capo.
- 788 Swami, V., Frederick, D. A., Aavik, T., Alcalay, L., Allik, J., Anderson, D., ... Zivcic-Becirevic,  
789 I. (2010). The attractive female body weight and female body dissatisfaction in 26  
790 countries across 10 world regions: Results of the International Body Project  
791 I. *Personality and Social Psychology Bulletin*, 36, 309-325.  
792 doi:10.1177/0146167209359702
- 793 Symons, D. (1979). *The evolutionary of human sexuality*. New York: Oxford University Press.
- 794 Trivers, R. L. (1972). Parental investment and sexual selection. In B. Cambell (Ed.), *Sexual  
795 selection and the descent of man, 1871-1971* (pp. 136-179). London: Heinemann.
- 796 Von Sydow, K. (2002). Sexual enjoyment and orgasm postpartum: Sex differences and

- 797 perceptual accuracy concerning partners' sexual experience. *Journal of Psychosomatic*  
798 *Obstetrics & Gynecology*, 23, 147-155. doi:10.3109/01674820209074667
- 799 Wade, L. D., Kremer, E. C., & Brown, J. (2005). The incidental orgasm: The presence of clitoral  
800 knowledge and the absence of orgasm for women. *Women & Health*, 42, 117-138.  
801 doi:10.1300/j013v42n01\_07
- 802 Wallen, K., & Lloyd, E. A. (2011). Female sexual arousal: Genital anatomy and orgasm in  
803 intercourse. *Hormones and Behavior*, 59, 780-792. doi:10.1300/j013v42n01\_07
- 804 Wheatley, J. R., & Puts, D. A. (2015). Evolutionary science of female orgasm. In T. K.  
805 Shackelford & R. D. Hansen (Eds.), *The evolution of sexuality* (pp. 123-148). New York:  
806 Springer.
- 807 Young, M., Denny, G., Luquis, R., & Young, T. (1998). Correlates of sexual satisfaction in  
808 marriage. *Canadian Journal of Human Sexuality*, 7, 115-127.

809 Table 1. *Demographics of Sample.*

	Heterosexual Women	Lesbian Women	Bisexual Women	Heterosexual Men	Gay Men	Bisexual Men
Participants <i>N</i>	24,102	340	1112	26,032	452	550
Age <i>M (SD)</i>	33.8 (9.6)	36.5 (9.7)	31.1 (8.5)	40.5 (10.4)	37.2 (9.3)	42.1 (10.4)
Relationship Length in Years <i>M (SD)</i>	8.2 (8.5)	5.2 (5.8)	6.6 (7.2)	13.4 (10.3)	6.8 (7.5)	14.1 (10.4)
Relationship Status (%)						
Dating one person	26	29	24	13	27	12
Living together	20	54	30	9	59	12
Married	49	15	41	72	14	70
Remarried	5	2	5	6	0	6
Education (%)						
< High School Grad.	1	1	2	1	1	1
High School Grad.	12	7	14	7	5	9
Some College / A.A.	40	33	46	30	27	35
College	34	35	27	38	44	36
Graduate Degree	13	24	11	24	23	19
Ethnicity (%)						
White	84	84	79	88	89	90
Black	3	3	3	2	1	1
Hispanic	5	3	6	3	4	3
Asian	2	1	2	2	1	1
Native American	1	2	1	1	1	.5
Other	1	1	2	1	1	.5
Biracial	1	2	4	1	1	2
Prefer Not to Say	2	4	3	2	2	2
Kids Under 21 Living in House (%)						
Yes	50	22	45	60	8	56

812 Table 2. Predictors of Own Orgasm Frequency and Partner Orgasm Frequency among  
 813 Heterosexual, Gay, Lesbian, and Bisexual Men and Women.  
 814

	Predictors of <i>own</i> orgasm frequency					
	Women			Men		
	Hetero. Women $\beta$	Lesbian Women $\beta$	Bisexual Women $\beta$	Hetero. Men $\beta$	Gay Men $\beta$	Bisexual Men $\beta$
Age	.05***	.03	.07*	-.12***	-.17**	-.17**
Relationship Length	.04***	.08	.06	.08***	.14**	.11*
Education	-.01	.05	-.01	.02**	-.02	.01
Kids Under 21	.06***	.02	.04	.07***	.00	.11*
Receive Oral	.19***	.26***	.24***	.06***	.18***	.13**
Give Oral	-.01	-.01	.01	.03***	.00	-.03
Communication (0-5)	.05***	-.05	.09**	.00	.09	-.01
Sexual Variety (0-17)	.06***	.04	.08*	.03***	-.05	.07
Mood Setting (0-5)	.09***	.11	.06	.06***	-.04	.02
Length of Last Sex	.14***	.08	.13***	-.06***	.01	-.02
<i>Model 1 Adj R<sup>2</sup></i>	.13***	.08***	.17***	.03***	.05***	.04***
Relationship Satisfaction	.18***	.27***	.20***	.13***	.04	.08
<i>Model 2 Adj R<sup>2</sup></i>	.16***	.13***	.20***	.04***	.05***	.05***
	Predictors of <i>partner</i> orgasm frequency					
	Hetero. Women $\beta$	Lesbian Women $\beta$	Bisexual Women $\beta$	Hetero. Men $\beta$	Gay Men $\beta$	Bisexual Men $\beta$
	Hetero. Women $\beta$	Lesbian Women $\beta$	Bisexual Women $\beta$	Hetero. Men $\beta$	Gay Men $\beta$	Bisexual Men $\beta$
Age	-.09***	.05	-.18***	.01	-.19***	-.04
Relationship Length	.07***	.11	.13***	-.01	.09	.00
Education	.01*	.00	.01	-.02**	.06	.03
Kids Under 21	.07***	.01	.06*	.04***	-.04	.10*
Receive Oral	.03***	-.07	.06	.07***	.05	.10*
Give Oral	.03***	.29***	.03	.20***	.11*	.22***
Communication (0-5)	.03***	.00	.03	.00	.09	.04
Sexual Variety (0-17)	.00	.06	.01	.04***	-.01	.02
Mood Setting (0-5)	.04***	-.03	.01	.07***	-.02	.01
Length of Last Sex	-.06***	.09	-.03	.12***	.01	.11*
<i>Model 1 Adj R<sup>2</sup></i>	.02***	.07***	.03***	.12***	.04**	.12***
Relationship Satisfaction	.12***	.07	.08*	.09***	.10	.07
<i>Model 2 Adj R<sup>2</sup></i>	.03***	.07***	.03***	.12***	.04***	.12***

815  
 816 Note. \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ . Positive  $\beta$ s indicate that participants who scored higher  
 817 on the predictor variables reported more orgasms.



Table 3. *Frequency of Oral Sex, Relationship Satisfaction, and Communication According to Orgasm Frequency.*

	Men				Women			
	Usually- Always	Half time	Never- Rarely	$\chi^2$	Usually- Always	Half time	Never- Rarely	$\chi^2$
<i>Freq. Receive Oral Sex Past Month (% in each cat.)</i>								
Usually/Always	28	23	18	102	36	22	13	1690
About half of the time	22	23	13		25	27	17	
Never/Rarely	50	54	69		38	51	71	
<i>Communication (% Yes)</i>								
I asked for something I wanted in bed	46	38	28	99	45	39	25	585
One of us praised other about smthng. they did in bed	41	32	17	170	58	48	32	1035
My partner asked for something they wanted in bed	30	26	18	54	51	48	36	322
One of us asked for feedback on how something felt	31	26	19	54	38	34	26	230
One of us called/emailed to tease doing smthng. sexual	31	29	18	50	47	38	28	534
One us gently criticized how other did smthing. in bed	9	11	11	13	8	11	10	30
<i>Acts of Sexual Variety Past Year (% Yes)</i>								
At least one of us got a mini-massage or backrub	67	64	50	91	69	65	56	284
One of us wore sexy lingerie/underwear	58	52	34	153	70	68	59	219
Took a shower or bath together	59	52	38	123	65	63	52	264
Made a "date night" to be sure we had sex	56	51	42	58	51	49	42	123
Tried a new sexual position	51	43	28	155	66	62	47	543
Went on a romantic getaway	46	42	35	37	44	41	33	190
Used a vibrator or sex toy together	42	37	30	49	45	42	33	208
Tried anal stimulation	37	30	23	70	39	35	25	285
Viewed pornography together	35	31	23	47	44	41	31	230
Talked about or acted out our fantasies	35	29	24	44	41	34	25	399
Had anal intercourse	23	20	16	20	27	26	20	95
Had sexual contact in a public place	21	19	11	40	25	23	16	185
Integrated foods into sex (chocolate sauce, whip cream)	20	20	13	16	24	20	14	198
Tried light S&M (e.g., restraints, spanking)	16	14	12	n.s.	24	21	15	188
One of us took Viagra or a similar drug	25	25	15	105	9	9	8	n.s.
Videotaped our sex or posed for pictures in the nude	14	12	9	17	15	14	10	79
Invited another person into bed with us	5	5	5	n.s.	4	4	3	13

*Note.* Chi-Square analyses test if the proportion of people responding in each category differ depending on orgasm frequency. All analyses were significant at the  $p < .001$  level unless noted with "n.s." for not significant.

Table 4. *Events During Last Sexual Encounter (DLS) and Relationship Satisfaction According to Orgasm Frequency.*

	Men				Women			
	Usually- Always	Half of time	Never- Rarely	$\chi^2$	Usually- Always	Half of time	Never- Rarely	$\chi^2$
What Happened DLS: Mood Setting (% Yes)								
At least one of us said "I love you"	65	55	50	92	66	58	49	476
We engaged in sexy talk	35	30	20	73	49	37	25	916
Laughed about something funny happened during sex	24	24	18	n.s.	38	33	25	303
Lit a candle or dimmed the lights	20	19	16	n.s.	23	17	13	248
Played music in the background	13	14	12	n.s.	14	11	8	172
What Happened DLS: Acts (% Yes)								
Vaginal intercourse	92	88	75	254	94	94	92	23
Manual stimulation of genitals	84	81	75	38	86	80	68	859
Gentle kissing	79	78	70	34	82	76	66	524
Deep kissing	65	60	53	51	74	64	52	779
Changed positions during sexual intercourse	57	41	43	66	71	62	52	601
Gave oral sex	47	46	41	n.s.	53	46	39	340
Received oral sex	45	40	36	26	48	38	25	844
Anal intercourse	6	6	6	n.s.	6	4	3	73
Length of Sex DLS (% in each cat.)								
1+ Hour	11	17	12	104	13	8	6	2456
30-60 minutes	32	29	26		37	29	19	
15-30 minutes	40	34	33		35	40	35	
15 minutes or less	17	20	28		11	21	39	
Relationship Satisfaction (% Agree)								
I feel happy with my relationship overall	86	75	60	385	92	86	73	1249

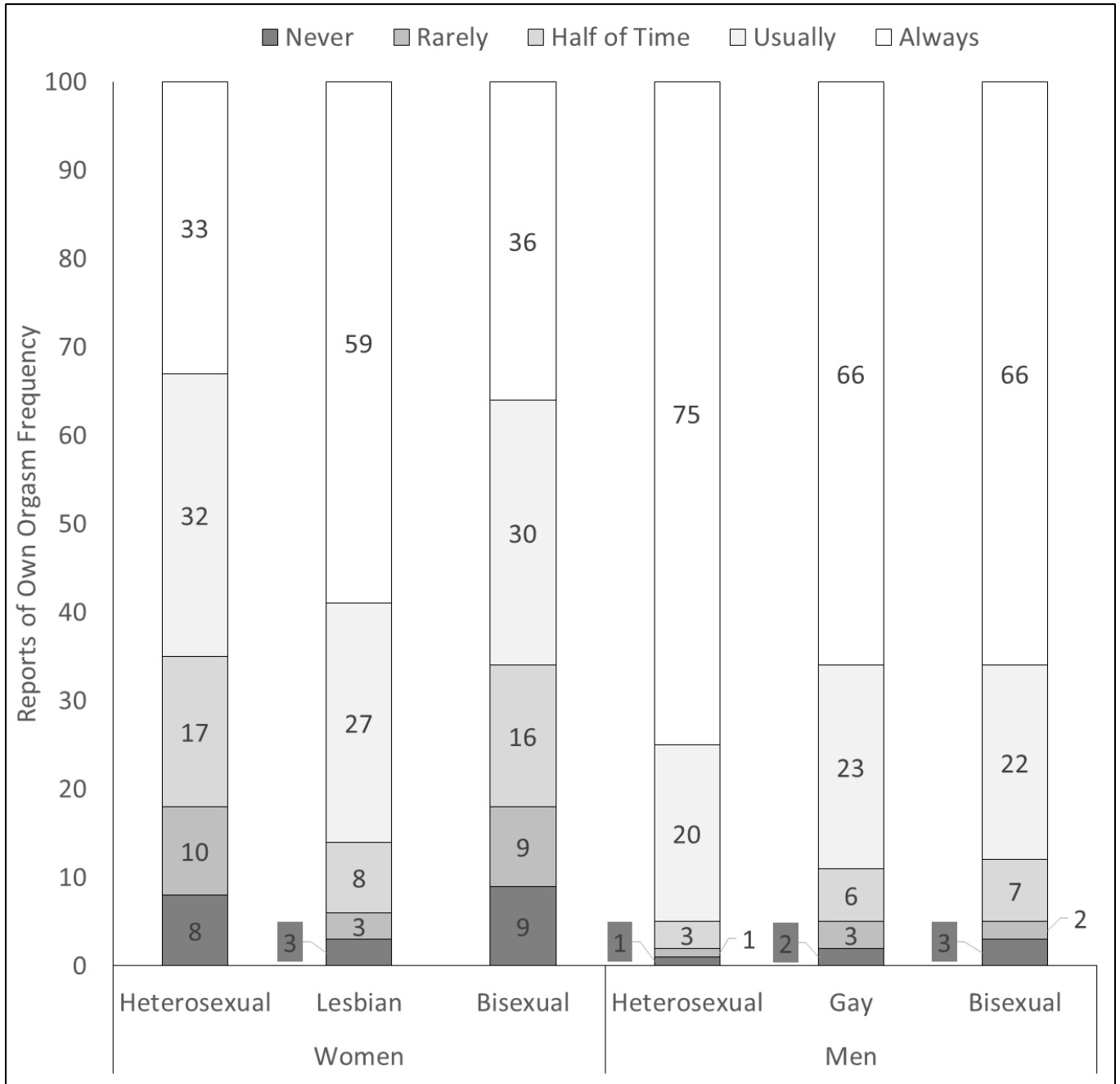
*Note.* Chi-square analyses tested if the proportion of people responding in each category differed by orgasm frequency. Chi-square values are listed for all statistically significant effects. All analyses were significant at the  $p < .001$  level unless noted with "n.s.". For example, among men who usually/always orgasm, 65% reported saying I love during sex (35% did not). For example, among women who usually/always orgasm, 13% say sex lasts 1+ hour, 37% 30-60 minutes, 35% 15-30 minutes, and 11% 15 minutes or less.

Table 5. *Orgasm Frequency According to Combinations of Behaviors Engaged in During Last Sexual Encounter.*

Behaviors During Last Sex				Orgasm Frequency Over Past Month					
Receive Oral Sex	Vaginal Sex	Genital Stimulation	Deep Kissing	Usually-Always			Rarely-Never		
				Hetero. Women	Lesbian Women	Bisexual Women	Hetero. Women	Lesbian Women	Bisexual Women
				%	%	%	%	%	%
Yes	No	Yes	Yes	80	91	71	7	5	19
Yes	Yes	Yes	Yes	77	90	78	8	3	9
Yes	No	Yes	No	73	-	-	10	-	-
Yes	Yes	No	Yes	71	-	73	14	-	15
Yes	Yes	Yes	No	69	-	73	13	-	17
Yes	No	No	Yes	69	-	-	22	-	-
No	Yes	Yes	Yes	67	79	71	16	9	13
Yes	No	No	No	62	-	-	18	-	-
Yes	Yes	No	No	60	-	67	17	-	14
No	No	Yes	Yes	60	80	70	21	6	22
No	Yes	Yes	No	59	-	53	22	-	24
No	Yes	No	Yes	57	-	59	25	-	24
No	No	No	Yes	54	-	-	25	-	-
No	No	Yes	No	52	74	-	28	13	-
No	No	No	No	37	-	-	51	-	-
No	Yes	No	No	35	-	29	44	-	54

*Note.* The values represent the percentage of women who usually/always and rarely/never orgasm during sex according to what behaviors they engaged in during their last sexual encounter. For example, 77% of heterosexual women who received oral sex, had vaginal sex, had genital stimulation, and had deep kissing during their last sexual encounter reported usually/always orgasming when sexually intimate during the past month. Values are only presented in cells for which there were at least 20 participants.

*Figure 1.* Reports of *own orgasm frequency* during past month for gay, lesbian, bisexual, and heterosexual men and women.



*Figure 2.* Reports of *partner orgasm frequency* during past month for gay, lesbian, bisexual, and heterosexual men and women.

