



EMORY
LIBRARIES &
INFORMATION
TECHNOLOGY

OpenEmory

Variation in Orgasm Occurrence by Sexual Orientation in a Sample of U.S. Singles

Justin R. Garcia, *Indiana University*
Elisabeth A. Lloyd, *Indiana University*
[Kim Wallen](#), *Emory University*
Helen E. Fisher, *Indiana University*

Journal Title: The Journal of Sexual Medicine
Volume: Volume 11, Number 11
Publisher: Elsevier | 2014-11, Pages 2645-2652
Type of Work: Article | Post-print: After Peer Review
Publisher DOI: 10.1111/jsm.12669
Permanent URL: <https://pid.emory.edu/ark:/25593/t3gjp>

Final published version: <http://dx.doi.org/10.1111/jsm.12669>

Copyright information:

© 2014 International Society for Sexual Medicine. Published by Elsevier Inc.
All rights reserved.

Accessed October 20, 2019 7:29 PM EDT



Published in final edited form as:

J Sex Med. 2014 November ; 11(11): 2645–2652. doi:10.1111/jsm.12669.

Variation in Orgasm Occurrence by Sexual Orientation in a Sample of U.S. Singles

Justin R. Garcia, MS, PhD^{*,†}, Elisabeth A. Lloyd, PhD^{*,‡}, Kim Wallen, PhD[§], and Helen E. Fisher, PhD^{*,¶}

^{*}The Kinsey Institute for Research in Sex, Gender, and Reproduction, Indiana University, Bloomington, IN, USA

[†]Department of Gender Studies, Indiana University, Bloomington, IN, USA

[‡]Department of History and Philosophy of Science, Indiana University, Bloomington, IN, USA

[§]Department of Psychology and Yerkes National Primate Research Center, Emory University, Atlanta, GA, USA

[¶]Department of Anthropology, Rutgers University, New Brunswick, NJ, USA

Abstract

Introduction—Despite recent advances in understanding orgasm variation, little is known about ways in which sexual orientation is associated with men’s and women’s orgasm occurrence.

Corresponding Author: Justin R. Garcia, MS, PhD, The Kinsey Institute, Indiana University, 1165 E. Third Street, Morrison Hall 313, Bloomington, IN 47405, USA. Tel: 812-855-7686; Fax: 812-855-8277; jusrgarc@indiana.edu.

Conflict of Interest: MarketTools[®] was commissioned to perform a nationally representative survey of U.S. Singles; MarketTools[®] was not involved in data analyses. Singles in America (SIA) is funded by Match.com[®]. J.R.G and H.E.F. have received funding from Match.com[®]. Research findings from SIA are not subject to approval by Match.com[®] or other sponsors prior to submission or publication.

Statement of Authorship

Category 1

a. Conception and Design

Justin R. Garcia; Elisabeth A. Lloyd; Kim Wallen; Helen E. Fisher

b. Acquisition of Data

Helen E. Fisher; Justin R. Garcia

c. Analysis and Interpretation of Data

Kim Wallen; Justin R. Garcia; Elisabeth A. Lloyd

Category 2

a. Drafting the Article

Justin R. Garcia; Elisabeth A. Lloyd

b. Revising It for Intellectual Content

Justin R. Garcia; Elisabeth A. Lloyd; Kim Wallen; Helen E. Fisher

Category 3

a. Final Approval of the Completed Article

Justin R. Garcia; Elisabeth A. Lloyd; Kim Wallen; Helen E. Fisher

Aim—To assess orgasm occurrence during sexual activity across sexual orientation categories.

Methods—Data were collected by Internet questionnaire from 6,151 men and women (ages 21–65+ years) as part of a nationally representative sample of single individuals in the United States. Analyses were restricted to a subsample of 2,850 singles (1,497 men, 1,353 women) who had experienced sexual activity in the past 12 months.

Main Outcome Measures—Participants reported their sex/gender, self-identified sexual orientation (heterosexual, gay/lesbian, bisexual), and what percentage of the time they experience orgasm when having sex with a familiar partner.

Results—Mean occurrence rate for experiencing orgasm during sexual activity with a familiar partner was 62.9% among single women and 85.1% among single men, which was significantly different ($F_{1,2848} = 370.6$, $P < 0.001$, $\eta^2 = 0.12$). For men, mean occurrence rate of orgasm did not vary by sexual orientation: heterosexual men 85.5%, gay men 84.7%, bisexual men 77.6% ($F_{2,1494} = 2.67$, $P = 0.07$, $\eta^2 = 0.004$). For women, however, mean occurrence rate of orgasm varied significantly by sexual orientation: heterosexual women 61.6%, lesbian women 74.7%, bisexual women 58.0% ($F_{2,1350} = 10.95$, $P < 0.001$, $\eta^2 = 0.02$). Lesbian women had a significantly higher probability of orgasm than did either heterosexual or bisexual women ($P < 0.05$).

Conclusions—Findings from this large dataset of U.S. singles suggest that women, regardless of sexual orientation, have less predictable, more varied orgasm experiences than do men and that for women, but not men, the likelihood of orgasm varies with sexual orientation. These findings demonstrate the need for further investigations into the comparative sexual experiences and sexual health outcomes of sexual minorities.

Keywords

Orgasm; Orgasm Variation; Sexual Orientation; Gay; Lesbian; Bisexual

Introduction

Orgasm is characterized by subjective feelings of intense sensation and pleasure, including a sudden discharge of accumulated erotic tension at sexual climax and a temporarily altered state of consciousness [1–4]. Orgasm is generally comprised of a series of psychophysiological responses, including genital reactivity, involuntary rhythmic contractions of pelvic musculature, changes in heart rate and blood pressure, and neurohormonal activation/deactivation [2–5]. While neural and psychophysiological aspects of orgasm have been recently described [6–11], surprisingly little is known about orgasm in nonclinical and fundamental questions of how demographic factors may contribute to variation in individuals' orgasm experiences. In order to advance both research and clinical practice, this article further investigates associations between self-identified sexual orientation and orgasm variation.

For decades researchers have been aware of variation in orgasm occurrence and experience [1,12–15]. Understanding sex/gender differences in the form and function of orgasm variation has been of interest to both health practitioners and scholars from a wide range of disciplines. Existing literature demonstrates substantial variation in orgasm experiences

among women and to a lesser, but not inconsequential, extent among men [2–4,15,16]. Theory and research have focused on the higher rates of primary or secondary anorgasmia among women (compared with men) [4,11,15,17–22].

At least one recent probability sample in the United States provides nationally representative rates of orgasm frequency for both men and women. In a subset of 3,990 participants ages 18 to 59 years from the National Survey of Sexual Health and Behavior, 91.3% of men and 64.4% of women reported orgasm during their most recent sexual event [23]. Among these findings, both men's and women's orgasm occurrence was positively correlated with engaging in a greater variety of sexual behaviors. Further, among men, age was correlated with decreased erectile function and decreased orgasm, while among women age was correlated with decreased vaginal lubrication but increased orgasm [23].

While relationships between orgasm and some sociodemographics, such as age, have been investigated to some extent [12,13,23–25], other factors remain more elusive. In particular, there is a dearth of data on rates of orgasm across sexual orientations. Despite initial insights into orgasm occurrence among gay men and lesbian women in the 1940s and 1950s [1,12,13], little empirical research is available on orgasm among sexual minorities. Some historical accounts have suggested that lesbian women may orgasm more than heterosexual women [1,13]. Kinsey and colleagues [13] suggested that lesbian couples likely had higher orgasm rates than heterosexual couples. Similarly, Masters and Johnson [1] suggested that lesbian women offer a good example to heterosexuals who may more regularly focus on sexual performance (i.e., emphasis on “show,” exhibition, and/or longevity and duration) over mutual sexual pleasure.

One study sought to address this gendered information gap. In a sample of primarily young Caucasian women, participants were asked about their frequency of orgasm (regardless of type of sexual stimulation). Results showed that while 2.2% of lesbian women and 13.3% of heterosexual women reported *never* experiencing orgasm, 28.7% of lesbian women and 25.5% of heterosexual women reported *always* experiencing orgasm [26]. While these data provide an important starting point, generalizability is somewhat limited and rates were not reported for self-identified bisexuals. Thus it remains that little is known about orgasm occurrences among women and men of varied sexual orientations across the adult lifespan. Understanding the factors that influence variation in orgasm occurrence among sexual minority populations may assist in tailoring behavioral therapies for those of different sexual orientations. Moreover, to the extent that lack of orgasm is seen as a common and unwanted problem, learning more about orgasm in same-sex relationships may inform treatment for men and women in both same-sex and mixed-sex relationships. Consequently, these findings may contribute to promotion of a more informed and positive sexual health care.

Aim

To assess orgasm occurrence during sexual activity with a familiar partner across sexual orientation categories (heterosexual, homosexual, bisexual).

Methods

Study Design and Procedures

Data for the current study were drawn from a 2011 questionnaire of single men and women in the United States of America.¹ The study questionnaire focused primarily on attitudes and behaviors regarding dating, sexual activity, and single life styles, and included questions about demographic characteristics. Data were collected by MarketTools® (San Francisco, CA, USA; see www.markettools.com) using Internet research panels for population-based cross-sectional survey. Nationally representative research panels are compiled based on demographic distributions reflected in the most recent Current Population Survey, released by the United States Bureau of the Census. However, the current study also included augmented oversampling of certain demographic categories, specifically gays and lesbians (but not bisexuals). All data were collected over the Internet.

To ensure data quality, research panelists are required to verify their identity through the TrueSample™ certification process (see www.truesample.com). To prevent automated responses, a respondent verification tool shows alphanumeric characters as an image that the respondent must then enter to verify legitimacy. Each respondent is further validated as a real individual, maintaining unique identification information to prevent double responders. Additionally, panelists are screened to ensure survey engagement, with those straight-lining responses or moving too quickly through panels removed.

Additional target population filters were also introduced. Only those individuals completing the survey on a desktop computer, laptop, or notebook were included within the sample frame (those using mobile devices were not invited to participate). Inclusion criteria required being at least 21 years of age and identifying current relationship status as single (as defined by the U.S. Census); participants included those who identified as currently single, separated, divorced or widowed; those individuals identifying as married, in a domestic partnership, living with a partner, engaged, or who did not answer the demographic question on relationship status were not invited to participate. Individuals on research panels within the sample frame received a recruitment message from MarketTools® that provided a brief description of the study and invited them to participate for financial remuneration. In the study confidentiality statement, participants were informed that they would never be contacted for marketing purposes as a result of their participation and that all identifying information would be stored separately from their research response data. Data access and analysis procedures were approved by Indiana University's institutional review board.

Main Outcome Measures

Sex/Gender—Participants were asked to identify as “Male,” “Female,” or “Other.” Data were collected only on those individuals who identified themselves as Male or Female.

¹Singles in America (SIA) is sponsored by the online dating company Match.com®; however, participants were not drawn from the Match.com® population or subsidiary sites.

Sexual Orientation—Participants were asked: “Which one of the following best describes your sexual orientation?” Response options included “Heterosexual,” “Gay” (if male) or “Lesbian” (if female), and “Bisexual.”

Orgasm—For the current study, participants were asked the following question: “When having sex with a familiar partner, what percentage of the time do you achieve orgasm?”² Responses were open text, recorded in percentages from 0% to 100%.

Control Measures

Recent Sexual Experience—All participants were also asked “How often have you had sex in the past 12 months?” Those who answered they had not had sex in the past 12 months, or had never had sex, received a skip pattern and thus did not complete the questions about sexual behavior, including orgasm occurrence. This was done as a control, to exclude those individuals without recent sexual experience from the current analyses and minimize any potential memory recall bias.

Statistical Analysis

All analyses were conducted using statistical software program SPSS version 20 (SPSS Inc., Chicago, IL, USA). Analyses presented below include basic descriptives and analysis of variance statistics. In addition, effect size estimates were calculated (η^2 for anova and Cohen’s *d* for pairwise comparisons). $P < 0.05$ were considered significant.

Participants

The complete sample of participants contained 6,151 singles (male = 2,880, female = 3,271) from the United States. Of those, 5,541 (male = 2,744, female = 2,797) were from the national probability sample of U.S. singles; an additional 610 (male = 136, female = 474) individuals were sampled to augment the sample with those of a minority sexual orientation and those in minority racial categories. For purposes of the current study, responses were then restricted to those individuals who had engaged in sexual behavior with a familiar partner within the past 12 months. Thus the current analyses included a total of 2,850 single individuals (male = 1,497, female = 1,353).

Of the $n = 2,850$ (male = 1,497, female = 1,353) single participants included in the current analyses, ages were distributed as follows: 21–24 years (268), 25–29 years (353), 30–34 years (402), 35–39 years (307), 40–44 years (382), 45–49 years (289), 50–54 years (309), 55–59 years (183), 60–64 years (145), 65+ years (212). In terms of self-identified racial and ethnic background of participants: 73.7% (2,102) white, 14.0% (400) black/African American, 4.9% (140) Asian or Pacific Islander, 0.7% (20) North American Indian or Alaskan Native, and 6.6% (189) Hispanic or Latino/a. In terms of self-identified sexual orientation category, among males 81.9% (1,226) identified as heterosexual, 13.9% (208) as

²The question was broadly stated to maintain a focus on orgasm, under whatever behavioral repertoire conditions that occur in people’s lives. We did, however, restrict the query to sex “with a familiar partner” because relationship context and duration has been shown to influence orgasm outcomes [24,25].

gay, and 4.2% (63) as bisexual. Among females 85.3% (1,154) identified as heterosexual, 10.3% (139) as lesbian, and 4.4% (60) as bisexual.

Results

The overall mean occurrence rate for experiencing orgasm during sex with a familiar partner was 62.9% \pm 0.9% among single women and 85.1% \pm 0.7% among single men. Compared with women, men reported a significantly higher mean occurrence rate of orgasm frequency ($F_{1,2848} = 370.6$, $P < 0.001$, $\eta^2 = 0.12$). To further explore this difference we conducted separate analyses for men and women in relation to self-identified sexual orientation category.

For men, mean occurrence rate of orgasm during sex with a familiar partner did not vary across sexual orientations: heterosexual men 85.5% \pm 0.7%, gay men 84.7% \pm 1.9%, and bisexual men 77.6% \pm 4.1% ($F_{2,1494} = 2.67$, $P = 0.07$, $\eta^2 = 0.004$). Bisexual men appeared to show a lower rate of orgasm. However, this difference between bisexual and heterosexual men was not significant, and had a small effect size ($d = 0.24$; Figure 1). See Table 1 for the distribution of orgasm responses.

For women, however, mean occurrence rate of orgasm during sex with a familiar partner varied significantly across sexual orientations: heterosexual women 61.6% \pm 1.0%, lesbian women 74.7% \pm 2.6%, and bisexual women 58.0% \pm 5.0% ($F_{2,1350} = 10.95$, $P < 0.001$, $\eta^2 = 0.02$). Lesbian women had a significantly higher rate of orgasm than either heterosexual or bisexual women (Student–Newman–Keuls homogenous subsets, $P < 0.05$). Differences between lesbian women and heterosexual women were of moderate magnitude ($d = 0.42$). Differences between lesbian women and bisexual women were also of moderate magnitude ($d = 0.51$; Figure 2). See Table 1 for a distribution of orgasm responses.

Discussion

The current study confirms existing findings and advances our understanding of orgasm occurrence among men and women across self-identified sexual orientation categories. While early scholars hinted at sexual orientation differences in sexual pleasure outcomes [1,12,13], little empirical evidence has been offered. Here we found substantial intraindividual (frequency of experiencing orgasm) and interindividual (distribution of respondents) variation in frequency of orgasm experience, both within and between sexes/genders. Compared with men, women displayed greater intraindividual and interindividual variation in orgasm occurrence during sexual activity with a familiar partner. This is consistent with literature suggesting that male orgasm is subject to less inconsistency, seemingly regardless of sexual orientation, perhaps due to both sex-specific physiology and culturally reinforced gender roles that endorse male sexual activity and pleasure.

In this large dataset we found that while heterosexual, gay, or bisexual men do not differ substantially in their rates of orgasm occurrence, lesbian women had higher average mean occurrence rates than did heterosexual or bisexual women. Among men, self-identified heterosexual, gay, or bisexual men reported similarly high mean rates for orgasm occurrence and intraindividual variation. Among those men who self-identified as bisexual, while the

mean orgasm occurrence was similar, distribution was slightly greater than among heterosexual or gay men, with a greater proportion of bisexual men who experienced orgasm less frequently. Among women, self-identified heterosexual or lesbian women differed substantially in their rates of orgasm occurrence, with the distribution of those commonly experiencing orgasm spanning the entire range from 0% to 100% of the time. Lesbian women reported higher mean orgasm occurrence rates and higher intraindividual variation than did heterosexual women; that is, lesbian women's responses were more widely distributed than among bisexual or heterosexual women, likely depending on a variety of unknown factors. Bisexual women, however, reported the lowest mean orgasm occurrence rate and greatest intraindividual variation among women.

The current findings are a first step, highlighting underexplored relationships between sexual orientation and orgasm occurrence. There are a variety of hypotheses regarding why these patterns occur. One possible explanation is that self-identified lesbian women are more comfortable and familiar with the female body and thus, on average, are better able to induce orgasm in their female partners. Similarly, previous research has suggested that the length of sexual encounters varies as a function of the sex/gender of the participants, with two women having longer durations of sexual activity than heterosexual pairs [27–29], potentially affecting orgasm outcomes. Another possible explanation could lie in differences in gender and sexual attitudes across sexual orientations, attitudes which themselves are known psychosocial factors that affect orgasm [24,25,30]. Relatedly, sexual roles during sexual activity, which likely vary across sexual orientations and may be particularly gendered in their presentation, may result in differential patterns of individuals reaching, or attempting to reach, orgasm. Yet another possibility could be biological, perhaps related to prenatal androgen and estrogen exposures, which may have varied effects on both sexual orientation [31,32], and separately on vaginal and clitoral anatomy in ways that may also affect orgasm [33]. Only future research can provide further insight into the mechanisms by which sexual orientation influences orgasm.

The focus of the current study was variation in occurrence of orgasm by self-identified sexual orientation categories, and not the specific behavioral repertoires that most reliably lead to orgasm (which have been described elsewhere [23,34]). The wording of the questionnaire, asking participants to report on orgasm “when having sex with a familiar partner” likely lends itself to varied interpretations of how individuals define both “sex” [35] and a “familiar partner.” It is possible that differences in self-definitions of “sex” and “familiar partner,” as well as specific sexual behavior repertoires tied to these terms, exist across sexual orientation categories in ways that may underlie the observed patterns of orgasm occurrence reported here. Future research may wish to explore the interacting ways in which demographics, including sexual orientation, gender/sexual attitudes, and specific sexual behaviors concomitantly affect orgasm.

It is important to also consider why self-identified bisexuals had somewhat lower rates of orgasm occurrence than those men and women of other sexual orientations, although the difference was only significant among women. This is somewhat surprising considering sex-specific patterns of sexual “drive” across sexual orientations, such as higher sexual motivation being correlated with bisexual attraction among women but not men [36].

Among bisexuals, it is possible that the identity construct used in the current study obscures the variety of sexual behaviors and sexual preferences those identifying as bisexual may be engaging in during partnered sexual activity [37–39]. This may result in overall patterns of orgasm that are difficult to interpret with respect to behavioral actions, intentions, and desires. It remains important to further understand in what ways diversity across sexual orientations, beyond categorical groupings, result in variations in sexual health outcomes.

The sizeable variation reported in orgasm experiences elsewhere as well as in the current study, raises numerous questions regarding the medicalization of orgasm, with women more often than men diagnosed with orgasmic “disorders” (i.e., female orgasmic disorder) for having difficulty in regularly achieving orgasm or having delayed or absent orgasm following a sexual excitement phase [4,15,17–19,21,22]. The medicalization of women’s orgasmic variation is symptomatic of larger patterns surrounding the medicalization of human sexuality in general [40].

Feminist scholars have commented on the observed variation in orgasm, with particular attention given to the seemingly high rates of women who rarely or infrequently experience orgasm from partnered sexual activity. Many feminist scholars have argued that a sizeable amount of orgasm variation results from sexual double standards, sociosexual attitudes, and barriers to entitlement of sexual pleasure [14,20,24,25,41]. The bases of orgasmic variation has also been of significant interest to evolutionary scientists, particularly with respect to a possible adaptive origin of women’s orgasm [11,15,16,22,42–47]. While some evolutionists have argued that orgasm is an evolutionary adaptation to promote reproduction [45,48], others have insisted there is of yet insufficient evidence to demonstrate the trait is an adaptation in women (i.e., leads to increased relative reproductive fitness) [15,43,44,46,49]. The latest evidence indicates that there is no evolutionary link between women’s orgasm and offspring success [47], thus undermining the likelihood that this trait is an evolutionary adaptation. Some of the most compelling biological evidence exploring the etiology of orgasmic variation comes by way of studies demonstrating individual genital morphology, specifically in women, where distance between the glans clitoris and urinary meatus accounts for a sizeable amount of women’s individual variation in accounts of orgasm during heterosexual intercourse [33]. We were unable to disentangle the contributions of psychosocial or biological factors in determining sex/gender differences in orgasm outcomes; nevertheless, our findings point to the importance of considering both as interacting causal forces that co-jointly shape human sexual behavior and thus influence a wide variety of sexual health outcomes.

Limitations

The current study presents initial findings that evoke a variety of future research questions, and involve a variety of limitations. One limitation of the current study’s measures of orgasm with a familiar partner is that we did not also measure orgasm occurrence with an unfamiliar partner, a topic we hope to take up in future studies. Initial studies [24,25] have demonstrated lower rates of orgasm in uncommitted sexual “hookups” as compared with committed romantic relationships, suggesting that relationship context, and factors associated with the likelihood to engage in those contexts, may also affect orgasm. It is also

worth noting that while the U.S. findings are consistent with cross-cultural data demonstrating that older men and women often remain sexually active [50–53], adequate anthropological data on orgasm in tribal societies in particular remain insufficient [42].

In the current study, self-identified sexual orientation categories were limited to heterosexual/straight, gay/lesbian, and bisexual. As a result, this study did not include the categories of “queer” or “asexual” or a variety of other categories that more fully encompass people’s sexual identities. Moreover, because we do not know the sex/gender of the sexual partners that participants are likely referencing, we cannot analyze how orgasm rates might distribute as a function of their partners’ sex/gender, rather than as a function of their sexual identity; while relevant for all participants regardless of self-identified sexual orientation, this is particularly pertinent for self-identified bisexual men and women. That is, future studies may seek to investigate whether bisexual women with female partners have orgasm rates that are more similar to those of lesbian women or to those of heterosexual women; and likewise whether bisexual women with male partners have orgasm rates that are more similar to those of heterosexual women or lesbian women. These issues arise especially for bisexual women because of our findings, but may also prove applicable in the case of bisexual men.

Conclusion

Our data highlight the importance of assessing associations between sexual orientation and variations in individual sexual and orgasm experiences. In the current sample, self-identified sexual orientation (categorized as heterosexual, gay/lesbian, or bisexual) affected women’s, but not men’s, reported orgasm occurrence rate. While a vast majority of men and a slight majority of women report orgasm occurrence during sexual activity with a familiar partner, there is substantial variation *between and within* individuals (particularly women), in the frequency with which orgasm occurs. These data demonstrate the need for further investigations into the comparative sexual experiences and outcomes of sexual minorities, to understand the mechanisms by which sociodemographics, and, in particular, sexual orientation, affects sexual health outcomes including orgasm experiences.

References

1. Masters, WH., Johnson, VE. Human sexual response. Boston, MA: Little, Brown; 1966.
2. Bancroft, J. Human sexuality and its problems. 3. London, UK: Churchill Livingstone, Elsevier; 2009.
3. Mah K, Binik YM. The nature of human orgasm: A critical review of major trends. Clin Psychol Rev. 2001; 21:823–56. [PubMed: 11497209]
4. Meston CM, Levin RJ, Sipski ML, Hull EM, Heiman JR. Women’s orgasm. Annu Rev Sex Res. 2004; 15:173–257. [PubMed: 16913280]
5. Komisaruk BR, Whipple B. Functional MRI of the brain during orgasm in women. Annu Rev Sex Res. 2005; 16:62–86. [PubMed: 16913288]
6. Krüger THC, Hartmann U, Schedlowski M. Prolactinergic and dopaminergic mechanisms underlying sexual arousal and orgasm in humans. World J Urol. 2005; 23:130–8. [PubMed: 15889301]
7. Krüger, THC., Schedlowski, M., Exton, MS. Neuroendocrine processes during sexual arousal and orgasm. In: Janssen, E., editor. The psychophysiology of sex. Bloomington, IN: Indiana University Press; 2007. p. 83-102.

8. Georgiadis JR, Kortekaas R, Kuipers R, Nieuwenburg A, Prium J, Reinders AATS, Holstege G. Regional cerebral blood flow changes associated with clitorally induced orgasm in healthy women. *Eur J Neurosci.* 2006; 24:3305–16. [PubMed: 17156391]
9. Georgiadis JR, Reinders AATS, Paans AMJ, Renken R, Kortekaas R. Men versus women on sexual brain function: Prominent differences during tactile stimulation, but not during orgasm. *Hum Brain Mapp.* 2009; 30:3089–101. [PubMed: 19219848]
10. van Anders SM, Dunn EJ. Are gonadal steroids linked with orgasm perceptions and sexual assertiveness in women and men? *Horm Behav.* 2009; 56:206–13. [PubMed: 19409392]
11. Levin RJ. Can the controversy about the putative role of the human female orgasm in sperm transport be settled with our current physiological knowledge of coitus? *J Sex Med.* 2011; 8:1566–78. [PubMed: 21210957]
12. Kinsey, A., Pomeroy, WB., Martin, CE. *Sexual behavior in the human male.* Philadelphia, PA: Saunders; 1948.
13. Kinsey, A., Pomeroy, W., Martin, C., Gebhard, P. *Sexual behavior in the human female.* Philadelphia, PA: Saunders; 1953.
14. Hite, S. *The Hite report: A nationwide study of female sexuality.* New York, NY: Macmillan; 1976.
15. Lloyd, EA. *The case of the female orgasm: Bias in the science of evolution.* Cambridge, MA: Harvard University Press; 2005.
16. Dixson, AF. *Sexual selection and the origins of human mating systems.* New York, NY: Oxford University Press; 2009.
17. Bancroft J. The medicalization of female sexual dysfunction: The need for caution. *Arch Sex Behav.* 2002; 31:451–5. [PubMed: 12238614]
18. Graham CA. The DSM diagnostic criteria for female orgasmic disorder. *Arch Sex Behav.* 2010; 39:256–70. [PubMed: 19784768]
19. IsHak WW, Bokarius A, Jeffrey JK, David MC, Bakhta Y. Disorders of orgasm in women: A literature review of etiology and current treatments. *J Sex Med.* 2010; 7:3254–68. [PubMed: 20584112]
20. Gerhard J. Revisiting “the myth of the vaginal orgasm”: The female orgasm in American sexual thought and second wave feminism. *Fem Stud.* 2000; 26:449–76. [PubMed: 16856271]
21. Heiman, JR. Orgasmic disorders in women. In: Leiblum, SR., editor. *Principles and practices of sex therapy.* New York, NY: Guilford; 2007. p. 84-123.
22. Zietsch BP, Miller GF, Bailey JM, Martin NG. Female orgasm rates are largely independent of other traits: Implications for “female orgasmic disorder” and evolutionary theories of orgasm. *J Sex Med.* 2011; 8:2305–16. [PubMed: 21569216]
23. Herbenick D, Reece M, Schick V, Sanders SA, Dodge B, Fortenberry JD. An event-level analysis of the sexual characteristics and composition among adults ages 18 to 59: Results from a national probability sample in the United States. *J Sex Med.* 2010; 7(suppl s5):346–61. [PubMed: 21029390]
24. Garcia JR, Massey SG, Seibold-Simpson SM, Merriwether AM. Orgasm experience among emerging adult men and women: Gender, relationship context, and attitudes toward uncommitted sexual activity. (in review).
25. Armstrong EA, England P, Fogarty ACK. Accounting for women’s orgasm and sexual enjoyment in college hookups and relationships. *Am Sociol Rev.* 2012; 77:435–62.
26. Coleman EM, Hoon PW, Hoon EF. Arousability and sexual satisfaction in lesbian and heterosexual women. *J Sex Res.* 1983; 19:58–73.
27. Miller SA, Byers ES. Actual and desired duration of foreplay and intercourse: Discordance and misperceptions within heterosexual couples. *J Sex Res.* 2004; 41:301–9. [PubMed: 15497058]
28. Cohen JN, Byers ES. Beyond lesbian bed death: Enhancing our understanding of the sexuality of sexual-minority women in relationships. *J Sex Res.* 2014; 51:893–903. [PubMed: 23924274]
29. Nichols M. Lesbian sexuality/female sexuality: Rethinking “lesbian bed death. *Sex Relation Ther.* 2004; 19:363–71.
30. Wiederman MW. Pretending orgasm during sexual intercourse: Correlates in a sample of young adult women. *J Sex Marital Ther.* 1997; 23:131–9. [PubMed: 9230494]

31. Cohen-Bendahan CCC, van de Beek C, Berenbaum SA. Prenatal sex hormone effects on child and adult sex-typed behavior: Methods and findings. *Neurosci Biobehav Rev.* 2005; 29:353–84. [PubMed: 15811504]
32. LeVay, S. *Gay, straight, and the reason why.* New York, NY: Oxford University Press; 2011.
33. Wallen K, Lloyd EA. Female sexual arousal: Genital anatomy and orgasm in intercourse. *Horm Behav.* 2011; 59:780–92. [PubMed: 21195073]
34. Richters J, de Visser R, Rissel C, Smith A. Sexual practices at last heterosexual encounter and occurrence of orgasm in a national survey. *J Sex Res.* 2006; 43:217–26. [PubMed: 17599244]
35. Sanders SA, Hill BJ, Yarber WL, Graham CA, Crosby RA, Milhausen RR. Misclassification bias: Diversity in conceptualisations about having “had sex. *Sex Health.* 2010; 7:31–4. [PubMed: 20152093]
36. Lippa RA. The relation between sex drive and sexual attraction to men and women: A cross-national study of heterosexual, bisexual, and homosexual men and women. *Arch Sex Behav.* 2007; 36:209–22. [PubMed: 17380375]
37. Dodge, B., Sandfort, TGM. A review of mental health research on bisexual individuals when compared to homosexual and heterosexual individuals. In: Firestein, BA., editor. *Becoming visible: Counseling bisexuals across the lifespan.* New York, NY: Columbia University Press; 2007. p. 28-51.
38. Dodge B, Schnarrs PW, Reece M, Martinez O, Goncalves G, Malebranche D, Van Der Pol B, Nix R, Fortenberry JD. Sexual behaviors and experiences among behaviorally bisexual men in the Midwestern United States. *Arch Sex Behav.* 2013; 42:247–56. [PubMed: 22187027]
39. Armstrong HL, Reissing ED. Women who have sex with women: A comprehensive review of the literature and conceptual model of sexual function. *Sex Relation Ther.* 2013; 28:364–99.
40. Cacchioni T, Tiefer L. Why medicalization? Introduction to the special issue on the medicalization of sex. *J Sex Res.* 2012; 49:307–10. [PubMed: 22720821]
41. Lavie-Ajayi M. “Because all real women do”: The construction and deconstruction of “female orgasmic disorder. *Sex Evol Gender.* 2005; 7:57–72.
42. Gray, PB., Garcia, JR. *Evolution and human sexual behavior.* Cambridge, MA: Harvard University Press; 2013.
43. Dixson, AF. *Primate sexuality: Comparative studies of the prosimians, monkeys, apes, and humans.* 2. New York, NY: Oxford University Press; 2012.
44. Symons, D. *The evolution of human sexuality.* New York, NY: Oxford University Press; 1979.
45. Puts DA, Welling LLM, Burriss RP, Dawood K. Men’s masculinity and attractiveness predict their female partners’ reported orgasm frequency and timing. *Evol Hum Behav.* 2012; 33:1–9.
46. Lloyd, EA. The evolution of female orgasm: New evidence and response to feminist critiques. In: de Sousa, F., Munévar, G., editors. *Sex, reproduction, and Darwinism.* London, UK: Pickering and Chatto; 2012. p. 109-25.
47. Zietsch BP, Santilla P. No direct relationship between human female orgasm rate and number of offspring. *Anim Behav.* 2013; 86:253–5.
48. Puts DA. Of bugs and boojums: Female orgasm as a facultative adaptation. *Arch Sex Behav.* 2007; 36:337–9. [PubMed: 17510785]
49. Lloyd EA. Response to Puts and Dawood’s “The evolution of female orgasm: Adaptation or byproduct?”—Been there. *Twin Res Hum Genet.* 2006; 9:603–8. [PubMed: 16899171]
50. Drench ME, Losee RH. Sexuality and sexual capacities of elderly people. *Rehabil Nurs.* 1996; 21:118–23. [PubMed: 8711257]
51. Laumann EO, Nicolosi A, Glasser DB, Paik A, Gingell C, Moreira E, Wang T. Sexual problems among women and men aged 40–80 years: Prevalence and correlates identified in the Global Study of Sexual Attitudes and Behaviors. *Int J Impot Res.* 2005; 17:39–57. [PubMed: 15215881]
52. Gray PB, Garcia JR. Aging and human sexual behavior: Biocultural perspectives. *Gerontology.* 2012; 58:446–52. [PubMed: 22487655]
53. Winn RL, Newton N. Sexuality in aging: A study of 106 cultures. *Arch Sex Behav.* 1982; 11:283–98. [PubMed: 7149964]

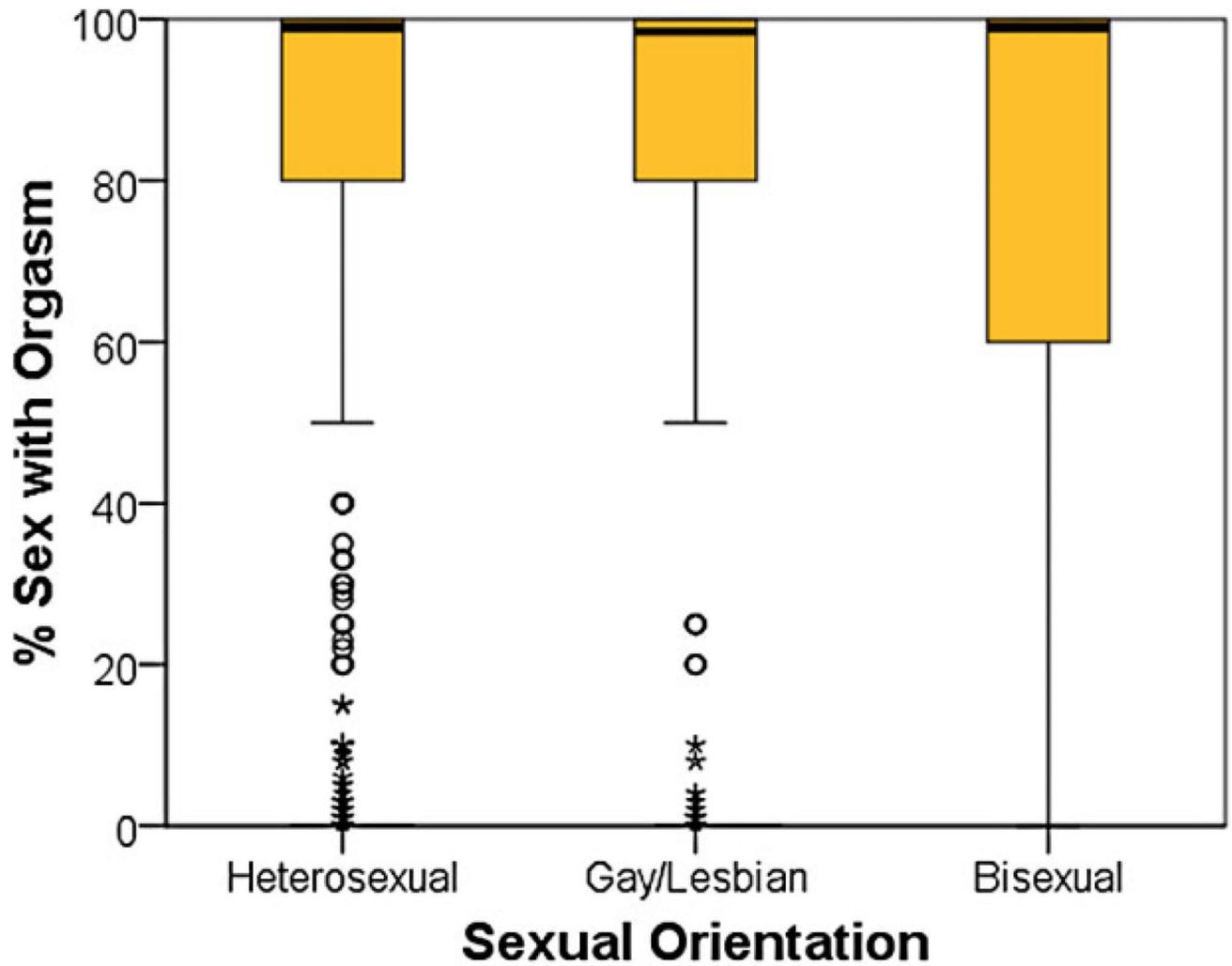


Figure 1. Box and whisker plot of percentage of sex that includes orgasm for heterosexual men, gay men, and bisexual men. Solid bar indicates median; box represents interquartile ranges; vertical bars indicate overall range; outliers are represented by individual points. No significant differences in orgasm among men across sexual orientation categories.

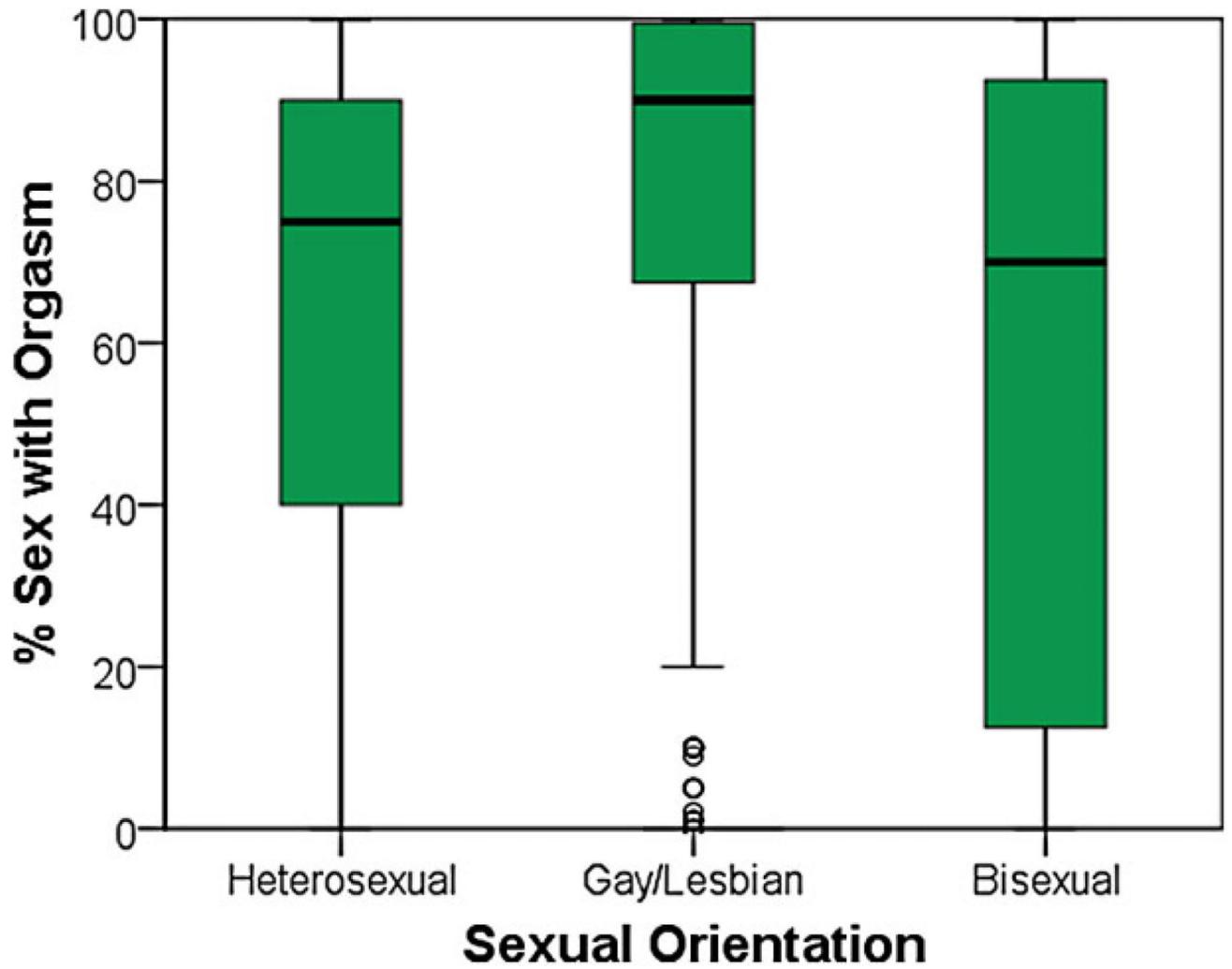


Figure 2.

Box and whisker plot of percentage of sex that includes orgasm for heterosexual women, lesbian women, and bisexual women. Solid bar indicates median; box represents interquartile ranges; vertical bars indicate overall range; outliers are represented by individual points. Lesbian women reported a significantly higher rate of orgasm compared with heterosexual and bisexual women.

Distributions of percentage of the time men and women experience orgasm when having sex with a familiar partner. Comparisons are shown across self-identified sexual orientation categories of heterosexual, gay/lesbian, and bisexual. Percentage of orgasm occurrence is reported in quarter percentage categories, with the percent of individuals who reported experiencing orgasm 0%, 50%, and 100% of the time separately noted

Table 1

	Men				Women			
	Heterosexual n = 1,226	Gay n = 208	Bisexual n = 63		Heterosexual n = 1,154	Lesbian n = 139	Bisexual n = 60	
Frequency of orgasm								
0%	1.2%	1.4%	3.2%		7.5%	2.2%	13.3%	
	15	3	2		86	3	8	
1–24%	5.5%	6.25%	7.9%		12.7%	10.1%	13.3%	
	68	13	5		146	14	8	
25–49%	1.5%	1.92%	6.3%		6.5%	2.2%	6.7%	
	19	4	4		75	3	4	
50%	3.9%	2.9%	7.9%		14.4%	7.2%	6.7%	
	48	6	5		166	10	4	
51–74%	2.7%	1.4%	1.6%		7.2%	7.2%	11.7%	
	33	3	1		83	10	7	
75–99%	35.9%	39.4%	25.4%		35.6%	46%	35%	
	440	82	16		411	64	21	
100%	49.2%	46.6%	47.6%		16.2%	25.2%	13.3%	
	603	97	30		187	35	8	