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## Daily diary study of adult men's and women's event-level sexual motivations and sexual behaviour

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### Abstract

**Background:** Understanding people's sexual motivations has long been of public health and health promotion interest. We used daily diaries to examine how adult men's and women's event-specific affective sexual motivations were linked to the types and combinations of sexual behaviours chosen in a given sexual event.

**Methods:** Adult men ( $n = 156$ ) and women ( $n = 192$ ) completed thrice-daily electronic diaries assessing individual- and partner-specific attributes and non-coital or coital sexual behaviours. Sexual motivations were: *interest in sex*, *feeling in love with partner*, *wanted to have sex* and *partner wanted to have sex*. The outcome variable was: *sexual behaviour type* (no sex, one vaginal sex event, one vaginal sex event + any other sex types, multiple vaginal sex events, any other sex types). Mixed-effect multinomial logistic regression modelled the influence of each sexual motivation on sexual behaviour type (Stata; all  $p < 0.05$ ). 'No sex' was the referent in all models; all models controlled for gender.

**Results:** Participants contributed 14 856 total partner-associated diary entries. Most (54%); women: 56.5%, men: 51.2%) were associated with no sex; when sex occurred, the most common behaviour type was one vaginal sex event (13.1%) for women and other sex types (16.4%) for men. Wanting to have sex or perceiving a partner wanted to have sex were the strongest predictors of sexual behaviour type, and were associated with a greater number of reported sexual behaviours.

**Conclusions:** Event-specific sexual motivations are associated with the choice to have sex, and with variation in the chosen sexual behaviours.

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Conflicts of interest

None declared.

## Introduction

Understanding sexual motivations, or the reasons why people engage in sexual activity,<sup>1,2</sup> has long been of interest to public health and health promotion professionals. Until recently, the majority of research in this area had focused on the physiological (e.g. pleasure-driven) or reproductive motivations for sex.<sup>3</sup> Over the past two decades, however, a growing body of literature has documented a wide variety of other emotional, financial, interpersonal and psychological sexual motives, with particular attention to understanding gender differences in these motivations,<sup>1,2,4-19</sup> as well as how these differences organise sexual behaviour.

Three common limitations unite the current literature. First, most research measures sexual motivations at a global level, rather than associating them within the relational or behavioural context of a given sexual encounter.<sup>20</sup> Second, many studies assess motivations at a single point in time, even though motivations may change in subsequent sexual events, either with the same partner, with different partners, or independent of any partners (e.g. the study by de Visser and Smith<sup>21</sup>). Third, with some exceptions, most research links motivations to general definitions of participating in sex (e.g. 'Did you have sex?'), rather than examining how different motivations could be uniquely associated with how and when people choose different manual-genital, oral-genital, vaginal or anal sex.

Collectively, these limitations obscure detailed understanding of how men's and women's event-specific sexual motivations, both individually based, as well as those associated with a given partner, are linked to the types of sexual behaviours chosen in that sexual event. Further, it is also unclear how the relationship between motivations and sexual behaviour may vary over time, both as a function of ongoing sexual experiences or within ongoing romantic/sexual relationships.<sup>5</sup> Such information is important for several reasons. From a public health perspective, most HIV/sexually transmissible infections (STI) prevention efforts are constructed around a single behaviour occurring in the context of a given sexual event (e.g. 'use a condom during vaginal sex'), rather than considering the possibility that multiple behaviours can and often do occur in the context of a given sexual event.<sup>22,23</sup> Moreover, while some interventions do focus on the role of sexual partners, most emphasise gender or power issues, rather than considering how affect is linked to sexual behaviours.<sup>24,25</sup> Documenting how specific motivations drive the selection and sequence of different behaviours could help better tailor sexual risk reduction programs.

From a health promotion perspective, greater understanding of the relative strength of physical and emotional motivators for sex could enhance the approach to improving sexual health in the context of specific relationships. For example, while studies have documented diversity in heterosexual sexual behaviour little is known about how other attributes of these events contribute to a person's evaluation of the event. It could be that orgasm is facilitated by specific behaviours in addition to the physical or emotional experiences associated with participating in specific behaviours.<sup>22</sup> In addition, understanding of motives could have important influences on individual health status, as individual- and perception of partner-sexual motivations influence personal and relational wellbeing,<sup>13</sup> as well as physical health (e.g. through contraceptive or condom use<sup>5,7</sup>).

Accordingly, using daily diary data collected from adult men and women, the objectives of the current study were to understand the influence of individual- and partner-specific sexual motivations on sexual behaviour choices in the context of a specific sexual event.

## Background

### Gender and sexual motivations

Sexual script theory (SST)<sup>28–30</sup> provides a useful framework for conceptualising how men and women may subscribe to *different* reasons for having sex in different situations. According to SST, sexual behaviours are organised within a social script closely integrated with traditional gender norms. Such norms socialise men to be sexually agentic, and to pursue multiple sexual experiences and multiple partners for largely self-focused reasons (e.g. conquest, sexual pleasure).<sup>31–33</sup> In contrast, women are expected to take a complementary, sexually passive role, to seek emotional closeness and committed relationships, and to have sex primarily for relationally focused reasons (e.g. intimacy with partner).<sup>33–35</sup>

Several studies on sexual motivations are consistent with these ideas. For example, in a landmark study examining the sexual motives over 2000 USA adults, Meston and Buss<sup>1</sup> found that more men than women reported physical appearance or physical desirability of a sexual partner as a reason for sex, whereas more women endorsed reasons related to feelings for another person. Other literature also supports gender differences, suggesting that physical or power reasons, such as feeling ‘horny,’ wanting physical release or stress relief, are cited by more men as reasons to have sex, whereas the perceived emotional benefits of sex, such as psychological closeness, bonding, intensify commitment, love or affection, may factor more prominently for women.<sup>6,11,12,15,18,19</sup>

However, SST also accounts for similarities in men’s and women’s motivations for sex<sup>14</sup> by suggesting that personal or relational contexts can aid people in revising traditional scripts, or in creating new scripts.<sup>28–30</sup> For example, traditional scripts may be more influential during early phases of a relationship, while developing relationship characteristics (e.g. knowledge about partner’s desires, or confidence in one’s own needs and wants) may drive behaviour in later relationship phases.<sup>36</sup> Moreover, more recent research documents fluidity in the enactments of traditional scripts, particularly among men.<sup>37–39</sup> Many young and adult men report enjoying close emotional ties to sexual partners,<sup>40,41</sup> and many women pursue specific sexual activities<sup>42</sup> or have sex in non-relational scenarios<sup>43</sup> simply in response to sexual desire.<sup>44,45</sup> Among young and emerging adults, both men and women endorse satisfying sexual desires as a primary reason, and feeling in love with a boy/girlfriend as a secondary reason, to have sex.<sup>14</sup> Other work has shown that, regardless of sexual orientation, women frequently cite pleasure, as well as emotional elements, such as love and commitment, as the most frequent drivers of sexual behaviour.<sup>46</sup> Emotional motivations for sex – including love and commitment – are similarly reported by both men and women.<sup>1,2,5</sup>

## Gender, sexual motivations and sexual behaviour

Less is known about how specific sexual motivations link to specific sexual behaviours. In general, studies show that having sex for pleasure is typically associated with more penetrative sexual behaviours, such as men's receiving oral sex, or participating in vaginal or anal sex, whereas endorsing love, intimacy or other emotional reasons for sex is associated with lighter behaviours, such as kissing, genital touching, massage or a woman's receiving oral sex.<sup>5,16,47</sup> Other research has suggested that having sex for intimacy reasons may also be associated with more frequent sex.<sup>4,5,7</sup>

Gender differences may exist in context-specific sexual motivations. Men are traditionally encouraged to pursue a variety of sexual behaviours, particularly as a means of maximising sexual pleasure. In contrast, women are often socialised to restrict the types of behaviours they engage in, and to use selected behaviours in support of emotional and relationship development.<sup>28-33</sup> For example, in a sample of college students, women reported higher levels of emotional motives, including love and commitment, during sexual interactions involving only oral sex only, or during sexual interactions with vaginal sex *and* oral sex. In the same study, males reported higher levels of physical motives for sexual events involving both oral and vaginal sex.<sup>33</sup> Among emerging adult women, a relational orientation towards a partner is associated with higher likelihood of orgasm and sexual enjoyment in hook-up sexual encounter,<sup>48</sup> while a perceived lack of emotional connection to a partner has also been implicated in a women's not engaging in sex.<sup>19</sup> However, both men and women may derive similar physical and emotional benefits from sexual activity.<sup>49</sup> In another study, sexual satisfaction was noted as a primary motivator for young adult men and women to engaging in casual sex.<sup>50</sup> Both sexual pleasure<sup>51</sup> and intimacy<sup>52</sup> are reasons for sexting in young adult relationships.<sup>51</sup>

## Gender, sexual motivations and specific sexual events

Research suggests that men's and women's sexual motivations are *event-specific*, with the influence of physical and emotional motivators changing as the contextual and behavioural characteristics of ongoing sexual experiences themselves change. For example, nationally representative research has described considerable diversity in men's and women's reports of arousal, pleasure and orgasm, as well as in the combinations of behaviours chosen, at their last sexual event.<sup>22</sup> In a diary study of adult women, sexual pleasure, sexual satisfaction and the prevalence of solo and partnered sexual behaviours varied from day-to-day.<sup>53</sup> In another diary study of romantic and sexual partners, reported levels of relationship and sexual satisfaction vacillated on days with and without reports of sexual activity.<sup>54</sup> Finally, among long-term heterosexual couples, diary-based day-to-day changes in reported intimacy were associated with relationship passion, sexual satisfaction and sexual frequency.<sup>55</sup> Our own diary work has confirmed event-level variability in physical and emotional motivators, such as being interested in sex or feeling in love, in young women's selection of sexual behaviours.<sup>26,56-59</sup>

## The current study

The current study bridges existing cross-sectional, retrospective literature on gender and sexual motivations and existing longitudinal, diary-based research on sexual affect and

sexual behaviour to prospectively link men's and women's sexual motivations to their sexual behaviour. Specifically, we use an ecological momentary assessment (EMA) approach to examine how the individual- and partner-specific motivations associated with a specific sexual event – feeling in love, being sexually interested, wanting to have sex or perceiving partner's wanting to have sex – influence the types and combinations of sexual behaviours they choose in that event.

## Methods

### Participants and study design

Data were collected as part of a larger 12-week study prospectively examining sexual partnerships, sexual behaviours and incident STIs in adult men and women.<sup>60</sup> Participants (192 women, 156 men) were recruited from the patient population of the Bell Flower Clinic (BFC), a sexually transmitted diseases clinic operated by the Marion County Health Department in Indianapolis, Indiana, USA. The BFC serves primarily lower- and middle-income individuals residing in areas with high rates of unintended pregnancy and STIs. Participants were eligible for the larger study if they were between 18 and 29 years of age, had primary residence in Marion County, Indiana, for the 90 days of the study duration. Both criteria were chosen to recruit a sample with a broad number of types of sexual relationships and reasons for sexual activity, as well as high rates of STIs, to facilitate follow up and to reduce sample attrition. Participant characteristics are provided in Table 1.

### Data collection

An EMA approach was used to elicit daily reports of event-specific sexual motivations and sexual behaviours. As an approach to data collection, EMA generally involves participants responding to pre-programmed signals on an electronic device (e.g. a cellular phone), prompting them to complete diaries related to recent or immediate social environment and behaviour.<sup>61,62</sup> In the current study, this meant that we were able to jointly assess sexual behaviour, as well as the motivations associated with the behaviours, as close to when they happened as possible. As repeated assessments are made in this fashion, it is possible to better understand how the influence of a given physical or emotional motivation differs when a specific behaviour, or a set of behaviours, does and does not occur, as well as how the influence of a given motivation changes over time. Moreover, compared with other collection modalities, EMA typically garners less missing data, higher reporting levels, stronger internal data validity and low behaviour reactivity.

As part of the larger study, participants contributed to within-day, cell-phone housed, electronic diaries assessing individual- and partner-specific emotional attributes, non-sexual activities, non-coital or coital sexual behaviours and contraceptive behaviours. Diaries were completed three times daily, at 8-h intervals selected to match the participant's daily routine. Each participant was provided with an Internet-enabled cell phone and a phone/data plan during the study. Participants had the option to keep the phone at study exit, and the majority (90%) opted to do so. Thirty minutes before a scheduled diary entry, participants received a text message reminding them to complete data entry, with up to three additional reminder messages following until the allowed completion window closed (4 h past the scheduled

time). Reminders also continued when a diary was started, but not submitted. Additional information on the larger study and the diary protocol are available in a prior publication.<sup>60</sup>

Once a diary entry was started, participants completed a specific sequence of questions assessing information about events since their last entry, including mood, and if any partner interaction had occurred. If partner interaction occurred, participants identified, from a checklist, any *partnered* sexual behaviours and the number of times each occurred, and the order of occurrence. Behaviours were linked to partners named in an auto-populated checklist initiated at enrolment and which was updated with the addition of any new partners. The current study is limited to diary intervals when any partner interaction occurred. This study was approved by the Institutional Review Board of Indiana University; all participants provided informed consent.

## Measures

**Predictor variables: sexual affective motivations**—For each partnered interaction, participants reported on four different sexual affective motivations, including their *interest in sex*, their *feeling in love with partner*, how much they *wanted to have sex* and how much their *partner wanted to have sex* (all single, five-point items: not at all, a little, some, quite a bit, a lot). Based on examination of response distributions, responses were each collapsed into three categories (not at all, a little to quite a bit, a lot).

**Outcomes variable: sexual interaction type**—As part of reporting on partnered interactions, participants reported oral-genital, penile-vaginal or penile-anal sexual behaviours that occurred with a specific partner. Using these data, we created a single variable classifying the *sexual behaviour type* for each reported diary interval with a given partner (no sex, one vaginal sex event only, one vaginal sex event *plus* any other types of sex, multiple vaginal sex events only, other types of sex only). For the construction of this variable, any reference to ‘vaginal sex’ implies penile-vaginal sex and ‘any other types of sex’ implied any sexual behaviour reported that did not involve penile-vaginal sex.

## Statistical analyses

Multinomial logistic regression was used to model the influence of each sexual motivation on sexual behaviour type. A general linear mixed modelling approach adjusted estimates for multiple within-subject diaries (Stata; all  $P < 0.05$ ).<sup>63</sup> ‘No sex’ was the outcome variable referent, and all sexual motivations were entered at the same time into a single multivariate model. We conducted each model twice, once for female participants and once for male participants.

## Results

Participants contributed 14 856 total partner-associated diary entries (Table 2). Female participants accounted for a slightly greater proportion of this total ( $n = 7743$ ; 52.12% of all interactions) as compared with male participants ( $n = 7113$ ; 47.88% of all interactions). Approximately half of all partnered interactions for both female (56.5%) and male (51.2%) participants were associated with no sex; when any sexual activity was reported, the most

common type was one vaginal event for females (13.1%) and other sex types only (16.4%) for males. The least commonly reported sexual behaviour for both women and men was one vaginal event in combination with other sex types (both 8.4%).

Controlling for other event-level sexual motivations (Table 3), feeling 'a lot' as compared with 'not at all' in love was associated with a lower likelihood of women's (relative risk ratio [RRR] = 0.33) reporting one vaginal event with other types of sex, relative to not having sex. Feeling 'a lot' as compared with 'not at all' in love also lowered men's reports (RRR = 0.32–0.42) of more complex sexual behaviours relative to not having sex.

For female participants, feeling either 'a little to some' or 'a lot' as compared with 'not at all' interested in sex was associated with between twice- and four-fold the relative risk (RRR = 1.63–4.60) of one vaginal event with other sex types, multiple vaginal events with other sex types and other sex types only relative to not having sex. No effects of being interested in sex were significant in male participants.

Among male participants (Table 4), wanting to have sex 'a lot' versus 'not at all' was associated with more than four-fold (RRR = 4.23–4.80) the likelihood of a single vaginal event, vaginal sex with other sex types, and multiple vaginal sex events with other sex types as compared with not having sex at all. For females, a participants' wanting to have sex 'a little to some' (RRR = 1.90 = 5.47) or 'a lot' (RRR = 3.76–21.18) relative to 'not at all' increased the relative risk of all sex types compared with engaging in no sex. Specifically, reporting of multiple vaginal events in combination with other sex types was approximately 20-fold more likely than reporting no sex when their desire to have sex was at the highest reported level.

Finally, for both male and female participants, feeling 'a lot' like one's partner wanted to have sex was associated with a higher likelihood of most behaviours, as compared with events in which individuals only perceived 'a little to some' that their partner wanted to engage in sex. The highest level of this affective motivation was least predictive of other sex types only among women (RRR = 1.92) and with other sex types only among men (RRR = 3.18). Multiple vaginal sex events in combination with other sex events were approximately 36-fold more likely for women, and approximately 10-fold more likely for men, as compared with reporting no sex. One vaginal event in combination with other sex events was approximately 17-fold more likely for women, and approximately 30-fold more likely for men, versus engaging in no sex.

## Discussion

The purpose of the current study was to understand how men's and women's affective sexual motivations were differentially associated with the selection of specific sexual behaviours. Prior literature examining gender differences in these relationships has been limited through use of global measurements of motivations, reliance on cross-sectional data and general definitions of sexual behaviour. By analysing these relationships with measurements of sexual motives and sexual behaviour specific to a given partner within a specific sexual event, the current data reflect a more detailed description of gender-specific effects in the

link between motives and behaviour than that afforded in previously cross-sectional and/or retrospective studies.

Existing research on gender differences in sexual motivations have documented the greater salience of emotional motivations for women and the greater salience of physical motivators for men.<sup>1,6,11,12,15,18,19</sup> Other work has posited that physical and emotional motivators are both important for men and women.<sup>1,2,5,14,40,41,43–46,49–52</sup> Our data provide greatest support for the latter body of work, demonstrating that being sexually interested, wanting to have sex, or perceiving one's partners wanting to have sex, each significantly increased men's and women's odds of men's and women's partnered sex over choosing not to have sex during any given sexual event. These findings add context to a growing body of literature documenting the importance of men's emotional connection to their sexual partners<sup>40,41</sup> and women's experiences of sexual desire and sexual pleasure.<sup>14,42,46,64</sup> Pertinent to the latter, we found that some motivations exerted a stronger influence on *partnered behaviour* for women as compared with men, particularly in terms of a woman's wanting to have sex or perceiving that her partner wanted to have sex. These findings parallel recent qualitative work demonstrating the variance of gendered sexual scripts in relationship and individual contexts.<sup>65</sup> Future research may pursue a more detailed understanding of how these scripts drive the mechanism by which men and women communicate non-traditional motivations to sexual partners. Such information could help how couples address sexual pleasure, sexual satisfaction and sexual function.<sup>2</sup>

These findings also partially align with studies suggesting that emotional sexual motivations are typically associated with lighter, less varied sexual behaviour choices, whereas pleasure as a sexual motivator is usually associated with more frequent, penetrative-type sexual behaviours.<sup>4,5,7,16,33,47</sup> We found that among female participants, feeling in love was associated with a lower likelihood of many sexual interaction choices as compared with not having sex, whereas for both male and female participants, whereas either partners' wanting to have sex was associated with more involved sets of sexual behaviours (e.g. multiple vaginal events). These findings could reflect differences in end goals from one motivator to another. For example, individuals feeling in love may perceive that a single act of vaginal sex is adequate to achieve the emotional closeness desired from a given sexual event. Alternatively, 'wanting to have sex' as a motivation for partnered interaction may be associated with orgasm as an end goal, and individuals may pursue multiple sexual practices as a means of increasing its likelihood.<sup>23</sup>

Finally, these data have important implications for both intervention and sexual health promotion programs. From an intervention standpoint, assessment of sexual motives may help better tailor prevention efforts to specific relationships. For example, targeting increased condom use in relationships associated with physical motivators may require helping individuals to eroticise condom use, particularly if they are viewed to interfere with sexual enjoyment during sex.<sup>66</sup> From a sexual health promotion viewpoint, understanding which sexual motivations link to which sexual behaviours could amplify the success of behaviourally focused strategies to enhance sexual satisfaction and sexual function in relationships,<sup>2</sup> or to strengthen emotional aspects of relationships.

## Limitations

Several limitations of the present study should be noted. First, participants were primarily recruited from the patient population at a county health clinic serving individuals residing in urban, low- to middle-income areas marked by high rates of STI. Therefore, while these data may not be generalisable to all similarly aged men and women, they do provide understanding on the processes of sexuality and sexual behaviour in higher risk persons (those economically disadvantaged, racial/ethnic minority, or both) whose risk is epidemiologically emphasised, but whose sexual relationships are largely ignored. In addition, although the data were collected at a partner-specific level, the models presented here do not incorporate information about the couples' histories before a given day. For example, variables such as relationship duration<sup>67</sup> or regular frequency of sex, may influence the day-to-day effect of sexual motivations on sexual behaviour selection. Future research may also seek to implement a more complex event-level selection of sexual behaviours or contraceptive variables. Models also do not incorporate the effect of any non-partnered sexual activity, such as solo masturbation, the frequency of which may effect an individual's ongoing motivation for partnered sex. Finally, the outcome variable in this study broadly defined 'other sex' in terms of any sexual behaviour that was not penile-vaginal sex, including any manual-genital, oral-genital or behaviours not captured in the diary list. The constructions of measures in this way could mask differences between non-coital behaviour choices. Moving forward, studies may obtain beneficial information if more finely gained comparisons of partnered behaviours were examined.

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## References

1. Meston C, Buss D. Why humans have sex. *Arch Sex Behav* 2007; 36:477–507. doi:10.1007/s10508-007-9175-2 [PubMed: 17610060]
2. Stephenson KR, Ahrold TK, Meston CM. The association between sexual motives and sexual satisfaction: gender differences and categorical comparisons. *Arch Sex Behav* 2011; 40: 607–18. doi:10.1007/s10508-010-9674-4 [PubMed: 20967494]
3. Masters WH, Johnson VE. Human sexual inadequacy. Boston 1970; 467: 58.
4. Browning JR, Hatfield E, Kessler D, Levine T. Sexual motives, gender, and sexual behavior. *Arch Sex Behav* 2000; 29: 135–53. doi:10.1023/A:1001903705153 [PubMed: 10842722]
5. Cooper ML, Shapiro CM, Powers AM. Motivations for sex and risky sexual behavior among adolescents and young adults: a functional perspective. *J Pers Soc Psychol* 1998; 75: 1528–58. doi:10.1037/0022-3514.75.6.1528 [PubMed: 9914665]
6. Leigh BC. Reasons for having and avoiding sex: gender, sexual orientation, and relationship to sexual behavior. *J Sex Res* 1989; 26: 199–209. doi:10.1080/00224498909551506
7. Katz BP, Fortenberry JD, Zimet GD, Blythe MJ, Orr DP. Partner-specific relationship characteristics and condom use among young people with sexually transmitted diseases. *J Sex Res* 2000; 37: 69–75. doi:10.1080/00224490009552022
8. Christopher FS, Cate RM. Factors involved in premarital sexual decision-making. *J Sex Res* 1984; 20: 363–76. doi:10.1080/00224498409551233

9. Deardorff J, Suleiman AB, Dal Santo TS, Flythe M, Gurdin JB, Eyre SL. Motivations for sex among low-income African American young women. *Health Educ Behav* 2013; 40: 646–50. doi:10.1177/1090198112473112 [PubMed: 23372029]
10. Greiling H, Buss DM. Women's sexual strategies: the hidden dimension of extra-pair mating. *Pers Individ Dif* 2000; 28: 929–63. doi:10.1016/S0191-8869(99)00151-8
11. Buss D. The evolution of desire: strategies of human mating. New York: Basic Books; 2003.
12. Basson R. The female sexual response: a different model. *J Sex Marital Ther* 2000; 26: 51–65. doi:10.1080/009262300278641 [PubMed: 10693116]
13. Impett EA, Peplau LA, Gable SL. Approach and avoidance sexual motives: implications for personal and interpersonal well-being. *Pers Relatsh* 2005; 12: 465–82. doi:10.1111/j.1475-6811.2005.00126.x
14. Ozer EJ, Dolcini MM, Harper GW. Adolescents' reasons for having sex: gender differences. *J Adolesc Health* 2003; 33: 317–9. doi:10.1016/S1054-139X(03)00324-0 [PubMed: 14596952]
15. Patrick ME, Maggs JL, Abar CC. Reasons to have sex, personal goals, and sexual behavior during the transition to college. *J Sex Res* 2007; 44: 240–9. doi:10.1080/00224490701443759 [PubMed: 17879167]
16. Patrick ME, Maggs JL, Cooper ML, Lee CM. Measurement of motivations for and against sexual behavior. *Assessment* 2011; 18: 502–16. doi:10.1177/1073191110372298 [PubMed: 20581394]
17. Patrick ME, Lee CM. Sexual motivations and engagement in sexual behavior during the transition to college. *Arch Sex Behav* 2010; 39: 674–81. doi:10.1007/s10508-008-9435-9 [PubMed: 19067151]
18. Hill CA, Preston LK. Individual differences in the experience of sexual motivation: theory and measurement of dispositional sexual motives. *J Sex Res* 1996; 33: 27–45. doi:10.1080/00224499609551812
19. Carroll JL, Volk KD, Hyde JS. Differences between males and females in motives for engaging in sexual intercourse. *Arch Sex Behav* 1985; 14: 131–9. doi:10.1007/BF01541658 [PubMed: 3994500]
20. Treger S, Sprecher S, Hatfield E, Erber R. Women's sexuality in close relationships. The essential handbook of women's sexuality. Santa Barbara, CA: ABC-CLIO; 2013: 47–68.
21. de Visser RO, Smith A. Which intention? Whose intention? Condom use and theories of individual decision making. *Psychol Health Med* 2004; 9: 193–204. doi:10.1080/13548500410001670717
22. 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: 346–61. doi:10.1111/j.1743-6109.2010.02020.x [PubMed: 21029390]
23. 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. doi:10.1080/00224490609552320 [PubMed: 17599244]
24. Shain RN, Piper JM, Newton ER, Perdue ST, Ramos R, Champion JD, Guerra FA. A randomized, controlled trial of a behavioral intervention to prevent sexually transmitted disease among minority women. *N Engl J Med* 1999; 340: 93–100. doi:10.1056/NEJM199901143400203 [PubMed: 9887160]
25. Kamb ML, Fishbein M, Douglas JM, Rhodes F, Rogers J, Bolan G, Zenilman J, Hoxworth T, Malotte CK, Iatesta M, Kent C, Lentz A, Graziano S, Byers RH, Peterman TA. Efficacy of risk-reduction counseling to prevent Human Immunodeficiency Virus and sexually transmitted diseases. *JAMA* 1998; 280: 1161–7. doi:10.1001/jama.280.13.1161 [PubMed: 9777816]
26. Hensel DJ, Fortenberry JD, Orr DP. Variations in coital and noncoital sexual repertoire among adolescent women. *J Adolesc Health* 2008; 42: 170–6. doi:10.1016/j.jadohealth.2007.07.009 [PubMed: 18207095]
27. Laumann EO, Gagnon JH, Michael RT, Michaels S. The social organization of sexuality: sexual practices in the United States. Chicago: University of Chicago Press; 2000.
28. Simon W, Gagnon JH. Sexual scripts: origins, influences and changes. *Qual Sociol* 2003; 26: 491–7. doi:10.1023/B:QUAS.0000005053.99846.e5

29. Gagnon JH, Simon W. A sexual scripting approach. In: Geer JH, O'Donoghue WT, eds. *Theories of Human Sexuality*. New York, NY: Plenum; 1987:363–383.
30. Gagnon JH. The explicit and implicit use of the scripting perspective in sex research. *Annu Rev Sex Res* 1990; 1: 1–43.
31. Epstein M, Calzo JP, Smiler AP, Ward LM. “Anything from making out to having sex”: men’s negotiations of hooking up and friends with benefits scripts. *J Sex Res* 2009; 46: 414–24. doi:10.1080/00224490902775801 [PubMed: 19253134]
32. Kimmel MS. Masculinity as homophobia: fear, shame, and silence in the construction of gender identity. In: Harper SR, Harris F III, eds. *College Men and Masculinities: Theory, Research, and Implications for Practice*. San Francisco, CA: Jossey-Bass; 2010: 23–31.
33. Vannier SA, O’Sullivan LF. Who gives and who gets: why, when, and with whom young people engage in oral sex. *J Youth Adolesc* 2012; 40: 1–11.
34. Crawford M, Popp D. Sexual double standards: a review and methodological critique of two decades of research. *J Sex Res* 2003; 40: 13–26. doi:10.1080/00224490309552163 [PubMed: 12806528]
35. Crawford M, Unger RK. Women and gender: a feminist psychology, 4th edn. New York: McGraw Hill; 2004.
36. Sanchez DT, Fetterolf JC, Rudman LA. Eroticizing inequality in the United States: the consequences and determinants of traditional gender role adherence in intimate relationships. *J Sex Res* 2012; 49: 168–83. doi:10.1080/00224499.2011.653699 [PubMed: 22380587]
37. Flood M. Male and female sluts. *Aust Fem Stud* 2013; 28: 95–107. doi:10.1080/08164649.2012.758024
38. Elder WB, Brooks GR, Morrow SL. Sexual self-schemas of heterosexual men. *Psychol Men Masc* 2012; 13: 166–79. doi:10.1037/a0024835
39. Anderson E, Adams A, Rivers I. “I kiss them because I love them”: the emergence of heterosexual men kissing in British institutes of education. *Arch Sex Behav* 2012; 41: 421–30. doi:10.1007/s10508-010-9678-0 [PubMed: 20967493]
40. Giordano PC, Longmore MA, Manning WD. Gender and the meanings of adolescent romantic relationships: a focus on boys. *Am Sociol Rev* 2006; 71: 260–87. doi:10.1177/000312240607100205
41. Smiler AP. “I wanted to get to know her better”: adolescent boys’ dating motives, masculinity ideology, and sexual behavior. *J Adolesc* 2008; 31: 17–32. doi:10.1016/j.adolescence.2007.03.006 [PubMed: 17537500]
42. Maynard E, Carballo-Díéguez A, Ventuneac A, Exner T, Mayer K. Women’s experiences with anal sex: motivations and implications for STD prevention. *Perspect Sex Reprod Health* 2009; 41: 142–9. doi:10.1363/4114209 [PubMed: 19740231]
43. Weaver SA, Herold ES. Casual sex and women: measurement and motivational issues. *J Psychol Human Sex* 2000; 12: 23–41. doi:10.1300/J056v12n03\_02
44. Carvalheira AA, Brotto LA, Leal I. Women’s motivations for sex: exploring the diagnostic and statistical manual, fourth edition, text revision criteria for hypoactive sexual desire and female sexual arousal disorders. *J Sex Med* 2010; 7: 1454–63. [PubMed: 20141590]
45. Hatfield E, Luckhurst C, Rapson RL. Sexual motives: cultural, evolutionary, and social psychological perspectives. *Sex Cult* 2010; 14: 173–90. doi:10.1007/s12119-010-9072-z
46. Wood JR, Milhausen RR, Jeffrey NK. Why have sex? Reasons for having sex among lesbian, bisexual, queer, and questioning women in romantic relationships. *Can J Hum Sex* 2014; 23: 75–88. doi:10.3138/cjhs.2592
47. Hoffman V, Bolton R. Reasons for having sex and sexual risk-taking: a study of heterosexual male STD clinic patients. *AIDS Care* 1997; 9: 285–96. doi:10.1080/09540129750125082 [PubMed: 9290834]
48. 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. doi:10.1177/0003122412445802
49. Michael RT, Gagnon JH, Laumann EO, Kolata G. *Sex in America: a definitive survey*. New York: Little Brown; 1994.

50. Lyons HA, Manning WD, Longmore MA, Giordano PC. Young adult casual sexual behavior: life course specific motivations and consequences. *Sociol Perspect* 2014; 57: 79–101. doi:10.1177/0731121413517557 [PubMed: 25013267]
51. Parker TS, Blackburn KM, Perry MS, Hawks JM. Sexting as an intervention: relationship satisfaction and motivation considerations. *Am J Fam Ther* 2013; 41: 1–12. doi:10.1080/01926187.2011.635134
52. Drouin M, Tobin E. Unwanted but consensual sexting among young adults: relations with attachment and sexual motivations. *Comput Human Behav* 2014; 31: 412–8. doi:10.1016/j.chb.2013.11.001
53. Herbenick D, Reece M, Hensel DJ, Sanders SA, Jozkowski K, Fortenberry JD. Association of lubricant use with women's sexual pleasure, sexual satisfaction, and genital symptoms: a prospective daily diary study. *J Sex Med* 2011; 8: 202–12. doi:10.1111/j.1743-6109.2010.02067.x [PubMed: 21143591]
54. Muise A, Impett EA, Desmarais S. Getting it on versus getting it over with sexual motivation, desire, and satisfaction in intimate bonds. *Pers Soc Psychol Bull* 2013; 39: 1320–32. doi:10.1177/0146167213490963 [PubMed: 23812928]
55. Rubin H, Campbell L. Day-to-day changes in intimacy predict heightened relationship passion, sexual occurrence, and sexual satisfaction: a dyadic diary analysis. *Soc Psychol Personal Sci* 2012; 3: 224–31. doi:10.1177/1948550611416520
56. Hensel DJ, Fortenberry JD, Orr DP. Factors associated with event level anal sex and condom use during anal sex among adolescent women. *J Adolesc Health* 2010; 46: 232–7. doi:10.1016/j.jadohealth.2009.06.025 [PubMed: 20159499]
57. Hensel DJ, Fortenberry JD, Orr DP. Situational and relational factors associated with coitus during vaginal bleeding among adolescent women. *J Sex Res* 2007; 44: 269–77. doi:10.1080/00224490701443940 [PubMed: 17879170]
58. Fortenberry JD, Temkit MH, Tu W, Graham CA, Katz BP, Orr DP. Daily mood, partner support, sexual interest, and sexual activity among adolescent women. *Health Psychol* 2005; 24: 252–7. doi:10.1037/0278-6133.24.3.252 [PubMed: 15898860]
59. Fortenberry JD, Hensel DJ. The association of sexual interest and sexual behaviors among adolescent women: a daily diary perspective. *Horm Behav* 2011; 59: 739–44. doi:10.1016/j.yhbeh.2011.03.003 [PubMed: 21397605]
60. Hensel DJ, Fortenberry JD, Harezlak J, Craig D. The feasibility of cell phone based electronic diaries for STI/HIV research. *BMC Med Res Methodol* 2012; 12: 1–12. [PubMed: 22214542]
61. Shiffman S, Stone A, Hufford M. Ecological momentary assessment. *Annu Rev Clin Psychol* 2008; 4: 1–32. doi:10.1146/annurev.clinpsy.3.022806.091415 [PubMed: 18509902]
62. Hufford M. Special methodological challenges and opportunities in ecological momentary assessment. In Stone AA, Shiffman S, Atienza A, Nebeling L, editors. *The science of real-time data capture: self-reports in health research*. Oxford: Oxford University Press; 2007. pp. 54–75.
63. Stata. College Station, TX.: StataCorp LP; 2012.
64. Baumeister RF, Twenge JM. Cultural suppression of female sexuality. *Rev Gen Psychol* 2002; 6: 166–203. doi:10.1037/1089-2680.6.2.166
65. Masters NT, Casey E, Wells EA, Morrison DM. Sexual scripts among young heterosexually active men and women: continuity and change. *J Sex Res* 2013; 50: 409–20. [PubMed: 22489683]
66. Hensel DJ, Stupiansky NW, Herbenick D, Dodge B, Reece M. Sexual pleasure during condom-protected vaginal sex among heterosexual men. *J Sex Med* 2012; 9: 1272–6. doi:10.1111/j.1743-6109.2012.02700.x [PubMed: 22781082]
67. Murray SH, Milhausen RR. Sexual desire and relationship duration in young men and women. *J Sex Marital Ther* 2012; 38: 28–40. doi:10.1080/0092623X.2011.569637 [PubMed: 22268980]

**Table 1.**Participant characteristics ( $n = 348$ )

	Women ( $n = 192$ )	Men ( $n = 156$ )
Race ( $n, \%$ )		
White	12 (6.25)	13 (8.33)
African American/Black	175 (91.15)	138 (88.46)
Other	5 (2.6)	4 (2.56)
Don't know	0 (0.0)	1 (0.64)
Ethnicity ( $n, \%$ )		
Hispanic	7 (3.65)	1 (0.64)
Non-Hispanic	152 (79.17)	106 (67.95)
Ethnicity not recorded	33 (17.19)	49 (31.41)
Age (mean, s.d.)	23.25 (2.98)	23.26 (2.94)
STI at enrolment (Yes: $n, \%$ )	46 (23.96)	30 (19.23)
Sexual history		
Age first gave oral sex (mean, s.d.)	11.06 (2.98)	10.94 (3.40)
Age first received oral sex (mean, s.d.)	10.59 (2.92)	10.10 (4.75)
Age first had vaginal sex (mean, s.d.)	15.13 (2.05)	13.80 (3.25)
Age first had anal sex (mean, s.d.)	12.95 (3.31)	11.35 (3.67)
Lifetime vaginal sex partners (mean, s.d.)	32.80 (27.55)	25.90 (17.50)
Lifetime anal sex partners (mean, s.d.)	7.92 (5.66)	11.32 (6.87)

s.d., standard deviation; STI, sexually transmissible infection

**Table 2.**

Distribution of sexual interaction types during partnered-associated diary intervals, by participant gender

Sexual interaction type (n, %)	Overall	Women	Men
No sex reported	8015 (54.0)	4373 (56.5)	3642 (51.2)
Any sex reported			
One vaginal sex event only	1697 (11.4)	1018 (13.1)	679 (9.5)
One vaginal sex event + other sex types	1245 (8.4)	651 (8.4)	594 (8.4)
Multiple vaginal sex events + other sex types	1785 (12.0)	757 (9.8)	1028 (14.5)
Other sex types only	2114 (14.2)	944 (12.2)	1170 (16.4)
Total partner interactions	14 856	7743	7113

**Table 3.**

Multivariate relative risk ratio (RRR) for sexual affective motivations and sexual behaviour choice during partnered-associated diary intervals, among female participants

Sexual affective motivation	Female participants Relative risk ratio (95% CI)			
	One vaginal event only <sup>A</sup>	One vaginal event + other sex types <sup>A</sup>	Multiple vaginal events + other sex types <sup>A</sup>	Other sex types only <sup>A</sup>
Feeling in love	—	—	—	—
None (ref)	—	—	—	—
Little to some	1.07 (0.57–2.02)	0.51 (0.24–1.07)	0.88 (0.46–1.69)	0.77 (0.44–1.32)
A lot	0.87 (0.43–1.75)	0.33 (0.14–0.76)*	0.48 (0.22–1.01)	0.55 (0.25–1.16)
Interested in sex	—	—	—	—
None (ref)	—	—	—	—
Little to some	1.42 (0.90–2.23)	1.90 (1.22–2.96) **	2.31 (1.40–3.81) **	1.63 (1.06–2.52)*
A lot	1.52 (0.79–2.93)	2.88 (1.59–5.22) ***	4.10 (2.32–7.24) ***	2.50 (1.49–4.19) ***
Participant wanted sex	—	—	—	—
None (ref)	—	—	—	—
Little to some	5.47 (2.96–10.12) ***	4.13 (2.00–8.49) ***	5.25 (2.42–11.38) ***	1.90 (1.19–3.04) **
A lot	13.27 (6.65–26.48) ***	11.93 (5.71–24.95) ***	21.18 (9.23–48.57) ***	3.76 (2.23–6.33) ***
Partner wanted sex	—	—	—	—
None (ref)	—	—	—	—
Little to some	5.14 (2.63–10.04) ***	4.60 (1.87–11.26) **	13.97 (3.53–55.16) ***	1.19 (0.75–1.87)
A lot	11.33 (5.89–21.79) ***	17.30 (6.46–46.37) ***	36.67 (9.09–147.87) ***	1.92 (1.17–3.14) **

CI, confidence interval;

\*  $P < 0.05$ ;

\*\*  $P < 0.01$ ;

\*\*\*  $P < 0.001$

<sup>A</sup>Referent (Ref) is 'no sex'.

**Table 4.**

Multivariate relative risk ratio (RRR) for sexual affective motivations and sexual behaviour choice during partnered-associated diary intervals, among male participants

Sexual affective motivation	One vaginal event only <sup>A</sup>	One vaginal event + other sex types <sup>A</sup>	Multiple vaginal events + other sex types <sup>A</sup>	Other sex types only <sup>A</sup>
Feeling in love	—	—	—	—
None (ref)	—	—	—	—
Little to some	0.65 (0.39–1.09)	0.54 (0.28–1.03)	0.29 (0.17–0.52) ***	0.50 (0.23–1.11)
A lot	0.57 (0.31–1.03)	0.42 (0.18–0.96)*	0.32 (0.13–0.78)*	0.32 (0.11–0.89)*
Interested in sex	—	—	—	—
None (ref)	—	—	—	—
Little to some	0.95 (0.61–1.47)	1.19 (0.56–2.54)	1.01 (0.51–2.00)	1.25 (0.66–2.38)
A lot	0.75 (0.41–1.37)	1.55 (0.65–3.69)	1.37 (0.61–3.07)	1.37 (0.64–2.95)
Participant wanted sex	—	—	—	—
None (ref)	—	—	—	—
Little to some	1.51 (0.76–2.98)	2.07 (0.85–5.06)	1.82 (0.66–5.01)	0.75 (0.45–1.26)
A lot	4.23 (2.02–8.85) ***	4.57 (1.79–11.67) **	4.80 (1.68–13.67) ***	1.35 (0.70–2.60)
Partner wanted sex	—	—	—	—
None (ref)	—	—	—	—
Little to some	3.75 (1.31–10.68)*	6.81 (2.52–18.35) ***	2.31 (0.98–5.42)	1.85 (0.95–3.60)
A lot	9.03 (2.91–27.94) ***	30.22 (9.69–94.26) ***	9.68 (3.37–27.77) ***	3.18 (1.34–7.53) **

CI, confidence interval;

\*  $P < 0.05$ ;

\*\*  $P < 0.01$ ;

\*\*\*  $P < 0.001$

<sup>A</sup>Referent (Ref) is 'no sex'.