Published in final edited form as:

J Sex Med. 2014 March ; 11(3): 678–696. doi:10.1111/jsm.12225.

Accuracy of 30-Day Recall for Components of Sexual Function and the Moderating Effects of Gender and Mood

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Abstract

Introduction—Despite the ubiquity of 1-month recall periods for measures of sexual function, there is limited evidence for how well recalled responses correspond to individuals' actual daily experiences.

Aim—To characterize the correspondence between daily sexual experiences and 1-month recall of those experiences.

Methods—Following a baseline assessment of sexual functioning, health, and demographic characteristics, 202 adults from the general population (101 women, 101 men) were recruited to complete daily assessments of their sexual function online for 30 days and a single recall measures of sexual function at day 30.

Main Outcome Measures—At the baseline and 30-day follow-ups, participants answered items asking about sexual satisfaction, sexual activities, interest, interfering factors, orgasm, sexual functioning, and use of therapeutic aids during the previous 30 days. Participants also completed a measure of positive and negative affect at follow-up. The main outcome measures were agreement between the daily and 1-month recall versions of the sexual function items.

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Additional Contributions: Damon M. Seils, MA, Duke University, for critical input and assisted with manuscript preparation. Angel Moore, MPH, Duke University, provided research assistance. Study interviewers included Lucy Andrzejewski, Teresa Baker, Henry Beresford, Monie Clayton, Patrick Lane, Justin Levens, and Mindy Kash from the Duke University School of Nursing Research Management Team. The Research Management Team is supported by a Clinical and Translational Science Award (UL1RR024128) from the National Center for Research Resources, a component of the National Institutes of Health.

Conflict of Interest: None

Results—Accuracy of recall varied depending on the item and on the gender and mood of the respondent. Recall was better (low bias and higher correlations) for sexual activities, vaginal discomfort, erectile function, and more frequently used therapeutic aids. Recall was poorer for interest, affectionate behaviors (eg, kissing), and orgasm-related items. Men more than women overestimated frequency of interest and masturbation. Concurrent mood was related to over- or underreporting for 6 items addressing the frequency of masturbation and vaginal intercourse, erectile function, and orgasm.

Conclusions—A 1-month recall period seems acceptable for many aspects of sexual function in this population, but recall for some items was poor. Researchers should be aware that concurrent mood can have a powerful biasing effect on reports of sexual function.

Introduction

Commonly used measures of patient-reported sexual function ask patients to report their experiences during the previous month.¹⁻³ Monthly recall periods allow for less frequent assessments in longitudinal studies. However, the reliability and validity of such measures depend on how accurately people can report on their experiences during the previous month. Recent guidance from the US Food and Drug Administration underscores the importance of justifying recall periods before measures can be used to support labeling claims.⁴ Despite widespread use of monthly recall periods, there has been little research examining whether responses to the measures correspond to respondents' actual daily experiences. Previous research⁵⁻⁹ has been limited by small sample sizes or by focusing on sexual behaviors to the exclusion of other domains, such as interest and functioning.

We sought to characterize correspondence between daily reports of sexual experiences and 1-month recall of those experiences. The study was part of the development of a sexual function measure by the Patient-Reported Outcomes Measurement Information System (PROMIS) Network.¹⁰ The purpose of PROMIS is to develop efficient, high-quality, publicly available patient-reported measures of health concepts relevant to many chronic diseases. The default recall period in PROMIS measures is 7 days. However, data from cognitive interviews with patients suggested that a 1-month recall period would be required to generate sufficient numbers of sexual experiences for patient reports. We explored whether a monthly recall period would yield sufficiently reliable patient reports. A secondary aim of the study was to explore whether errors of recall vary as a function of gender or affective state at the time the person completed the 1-month recall assessment. Studies of recall accuracy in other domains have found that concurrent mood can influence what people remember about their experiences.¹¹⁻¹³

Methods

Study Population

Participants were recruited via flyers posted in outpatient clinics of the Duke University Health System (Durham, North Carolina), an advertisement in the weekly health section of the *New York Times*, and word of mouth. Additional participants were identified in the Duke Cancer Institute Tumor Registry. Participants who met screening criteria and agreed to participate were led through the informed consent process by telephone. Eligible participants were 18 years or older, had regular access to the Internet, were able to speak and read English, and expected to participate in at least 1 partnered sexual activity during the month of study. Our sampling strategy aimed for at least 50% of the participants to have a diagnosis of any common chronic condition (eg, arthritis, asthma, coronary artery disease, depression, diabetes, multiple sclerosis); the remainder of the participants were not diagnosed with any chronic illness. We stratified recruitment by gender and aimed for

diversity with respect to expected frequency of sexual activity. The institutional review board of the Duke University Health System approved the study.

Procedures

Data were captured electronically through Assessment Center (<http://assessmentcenter.net>), an online research management tool that allows clinicians and researchers to create study-specific websites to administer PROMIS and other patient-reported outcome (PRO) measures to patients and study participants. A pilot study involving cognitive interviews and daily assessments of 5 women and 5 men preceded the main study to test and refine the survey instruments and procedures. Participants in the pilot study were compensated \$75.

The main study consisted of a 3-day training period, a baseline assessment, 30 daily assessments, and a final assessment, for a total of 34 days. Participants in the main study were paid \$25 for completing the initial assessment, \$5 per daily assessment completed, and \$25 for the final assessment, for a maximum of \$200. During the first training session, study staff reviewed the daily questions individually with participants by telephone to make sure the questions were understood. Participants completed daily assessments on the next 2 training days on their own. After the third training assessment, study staff contacted participants to ask if they had any questions or problems with the assessments and reminded participants that they would receive daily morning reminders by e-mail beginning on the next day.

All participants were asked to complete daily assessments in the morning and were cued with an automatically generated reminder e-mail containing a link to the survey. Every afternoon, we sent e-mail reminders to participants who had not yet completed the daily assessment. In the early evening, participants had the option to complete the daily assessment by telephone with an interviewer.

If a participant did not complete a daily assessment, an interviewer attempted to contact the participant on the next day to ask whether he or she had any sexual activities to report on the missed day. The interviewer then recorded whether the participant had “missed with event” or “missed with no event” and recorded the type of activity that was missed.

If a participant missed a second daily assessment, we offered to provide an afternoon reminder by telephone on all subsequent days on which the participant had not completed the assessment by midday. Participants were required to complete at least 75% of the 30 daily assessments to be considered compliant. Participants who missed 8 daily assessments were removed from the study.

Measures

The baseline survey collected sociodemographic information and details about any chronic illnesses, functional limitations, and treatments received. At the baseline and 30-day assessments, participants responded to items about sexual satisfaction, sexual activities, interest, interfering factors, orgasm, functioning, and use of therapeutic aids (for example, personal lubricants or pills such as Viagra) during the previous 30 days. These items were taken from a preliminary pool of items under development for the PROMIS Sexual Function measure. The items were developed on the basis of a literature review,¹⁴ 16 focus groups,¹⁵ and cognitive interviews with 39 patients with cancer.¹⁶ (The final measure, which includes a subset of the items used in this study, is available in Assessment Center.) The 30-day recall assessment also included the Positive and Negative Affect Schedule (PANAS),^{17,18} an assessment of mood.

Daily assessments included 1 item about interest in sexual activity and 12 items about affectionate and sexual activities in the previous 24 hours. Participants who reported that a sexual activity had occurred within the previous 24 hours were asked additional questions about sexual function, orgasm, satisfaction, and use of therapeutic aids (17 or 24 items, depending on gender). These questions were daily versions of the corresponding items from the PROMIS Sexual Function items administered during the 30-day recall assessment.

Statistical Analyses

We describe baseline clinical and demographic characteristics and responses to the 30-day recall items using frequencies and percentages. We assessed agreement between 30-day recall and daily reports in terms of (a) bias (ie, over- or underestimation) in 30-day recall and (b) consistency of individual differences (ie, correlation) between daily reports and 30-day recall. The presence of bias is indicated by a mean daily report that is systematically higher or lower across participants than the 30-day recall score. Bias affects the interpretation of the absolute level of the responses (eg, on a 1-to-5 scale) across different measurement methods or how sensitive the score can be (eg, if the 30-day recall demonstrates a ceiling effect while the mean daily report does not). Low correlation between aggregated daily responses and 30-day recall, regardless of whether there is bias, suggests that participants with high function according to daily scores would not necessarily have high function according to 30-day recall.

Because some items from the daily reports and the 30-day recall assessment had different response metrics, we used multiple methods for calculating bias. We used Wilcoxon signed rank tests and McNemar tests to assess the statistical significance of bias. We assessed the consistency of individual differences using Pearson correlation coefficients (or point biserial coefficients for 30-day recall with dichotomous responses). Only 17 participants were eligible to answer questions from the “anal discomfort” domain of the measure (because they had engaged in anal sex in the previous 30 days), so we did not conduct agreement analyses of these responses.

We conducted exploratory analyses to determine whether disagreement between daily reports and 30-day recall was a function of gender or mood. Given the lack of variation in some 30-day recall items, we did not conduct this analysis for the 11 items for which at least 90% of the responses were in a single response category. To examine the role of gender, we considered items that appeared in the questionnaire for both men and women. For each item, we used a general linear model or a multiple logistic regression model in which we modeled 30-day recall as a function of the daily summary (eg, mean daily rating), gender, and the interaction between the daily summary and gender. If joint significance tests of the gender main effects and the daily summary–gender interaction effects yielded $P < .05$, we examined the daily summary–gender interaction effects. If they were not statistically significant at $P < .05$, we estimated the model again using only the main effects. If none of the main effects or interaction effects were statistically significant (despite a significant joint test of the terms), we did not interpret the model. For 30-day responses for which we used general linear models, we conducted sensitivity analyses using ordinal logistic regression.

We used a similar approach to test relationships between participants’ mood at the time they completed the 30-day recall assessment and the agreement between 30-day recall and daily reports. We measured mood using the positive and negative affect scores from the PANAS. To facilitate interpretation, we converted the positive and negative scores to z scores (ie, a model coefficient that corresponds to a 1 SD change in affect). For all gender and mood analyses, we examined graphical and quantitative (eg, Cook’s distance) regression diagnostics.

Results

A total of 194 participants (96%) completed all 30 daily assessments. Another 7 participants (3.5%) completed 29 daily assessments. Four participants were excluded due to noncompliance (8 missed assessments). The mean number of missed online assessments per participant was 1 (SD, 1.6; range, 0-7). (Participants who missed an online daily assessment were followed-up by telephone later in the day.) Overall, 6793 assessments were completed online, and 263 missed assessments were collected by phone. As shown in Table 1, more than two-thirds of the participants were 40 years or younger, nearly three-quarters were white, and most had a college degree. All participants in the study were in a partnered sexual relationship. The most common chronic conditions participants reported ever having were anxiety, arthritis or rheumatism, asthma, cancer, depression, headaches, and hypertension. Almost 60% of the participants reported having at least 1 diagnosis.

Table 2 shows the frequency of responses to the 30-day recall items. Responses to items about anal sex, painful orgasm or ejaculation, and use of therapeutic aids were highly skewed, indicating low prevalence of the experiences.

Agreement By Domain

Interest in Sexual Activity—Table 2 shows the agreement between 30-day recall and daily reports for each item. The single item assessing interest in sexual activity had the greatest amount of bias of any item in the study. On average, the 30-day recall overestimated the average daily interest in sex by 0.89 on the 5-point scale ($P < .001$). The correlation was 0.70, indicating that about half of the differences between respondents in their daily reports corresponded to differences among respondents in their 30-day recall. Thus, whereas most respondents overestimated their interest, those whose actual daily interest was higher tended to be the respondents whose 30-day recall was also higher.

Sexual Activities—Of the 11 activity items, 7 exhibited statistically significant bias, with absolute differences between 30-day recall and daily reports ranging from 0.19 (item A-3) to 0.41 (item A-5). Bias was relatively small for items assessing oral sex, vaginal intercourse, masturbation, and anal sex. Items referencing affectionate but nongenital activities (eg, kissing) had greater bias. Correlations between 30-day recall and daily reports were 0.70 for 7 of the 11 activities. The two items (A-5 and A-6) with lower correlations (0.43 and 0.52) dealt with touching genitals with a hand. These items also had the largest estimates of bias, such that the 30-day recall slightly underestimated the frequency (mean bias, -0.41 and -0.35).

Vaginal Discomfort—Four of the 12 items demonstrated statistically significant but very small underestimation by monthly recall. There was a broad range of correlations, from 0.31 to 0.90. The lowest correlations (V-3 = 0.40; V-7 = 0.62; and V-10 = 0.31) involved stopping sexual activity because of some kind of discomfort. These items also had low prevalence, which may have contributed to the low correlations. Aside from these, the rest of the correlations were 0.65 or higher, with the highest (0.90) corresponding to V-8 (vaginal dryness affecting satisfaction with sex life).

Erectile Function—There was evidence of bias for only 1 of the 5 items (EF-1) in the erectile function domain, which had a small mean bias (0.11) that was statistically significant. The monthly recall item addressing painful erections (EF-5) showed the poorest correspondence with the aggregated daily ratings ($r = .36$), which is likely due to the very low prevalence (only 4 men reported experiencing painful erections). The correlations of the other 4 items were strong ($r > 0.80$).

Orgasm—In the orgasm domain, the data indicated a major problem with O-1 (“How often have you been unable to have an orgasm/climax?”), in that many respondents appeared to answer the 30-day recall question as though it asked about the frequency with which the respondent was “able” to have an orgasm/climax. This may have been responsible for the low correlation of the monthly report with daily reports ($r = 0.30$). Of the remaining items, one (O-2) demonstrated statistically significant bias, but it was small (mean bias, 0.11). There was a range of correlations, with lower ones corresponding to items about painful orgasm (O-4 and O-7), which had very little variability. Two items that made reference to satisfaction with orgasm (O-2 and O-3) had moderate correlations (0.62 and 0.63). The items with the highest correlations (0.78 and 0.80) referred to the timing of orgasm.

Therapeutic Aids—Four of the therapeutic aids items (T-3, T-5, T-6, and T-7) had low prevalence that precluded meaningful analysis of agreement. For the remaining items—use of personal lubricants (T-1) and hormones (T-2) among women, and use of medication for erectile dysfunction (T-4) among men—there was no significant bias and high correlations were observed ($r = 0.89$).

Association Between Gender and Recall Bias

Gender was associated with the degree of recall bias for two items (Table 3). There were main and interactive effects of gender for I-1 (“In the past 30 days, how often have you been interested in sexual activity?”). As shown in Figure 1, both women and men overreported their level of interest (both lines above the perfect agreement line) on the 1-month recall. Overreporting among women was consistent over the range of mean daily interest, but otherwise showed a good association with the mean daily report. In contrast, men demonstrated greater overreporting on the 1-month recall at lower levels of average daily interest. There was a main effect of gender for A-10 (“In the past 30 days, how often have you masturbated?”), such that men overreported their frequency of masturbation more than women (2.52 vs 1.54 on a 5-point scale).

Association Between Recall Bias and Mood at Time of Recall

Eight of the 31 items with sufficient variability for analytic purposes demonstrated a relationship between 1-month recall and positive or negative affect (measured at the time of the 1-month recall), as shown in Table 3. There was a relatively modest main effect of negative affect for item A-9 (“In the past 30 days, how often have you had vaginal intercourse?”), such that someone at 1 SD above the mean for negative affect underreported the frequency of vaginal intercourse by 0.39 points on a 5-point scale in the 1-month recall. There was also a small but statistically significant interaction with negative affect, such that people with higher negative affect had a slightly stronger relationship between 1-month recall and daily reports of the frequency of vaginal intercourse.

For item A-10 (“In the past 30 days, how often have you masturbated?”), there was a main effect of positive affect, such that someone at 1 SD above the mean of positive affect underreported the frequency of masturbation by 0.36 points on the 5-point scale in the 1-month recall. There was also a statistically significant, but very small interaction effect with positive affect, such that people with greater positive affect had a stronger relationship between 1-month recall and daily reports.

Item V-1 (“In the past 30 days, how would you describe the comfort of your vagina during sexual activity?”) showed significant main and interactive effects for positive affect, such that women with greater positive affect overreported vaginal comfort during sexual activity (V-1) in the 1-month recall. The interaction effect meant that this overreporting was greatest for women with lower actual levels of comfort. There was also a significant main effect of

positive affect for V-6 (“In the past 30 days, how often have you had difficulty with sexual activity because your vagina was too dry?”), such that women with greater positive affect underreported their level of difficulty in the 1-month recall.

Two items dealing with erectile function—EF-1 and EF-4—showed significant main and interactive effects for positive affect. For both items, men with greater positive affect overreported their erectile functioning relative to those with lower positive affect in the 1-month recall, and this overreporting was especially pronounced among men with lower mean daily functioning. For both items, few respondents reported low mean daily functioning, making it difficult to estimate the magnitude of these effects precisely. (EF-4 also showed a small main effect for negative affect, such that greater negative affect was associated with overreporting of function.)

Two items dealing with orgasm demonstrated significant main effects of positive affect. For item O-2 (“In the past 30 days, how would you rate your ability to have a satisfying orgasm/climax?”), someone at 1 SD above the mean of positive affect overreported on 30-day recall their ability by 0.85 points on a 5-point scale. For item O-6 (“In the past 30 days, how often have you ejaculated [“come”] more quickly than you would like?”), someone at 1 SD above the mean of positive affect underreported the frequency by 0.25 points on a 5-point scale in the 1-month recall.

Discussion

We sought to evaluate how well people recalled their sexual functioning during the previous month and to determine whether gender and concurrent mood affected the accuracy of recall. Overall, our data suggest that the accuracy of 1-month recall varies by the domain of inquiry and by the gender and mood of the respondent.

Interest in sexual activity was overestimated to a significant extent, and men overestimated more than women. This overestimation could increase the likelihood of ceiling effects and could obscure real changes over time in level of interest. However, the correlation between 1-month recall and daily reports suggests that individual differences track reasonably well. These data imply that cross-sectional comparisons of sexual interest may have acceptable validity, as long as levels of sexual interest between women and men are not compared directly.

Recall of sexual activity frequencies most often queried in typical surveys (ie, oral sex, masturbation, vaginal intercourse, anal sex) were recalled well (small or no bias and correlations ≥ 0.70), suggesting that such items could provide adequate summaries of activity over the past month. However, items addressing affectionate, nongenital activities (eg, kissing or hugging) and those referencing manual genital stimulation had poorer recall. Assessment strategies other than monthly recall should be devised when such activities are of interest.

Items assessing vaginal discomfort and erectile function using a 30-day reporting period are generally good, but not perfect, proxies for what happened during the previous 30 days, with the exception of items with low variability. This conclusion should be tempered by the finding of strong effects of mood on the recall accuracy of certain items from these domains, which are discussed later.

Items addressing orgasm were mixed in the validity of their recall. Items dealing with the timing of orgasm yielded the best data. Especially for items about satisfaction with orgasm, more work is needed to develop items that are less prone to recall problems and the effects of mood at the time of recall. It is also possible that these items are influenced by global

beliefs about self that do not correspond well to actual daily experience. Finally, there was evidence of good recall (no bias and high correlations) for three types of therapeutic aids: personal lubricants and hormones for women, and use of erectile dysfunction medications for men.

In an effort to explain some of the variation in agreement between monthly recall and daily recall, we explored the role of gender and mood at the time of the 1-month recall. We found such effects for 9 items. In the absence of a perfect memory trace for some experience, people may “fill in the gaps” using some theory about what their experiences should have been, given who they are. In our study, we found that men overestimated the frequency of interest in sexual activities and of masturbation relative to women. This might reflect men’s use of a gender stereotype to guess at the frequency of these experiences. Coxon⁶ also reported overestimation of the frequency of masturbation in a sample of gay men.

Other studies have documented that the respondent’s mood at the time of assessment can influence the responses.^{11,12} In our study, several items showed a relationship between recall accuracy and the level of positive or negative affect reported by respondents at the time they completed the 1-month assessment. More work is needed to understand why some items exhibited this relationship with mood while others within the same domain did not. Additionally, researchers might consider administering a measure of positive affect alongside a measure of sexual function with 30-day recall to allow for later subgroup or sensitivity analyses.

Concurrent mood could influence recall in two ways. First, well-known findings on mood-congruent memory^{19,20} suggest that mood can cause selective search of the person’s memory for sexual experiences that are consistent with concurrent mood. For example, a person in a good mood finds it easier to access memories of intense and satisfying orgasmic experiences than memories of less intense orgasmic experiences. A second possibility is that positive mood may lead people to misremember specific sexual experiences as being better than they were. In this case, mood does not restrict access to all sexual experiences in memory, but rather reinterprets what happened during a given sexual experience.

Our study has several limitations. First, the results are specific to this sample of respondents who were sexually active and not undergoing significant change in their sex lives during the month of study participation. Because they were sexually active, the respondents generally had higher levels of functioning, precluding a valid statistical analysis of items with low variability. Also, we limited data collection to 1 month, which did not allow us to examine how well changes in daily reports corresponded to changes in monthly reports. A final limitation is the lack of agreement in the field of PRO assessment concerning the minimum level of agreement between actual (daily) experiences and responses to monthly recall items. The practical effect of bias can be assessed in terms of its relation to important clinical differences; that is, if the average bias is greater than the minimally important difference, there is a real problem. (At this time, there are no estimates of the minimally important difference for the items tested in this study.) The situation is less clear for correlations. A reliability coefficient of 0.70 is often regarded as the minimum for an instrument that is to be used for research. But a correlation of 0.70 suggests that about half of the variance in the 30-day recall is based on something other than what actually happened during the preceding month. Further discussion within the field is necessary to arrive at a consensus regarding the interpretation of recall studies such as this one.

In summary, our findings have several implications for clinical practice and research. First, for many specific aspects of functioning and activity, people appear to be able to recall with an adequate level of accuracy. However, the ability of people to accurately recall aspects of

their sexual lives varies depending on the specific aspect of sexual functioning being queried. Thus, one should not assume that accurate recall of one domain generalizes to all domains. Second, for both clinical and research settings, it is important to consider that the person's current mood could affect their reporting of past experiences. Researchers might consider administering a brief measure of positive affect alongside 30-day recall items to allow for statistical explorations of the moderating effect of mood on sexual function outcomes.

Acknowledgments

Funding/Support: This study was supported by grant U01AR052186 from the National Institute of Arthritis and Musculoskeletal and Skin Diseases.

Disclaimer: The content of this manuscript is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute of Arthritis and Musculoskeletal and Skin Diseases or the National Institutes of Health.

Appendix A

Items and Response Options

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
Interest in Sexual Activity		
I-1	How interested have you been in sexual activity?	How interested have you been in sexual activity?
	Not at all	Not at all
	A little bit	A little bit
	Somewhat	Somewhat
	Quite a bit	Quite a bit
	Very	Very
Activities		
A-1	How often have you and another person spent time holding or hugging each other romantically?	Have you and another person spent time holding or hugging each other romantically?
	Have not done in the past 30 days	No
	Once a week or less	Yes
	Once every few days	
	Once a day	
	More than once a day	
A-2	How often have you kissed another person romantically?	Have you kissed another person romantically?
	Have not done in the past 30 days	No
	Once a week or less	Yes
	Once every few days	
	Once a day	
	More than once a day	

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
A-3	How often have you touched someone's breasts or chest with your hand romantically?	Have you touched someone's breasts or chest with your hand romantically?
	Have not done in the past 30 days	No
	Once a week or less	Yes
	Once every few days	
	Once a day	
	More than once a day	
A-4	How often has someone touched your breasts or chest with their hand romantically?	Has someone touched your breasts or chest with their hand romantically?
	Have not done in the past 30 days	No
	Once a week or less	Yes
	Once every few days	
	Once a day	
	More than once a day	
A-5	How often have you touched someone's genitals with your hand romantically?	How often have you touched someone's genitals with your hand romantically?
	Have not done in the past 30 days	0
	Once	1
	Two to three times	2 or more times
	Four to five times	
	Six or more times	
A-6	How often has someone touched your genitals with their hand romantically?	How often has someone touched your genitals with their hand romantically?
	Have not done in the past 30 days	0
	Once	1
	Two to three times	2 or more times
	Four to five times	
	Six or more times	
A-7	How often have you touched someone's genitals with your mouth (had oral sex)?	How often have you touched someone's genitals with your mouth (had oral sex)?
	Have not done in the past 30 days	0
	Once	1
	Two to three times	2 or more times
	Four to five times	
	Six or more times	
A-8	How often has someone touched your genitals with their mouth (had oral sex)?	How often has someone touched your genitals with their mouth (had oral sex)?

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
	Have not done in the past 30 days	0
	Once	1
	Two to three times	2 or more times
	Four to five times	
	Six or more times	
A-9	How often have you had vaginal intercourse?	How often have you had vaginal intercourse?
	Have not done in the past 30 days	0
	Once	1
	Two to three times	2 or more times
	Four to five times	
	Six or more times	
A-10	How often have you masturbated?	How often have you masturbated?
	Have not done in the past 30 days	0
	Once	1
	Two to three times	2 or more times
	Four to five times	
	Six or more times	
A-11	How often have you had anal sex?	How often have you had anal sex?
	Have not done in the past 30 days	Never do this
	Once	0
	Two to three times	1
	Four to five times	2 or more times
	Six or more times	
	Never do this	
Vaginal Discomfort ^a		
V-1	How would you describe the comfort of your vagina during sexual activity?	How would you describe the comfort of your vagina during sexual activity?
	Have not had any sexual activity in the past 30 days	Very comfortable
	Very comfortable	Comfortable
	Comfortable	Uncomfortable
	Uncomfortable	Very Uncomfortable
	Very Uncomfortable	
V-2	How often have you had difficulty with sexual activity because of discomfort or pain in your vagina?	Did you have difficulty with sexual activity because of discomfort or pain in your vagina?
	Have not had any sexual activity in the past 30 days	No
	Never	Yes
	Rarely	

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
	Sometimes	
	Often	
	Always	
V-3	How often have you stopped sexual activity because of discomfort or pain in your vagina?	Did you stop sexual activity because of discomfort or pain in your vagina?
	Have not had any sexual activity in the past 30 days	No
	Never	Yes
	Rarely	
	Sometimes	
	Often	
	Always	
V-4	How difficult has it been for your vagina to get lubricated ("wet") when you wanted it to?	How difficult was it for your vagina to get lubricated ("wet") when you wanted it to?
	Have not tried to get lubricated in the past 30 days	Not at all
	Not at all	A little bit
	A little bit	Somewhat
	Somewhat	Quite a bit
	Quite a bit	Very
	Very	
V-5	How easily has your vagina become wet during sexual activity?	How easily did your vagina become wet during sexual activity?
	Have not had any sexual activity in the past 30 days	Not at all
	Not at all	A little bit
	A little bit	Somewhat
	Somewhat	Quite a bit
	Quite a bit	Very
	Very	
V-6	How often have you had difficulty with sexual activity because your vagina was too dry?	Did you have difficulty with sexual activity because your vagina was too dry?
	Have not had any sexual activity in the past 30 days	No
	Never	Yes
	Rarely	
	Sometimes	
	Often	
	Always	
V-7	How often have you stopped sexual activity because of vaginal dryness?	Did you stop sexual activity because of vaginal dryness?
	Have not had any sexual activity in the past 30 days	No

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
	Never	Yes
	Rarely	
	Sometimes	
	Often	
	Always	
V-8	How much has vaginal dryness affected your satisfaction with your sex life?	How much has vaginal dryness affected your satisfaction with your sex life?
	Have not had any sexual activity in the past 30 days	Not at all
	Not at all	A little bit
	A little bit	Somewhat
	Somewhat	Quite a bit
	Quite a bit	Very much
	Very much	
V-9	How often have you had difficulty with sexual activity because your vagina felt too tight?	Did you have difficulty with sexual activity because your vagina felt too tight?
	Have not had any sexual activity in the past 30 days	No
	Never	Yes
	Rarely	
	Sometimes	
	Often	
	Always	
V-10	How often have you stopped sexual activity because of vaginal tightness?	Did you stop sexual activity because of vaginal tightness?
	Have not had any sexual activity in the past 30 days	No
	Never	Yes
	Rarely	
	Sometimes	
	Often	
	Always	
V-11	How often have you stopped sexual activity because of vaginal irritation or bleeding that was not because of your period?	Did you stop sexual activity because of vaginal irritation or bleeding that was not because of your period?
	Have not had any sexual activity in the past 30 days	No
	Never	Yes
	Rarely	
	Sometimes	
	Often	
	Always	

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
V-12	How often have you had irritation or bleeding in your vagina after sexual activity that was not because of your period?	Did you have irritation or bleeding in your vagina after sexual activity that was not because of your period?
	Have not had any sexual activity in the past 30 days	No
	Never	Yes
	Rarely	
	Sometimes	
	Often	
	Always	
Erectile Function ^b		
EF-1	How would you rate your ability to get and keep an erection? (If you use pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)	How would you rate your ability to get and keep an erection? (If you used pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)
	Have not tried to get an erection in the past 30 days	Have not tried to get an erection in the past 24 hours
	Excellent	Excellent
	Very good	Very good
	Good	Good
	Fair	Fair
	Poor	Poor
EF-2	How often have you woken up during the night or in the morning with a full erection?	Have you woken up during the night or in the morning with a full erection?
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
EF-3	How difficult has it been for you to get an erection when you wanted to? (If you use pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)	How difficult has it been for you to get an erection when you wanted to? (If you used pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)
	Have not tried to get an erection in the past 30 days	Have not tried to get an erection in the past 24 hours
	Not at all	Not at all
	A little bit	A little bit
	Somewhat	Somewhat
	Quite a bit	Quite a bit
	Very	Very

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
EF-4	How difficult has it been to keep an erection (stay hard) when you wanted to? (If you use pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)	How difficult has it been to keep an erection (stay hard) when you wanted to? (If you used pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)
	Have not had an erection in the past 30 days	Have not had an erection in the past 24 hours
	Not at all	Not at all
	A little bit	A little bit
	Somewhat	Somewhat
	Quite a bit	Quite a bit
	Very	Very
EF-5	How often have your erections been physically uncomfortable or painful? (If you use pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)	Have your erections been physically uncomfortable or painful? (If you used pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)
	Have not had an erection in the past 30 days	Have not had an erection in the past 24 hours
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
Anal Discomfort		
An-1	How often have you had discomfort or pain in your rectum during anal sex?	Did you have discomfort or pain in your rectum during anal sex?
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
An-2	How often have you stopped having anal sex because of anal discomfort or pain?	Did you stop having anal sex because of anal discomfort or pain?
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
An-3	How often have you stopped having anal sex because of anal bleeding or irritation?	Did you stop having anal sex because of anal bleeding or irritation?

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
An-4	How often have you had bleeding or irritation in your rectum after anal sex?	Did you have bleeding or irritation in your rectum after anal sex?
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
Orgasm		
O-1	How often have you been unable to have an orgasm/climax?	Were you able to have an orgasm/climax?
	Have not tried to have an orgasm/climax in the past 30 days	Have not tried to have an orgasm/climax in the past 24 hours
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
O-2	How would you rate your ability to have a satisfying orgasm/climax?	How would you rate your ability to have a satisfying orgasm/climax?
	Have not tried to have an orgasm/climax in the past 30 days	Have not tried to have an orgasm/climax in the past 24 hours
	Excellent	Excellent
	Very good	Very good
	Good	Good
	Fair	Fair
	Poor	Poor
O-3	How satisfied have you been with the intensity of your orgasm/climax?	Were you satisfied with the intensity of your orgasm/climax?
	Have not tried to have an orgasm/climax in the past 30 days	Not at all
	Not at all	A little bit
	A little bit	Somewhat
	Somewhat	Quite a bit
	Quite a bit	Very
	Very	

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
O-4	How often have you had a painful orgasm/climax?	Did you have a painful orgasm/climax?
	Have not tried to have an orgasm/climax in the past 30 days	No
	Never	Yes
	Rarely	
	Sometimes	
	Often	
	Always	
O-5	How difficult has it been to control the timing of an orgasm/climax (or ejaculation)?	How difficult was it to control the timing of an orgasm/climax (or ejaculation)?
	Have not tried to have an orgasm/climax in the past 30 days	Not at all
	Not at all	A little bit
	A little bit	Somewhat
	Somewhat	Quite a bit
	Quite a bit	Very
	Very	
O-6	How often have you ejaculated ("come") more quickly than you would like?	Did you ejaculate ("come") more quickly than you would have liked?
	Have not tried to ejaculate in the past 30 days	Have not had an erection in the past 24 hours
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
O-7	How often have you had pain and/or burning during or after ejaculation?	Did you have pain and/or burning during or after ejaculation?
	Have not tried to ejaculate in the past 30 days	Have not had an erection in the past 24 hours
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
Therapeutic Aids		
T-1 ^a	How often have you used personal lubricants (such as KY Jelly or Replens) for sexual activity?	Did you use personal lubricants (such as KY Jelly or Replens) for sexual activity?
	Have not had any sexual activity in the past 30 days	No
	Never	Yes

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
	Rarely	
	Sometimes	
	Often	
	Always	
T-2 ^a	Have you used hormones (for example, estrogen, testosterone, or progesterone) for sexual activity either as a patch on your skin, or a cream, tablet, or ring inserted into your vagina?	Did you use hormones (for example, estrogen, testosterone, or progesterone) for sexual activity either as a patch on your skin, or a cream, tablet, or ring inserted into your vagina?
	No	No
	Yes	Yes
	I don't know	I don't know
T-3 ^a	Have you used a vaginal dilator?	Have you used a vaginal dilator?
	No	No
	Yes	Yes
	I am not sure what a vaginal dilator is	I am not sure what a vaginal dilator is
T-4 ^b	How often have you taken a pill such as Viagra, Cialis, or Levitra for sexual activity?	Have you taken a pill such as Viagra, Cialis, or Levitra for sexual activity?
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
T-5 ^b	Have you taken testosterone for sexual activity?	Have you taken testosterone for sexual activity?
	No	No
	Yes	Yes
	I don't know	I don't know
T-6 ^b	How often have you used an injection into your penis to get an erection?	Have you used an injection into your penis to get an erection?
	Never	No
	Rarely	Yes
	Sometimes	
	Often	
	Always	
T-7 ^b	How often have you used a vacuum pump (penis pump) to get an erection?	Have you used a vacuum pump (penis pump) to get an erection?
	Never	No
	Rarely	Yes
	Sometimes	

Item Code	30-Day Recall (N = 202)	Corresponding Daily Item and Response Options
	Item and Response Options	
	Often	
	Always	

^a Only women were asked to respond to the items.

^b Only men were asked to respond to the items.

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Figure 1.
 Relationship Between Daily Reports and Model-Predicted 1-Month Recall for Item I-1
 Among Men and Women
 Item I-1 asks, “In the past 30 days, how often have you been interested in sexual activity?”
 The gray dashed line indicates perfect agreement.

Table 1

Characteristics of the Study Population

Characteristic	Patients (N = 201)
Female	101 (50.0)
Age	
40 y	138 (68.3)
41-50 y	28 (13.9)
51-64 y	29 (14.4)
65 y	7 (3.5)
Race	
American Indian or Alaska Native	0
Asian	3 (1.5)
Black or African American	47 (23.3)
Native Hawaiian or other Pacific Islander	1 (0.5)
White	146 (72.3)
Multiple or other	5 (2.5)
Spanish, Hispanic, or Latino ethnicity	6 (3.0)
Educational attainment	
Less than high school	1 (0.5)
High school/general educational development	22 (10.9)
Some college	51 (25.4)
College degree	83 (41.3)
Advanced degree	44 (21.9)
Relationship status ^a	
Never married	46 (23)
Married	104 (52)
Living with partner in committed relationship	42 (21)
Separated	4 (2)
Divorced	4 (2)
Widowed	1 (0)
Self-reported chronic disease	
None	85 (42.3)
Anxiety	40 (20.2)
Hypertension	36 (17.9)
Depression	35 (17.7)
Cancer	25 (12.6)
Arthritis or rheumatism	24 (12.1)
Asthma	24 (12.1)
Migraines or severe headaches	21 (10.6)
Sleep disorder	17 (8.6)

Characteristic	Patients (N = 201)
Diabetes, high blood sugar, or sugar in urine	16 (8.0)
Osteoarthritis or degenerative arthritis	13 (6.6)
Alcohol or drug problem	7 (3.6)
Liver disease, hepatitis, or cirrhosis	5 (2.5)
Coronary artery disease	4 (2.0)
Myocardial infarction	3 (1.5)
Stroke or transient ischemic attack	2 (1.0)
Chronic obstructive pulmonary disease, chronic bronchitis, or emphysema	2 (1.0)
Angina	1 (0.5)
Heart failure	1 (0.5)
Spinal cord injury	1 (0.5)

^a All participants expected to participate in at least 1 partnered sexual activity during the month of study.

Table 2**a. Thirty-Day Recall of Sexual Experiences**

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
Interest in Sexual Activity		
I-1	Interest	
	Not at all	4 (2)
	A little bit	17 (9)
	Somewhat	54 (27)
	Quite a bit	78 (39)
	Very	47 (24)
Activities		
A-1	Hugging	
	Have not done in the past 30 days	3 (1)
	Once a week or less	37 (18)
	Once every few days	72 (36)
	Once a day	40 (20)
	More than once a day	49 (24)
A-2	Kissing	
	Have not done in the past 30 days	4 (2)
	Once a week or less	42 (21)
	Once every few days	66 (33)
	Once a day	36 (18)
	More than once a day	53 (26)
A-3	Touching partner's chest	
	Have not done in the past 30 days	7 (3)
	Once a week or less	55 (27)
	Once every few days	85 (42)
	Once a day	32 (16)
	More than once a day	22 (11)

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
A-4	Partner touching chest	
	Have not done in the past 30 days	8 (4)
	Once a week or less	58 (29)
	Once every few days	85 (42)
	Once a day	28 (14)
A-5	More than once a day	22 (11)
	Touching partner's genitals	
	Have not done in the past 30 days	12 (6)
	Once	15 (7)
	Two to three times	40 (20)
	Four to five times	42 (21)
	Six or more times	92 (46)
	Partner touching genitals	
	Have not done in the past 30 days	13 (6)
	Once	13 (6)
	Two to three times	36 (18)
	Four to five times	49 (24)
	Six or more times	90 (45)
	Giving oral sex	
	Have not done in the past 30 days	62 (31)
A-7	Once	20 (10)
	Two to three times	51 (25)
	Four to five times	25 (12)
	Six or more times	43 (21)
	Receiving oral sex	
A-8	Have not done in the past 30 days	59 (29)
	Once	26 (13)
	Two to three times	46 (23)

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
A-9	Four to five times	22 (11)
	Six or more times	48 (24)
	Vaginal sex	
	Have not done in the past 30 days	15 (8)
	Once	7 (4)
	Two to three times	30 (15)
	Four to five times	39 (20)
	Six or more times	109 (55)
	Masturbation	
A-10	Have not done in the past 30 days	76 (38)
	Once	23 (11)
	Two to three times	31 (15)
	Four to five times	19 (9)
	Six or more times	52 (26)
	Anal sex	
	Have not done in the past 30 days	37 (18)
	Once	9 (4)
	Two to three times	4 (2)
A-11	Four to five times	2 (1)
	Six or more times	2 (1)
	Never do this	147 (73)
Vaginal Discomfort ^a		
V-1	Vaginal comfort	
	Have not had any sexual activity in the past 30 days	3 (3)
	Very comfortable	56 (56)
	Comfortable	31 (31)
	Uncomfortable	5 (5)
	Very Uncomfortable	5 (5)

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
V-2	Vaginal pain - difficulty	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	68 (68)
	Rarely	19 (19)
	Sometimes	6 (6)
	Often	3 (3)
V-3	Always	2 (2)
	Vaginal pain - stopping	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	88 (88)
	Rarely	7 (7)
	Sometimes	3 (3)
V-4	Often	
	Always	
	Lubrication - difficulty	
	Have not tried to get lubricated in the past 30 days	2 (2)
	Not at all	51 (51)
	A little bit	31 (31)
V-5	Somewhat	9 (9)
	Quite a bit	2 (2)
	Very	5 (5)
	Lubrication - ease	
	Have not had any sexual activity in the past 30 days	2 (2)
	Not at all	5 (5)
	A little bit	14 (14)
	Somewhat	17 (17)
	Quite a bit	26 (26)
	Very	36 (36)

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
V-6	Vaginal dryness - difficulty	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	60 (60)
	Rarely	21 (21)
	Sometimes	11 (11)
	Often	3 (3)
V-7	Always	3 (3)
	Vaginal dryness – stopping	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	86 (86)
	Rarely	10 (10)
	Sometimes	2 (2)
V-8	Often	
	Always	
	Vaginal dryness - satisfaction	
	Have not had any sexual activity in the past 30 days	2 (2)
	Not at all	67 (67)
	A little bit	23 (23)
V-9	Somewhat	2 (2)
	Quite a bit	2 (2)
	Very much	4 (4)
	Vaginal tightness - difficulty	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	77 (77)
	Rarely	14 (14)
	Sometimes	3 (3)
	Often	2 (2)
	Always	2 (2)

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
V-10	Vaginal tightness – stopping	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	90 (90)
	Rarely	6 (6)
	Sometimes	1 (1)
	Often	1 (1)
V-11	Always	
	Vaginal bleeding - stopping	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	95 (95)
	Rarely	2 (2)
	Sometimes	1 (1)
V-12	Often	
	Always	
	Vaginal bleeding – frequency	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	87 (87)
	Rarely	4 (4)
Erectile Function ^b	Sometimes	2 (2)
	Often	5 (5)
	Always	
	Get & keep erection	
	Have not tried to get an erection in the past 30 days	2 (2)
	Excellent	67 (67)
EF-1	Very good	17 (17)
	Good	8 (8)
	Fair	3 (3)

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
EF-2	Poor	3 (3)
	Waking with erection	
	Never	12 (12)
	Rarely	15 (15)
	Sometimes	28 (28)
	Often	28 (28)
EF-3	Always	17 (17)
	Get erection	
	Have not tried to get an erection in the past 30 days	2 (2)
	Not at all	80 (80)
	A little bit	12 (12)
	Somewhat	3 (3)
EF-4	Quite a bit	
	Very	3 (3)
	Keep erection	
	Have not had an erection in the past 30 days	3 (3)
	Not at all	78 (78)
	A little bit	12 (12)
EF-5	Somewhat	4 (4)
	Quite a bit	1 (1)
	Very	2 (2)
	Painful erection	
	Have not had an erection in the past 30 days	3 (3)
	Never	93 (93)
	Rarely	3 (3)
	Sometimes	1 (1)
	Often	
	Always	

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
Anal Discomfort		
An-1	Anal pain - frequency	
	Never	10 (59)
	Rarely	6 (35)
	Sometimes	
	Often	
	Always	1 (6)
An-2	Anal pain – stopping	
	Never	12 (71)
	Rarely	5 (29)
	Sometimes	
	Often	
	Always	
An-3	Anal bleeding - stopping	
	Never	15 (88)
	Rarely	2 (12)
	Sometimes	
	Often	
	Always	
An-4	Anal bleeding – frequency	
	Never	15 (88)
	Rarely	1 (6)
	Sometimes	1 (6)
	Often	
	Always	
Orgasm		
O-1	Orgasm - inability	
	Have not tried to have an orgasm/climax in the past 30 days	5 (2)

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
	Never	102 (51)
	Rarely	48 (24)
	Sometimes	19 (9)
	Often	16 (8)
	Always	11 (5)
	Orgasm – satisfaction	
O-2	Have not tried to have an orgasm/climax in the past 30 days	4 (2)
	Excellent	97 (48)
	Very good	55 (27)
	Good	25 (12)
	Fair	13 (6)
	Poor	7 (3)
	Orgasm intensity	
O-3	Have not tried to have an orgasm/climax in the past 30 days	4 (2)
	Not at all	6 (3)
	A little bit	10 (5)
	Somewhat	22 (11)
	Quite a bit	76 (38)
	Very	83 (41)
	Painful orgasm	
O-4	Have not tried to have an orgasm/climax in the past 30 days	5 (2)
	Never	183 (91)
	Rarely	11 (5)
	Sometimes	1 (0)
	Often	
	Always	1 (0)
	Control orgasm timing	
O-5		

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
	Have not tried to have an orgasm/climax in the past 30 days	1 (1)
	Not at all	51 (51)
	A little bit	28 (28)
	Somewhat	9 (9)
	Quite a bit	9 (9)
	Very	2 (2)
O-6	Ejaculate too quickly	
	Have not tried to ejaculate in the past 30 days	1 (1)
	Never	40 (40)
	Rarely	27 (27)
	Sometimes	18 (18)
	Often	9 (9)
	Always	5 (5)
O-7	Ejaculation pain	
	Have not tried to ejaculate in the past 30 days	1 (1)
	Never	95 (95)
	Rarely	3 (3)
	Sometimes	1 (1)
	Often	
	Always	
Therapeutic Aids		
T-1 ^a	Personal lubricants	
	Have not had any sexual activity in the past 30 days	2 (2)
	Never	60 (61)
	Rarely	9 (9)
	Sometimes	11 (11)
	Often	7 (7)
	Always	10 (10)

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
T-2 ^a	Hormones	
	No	89 (89)
	Yes	11 (11)
	I don't know	
T-3 ^a	Vaginal dilator	
	No	91 (91)
	Yes	1 (1)
	I am not sure what a vaginal dilator is	8 (8)
T-4 ^b	ED pill	
	Never	94 (94)
	Rarely	4 (4)
	Sometimes	1 (1)
	Often	1 (1)
	Always	
T-5 ^b	Testosterone	
	No	100 (100)
	Yes	
	I don't know	
T-6 ^b	Penile injection	
	Never	100 (100)
	Rarely	
	Sometimes	
	Often	
	Always	
T-7 ^b	Vacuum pump	
	Never	97 (97)
	Rarely	

Domain and Item Code	30-Day Recall (N = 202)	
	Abbreviated Item Description and Response Options	No. (%)
	Sometimes	1 (1)
	Often	
	Always	2 (2)

b. Agreement Between 30-Day Recall and Daily Reports					
Item	Description	Daily Summary Type ^a	Bias		Correlation Coefficient, $r^{1/2}$
			Estimate ^c	P Value ^d	
I-1	Interest	Mean	0.89 (0.73) ^e	< .001	0.70
A-1	Hugging	Proportion "yes"	0.32 (0.69) ^f	< .001	0.72
A-2	Kissing	Proportion "yes"	0.34 (0.67) ^f	< .001	0.78
A-3	Touching partner's chest	Proportion "yes"	0.19 (0.65) ^f	< .001	0.73
A-4	Partner touching chest	Proportion "yes"	0.21 (0.66) ^f	< .001	0.75
A-5	Touching partner's genitals	SumMin	−0.41 (0.92) ^g	< .001	0.43
A-6	Partner touching genitals	SumMin	−0.35 (0.85) ^g	< .001	0.52
A-7	Giving oral sex	SumMin	−0.10 (0.96) ^g	.21	0.71
A-8	Receiving oral sex	SumMin	−0.09 (0.84) ^g	.20	0.71
A-9	Vaginal sex	SumMin	0.06 (0.67) ^g	.21	0.59
A-10	Masturbation	SumMin	−0.08 (0.93) ^g	.30	0.64
A-11	Anal sex	SumMin	0.20 (0.63) ^h	.03	0.77
V-1	Vaginal comfort	Mean	0.04 (0.62) ^e	.17	0.66
V-2	Vaginal pain – difficulty	Proportion "yes"	31 vs 20 ⁱ	.002 ^k	0.75
V-3	Vaginal pain – stopping	Proportion "yes"	10 vs 5 ⁱ	.10 ^k	0.40
V-4	Lubrication – difficulty	Mean	−0.15 (0.60) ^e	.02	0.82
V-5	Lubrication – ease	Mean	0.08 (0.84) ^e	.13	0.73
V-6	Vaginal dryness – difficulty	Proportion "yes"	39 vs 25 ⁱ	.001 ^k	0.79

V-7	Vaginal dryness – stopping	Proportion “yes”	12 vs 8 ⁱ	.21 ^k	0.62
V-8	Vaginal dryness – satisfaction	Mean	–0.08 (0.43) ^e	.19	0.90
V-9	Vaginal tightness – difficulty	Proportion “yes”	22 vs 13 ⁱ	.02 ^k	0.87
V-10	Vaginal tightness – stopping	Proportion “yes”	8 vs 3 ⁱ	.06 ^k	0.31
V-11	Vaginal bleeding – stopping	Proportion “yes”	3 vs 2 ⁱ	.32 ^k	0.74
V-12	Vaginal bleeding – frequency	Proportion “yes”	11 vs 11 ⁱ	> .99 ^k	0.76
EF-1	Get & keep erection	Mean	0.11 (0.49) ^e	.02	0.87
EF-2	Waking with erection	Proportion “yes”	89 vs 86 ⁱ	.18 ^k	0.81
EF-3	Get erection	Mean	0.01 (0.44) ^e	.59	0.84
EF-4	Keep erection	Mean	–0.01 (0.40) ^e	.85	0.86
EF-5	Painful erection	Proportion “yes”	4 vs 6 ⁱ	.41 ^k	0.36
An-1	Anal pain – frequency				
An-2	Anal pain – stopping				
An-3	Anal bleeding – stopping				
An-4	Anal bleeding – frequency				
O-1	Orgasm – inability	Proportion “yes”	48 vs 38 ⁱ	.02 ^k	0.30
O-2	Orgasm – satisfaction	Mean	0.11 (0.83) ^e	.001	0.62
O-3	Orgasm intensity	Mean	0.05 (0.75) ^e	.06	0.63
O-4	Painful orgasm	Proportion “yes”	6 vs 8 ⁱ	.25 ^k	0.36
O-5	Control orgasm timing	Mean	–0.09 (0.67) ^e	.28	0.78
O-6	Ejaculate too quickly	Proportion “yes”	60 vs 55 ⁱ	.28 ^k	0.80
O-7	Ejaculation pain	Proportion “yes”	4 vs 4 ⁱ	.99 ^k	0.48
T-1	Personal lubricants	Proportion “yes”	39 vs 40 ⁱ	.65 ^k	0.89
T-2	Hormones	Proportion “yes”	11 vs 11 ⁱ	> .99 ^k	0.92
T-3	Vaginal dilator	Proportion “yes”	1 vs 1 ⁱ	—	1.00
T-4	ED pill	Proportion “yes”	6 vs 5 ⁱ	.32 ^k	0.94
T-5	Testosterone	Proportion “yes”	0 vs 0 ⁱ	—	

T-6	Penile injection	Proportion "yes"	0 vs 0 ⁱ	—	
T-7	Vacuum pump	Proportion "yes"	3 vs 3 ⁱ	—	0.97

^a Only women were asked to respond to the items.

^b Only men were asked to respond to the items.

^a Mean = mean across the 30 days; Prop = proportion of 'yes' responses for all respondents who answered 'yes' or 'no'; SumMin = sum of the daily minimum frequencies (because response categories contained a range).

^b Pearson correlation coefficient for 2 continuous variables; phi coefficient for 2 dichotomous variables.

^c Mean (SD) or proportion of respondents who answered "yes" in 30-day recall vs daily summary.

^d P value from Wilcoxon signed rank test, unless indicated otherwise.

^e Mean (SD) of within-subject difference of 30-day recall subtracting mean score across the 30 days.

^f Mean (SD) of within-subject difference of recall with responses 4 & 5 combined as a 4 subtracting daily summary score which was mapped onto recall response categories using total count of daily 'Yes' responses.

^g Mean (SD) of within-subject difference of recall subtracting sum of the daily minimum frequencies mapped onto the corresponding monthly recall response category.

^h Mean (SD) of within-subject difference of recall (excluded 6) subtracting sum of the daily minimum frequencies in daily responses (excluded 4) mapped onto the corresponding monthly recall response category.

ⁱ Percent of respondents who answered "always," "often," "sometimes," or "rarely" in 30-day recall vs respondents who answered "yes" in at least 1 daily report.

^j Percent of respondents who answered "yes" in 30-day recall vs respondents who answered "yes" in at least 1 daily report.

^k P value from McNemar test.

Table 3

Parameter Estimates for Models Relating Gender and Mood to 30-Day Recall Accuracy

Item and Parameter	Estimate (SE)	P Value
Gender		
I-1. How interested have you been in sexual activity?		
Intercept	2.22 (0.27)	< .001
Summary score of daily responses	0.57 (0.08)	< .001
Female	−1.00 (0.36)	.005
Daily summary score × female	0.32 (0.12)	.008
A-10. How often have you masturbated? ^a		
Intercept	2.52 (0.15)	< .001
Summary score of daily responses	0.16 (0.02)	< .001
Female	−0.98 (0.20)	< .001
Daily summary score × female	0.04 (0.03)	.18
Mood		
A-9. How often have you had vaginal intercourse?		
Intercept	3.27 (0.11)	< .001
Summary score of daily responses	0.12 (0.01)	< .001
Positive affect z score ^b	−0.009 (0.13)	.95
Negative affect z score ^c	−0.39 (0.12)	.002
Daily summary score × positive affect z score	0.002 (0.01)	.84
Daily summary score × negative affect z score	0.04 (0.01)	.003
A-10. How often have you masturbated? ^c		
Intercept	1.87 (0.10)	< .001
Summary score of daily responses	0.22 (0.02)	< .001
Positive affect z score ^b	−0.36 (0.12)	.002
Negative affect z score ^c	−0.18 (0.12)	.12
Daily summary score × positive affect z score	0.07 (0.02)	< .001
Daily summary score × negative affect z score	0.004 (0.02)	.79
V-1. How would you describe the comfort of your vagina during sexual activity?		
Intercept	0.14 (0.36)	.69
Summary score of daily responses	0.96 (0.10)	< .001
Positive affect z score ^b	−1.37 (0.60)	.02
Negative affect z score ^c	−0.12 (0.41)	.77
Daily summary score × positive affect z score	0.44 (0.17)	.01
Daily summary score × negative affect z score	0.09 (0.12)	.47
V-6. How often have you had difficulty with sexual activity because your vagina was too dry?		
Intercept	4.65 (0.07)	< .001

Item and Parameter	Estimate (SE)	P Value
Summary score of daily responses	−0.036 (0.003)	< .001
Positive affect z score ^b	0.22 (0.08)	.008
Negative affect z score ^c	0.07 (0.08)	.37
Daily summary score × positive affect z score	0.004 (0.004)	.27
Daily summary score × negative affect z score	0.003 (0.002)	.15
EF-1. How would you rate your ability to get and keep an erection? (If you use pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.)		
Intercept	0.73 (0.24)	.003
Summary score of daily responses	0.86 (0.05)	< .001
Positive affect z score ^b	2.01 (0.45)	< .001
Negative affect z score ^c	0.18 (0.23)	.43
Daily summary score × positive affect z score	−0.40 (0.10)	< .001
Daily summary score × negative affect z score	−0.04 (0.05)	.39
EF-4. How difficult has it been to keep an erection (stay hard) when you wanted to? (If you use pills, injections, or a penis pump to help you get an erection, please answer this question thinking about the times that you used these aids.) ^e		
Intercept	1.07 (0.40)	.009
Summary score of daily responses	0.78 (0.08)	< .001
Positive affect z score ^b	3.28 (0.71)	< .001
Negative affect z score ^c	1.20 (0.58)	.04
Daily summary score × positive affect z score	−0.65 (0.14)	< .001
Daily summary score × negative affect z score	−0.24 (0.12)	.05
O-2. How would you rate your ability to have a satisfying orgasm/climax?		
Intercept	0.95 (0.35)	.006
Summary score of daily responses	0.79 (0.08)	< .001
Positive affect z score ^b	0.85 (0.39)	.03
Negative affect z score ^c	0.32 (0.35)	.37
Daily summary score × positive affect z score	−0.16 (0.09)	.08
Daily summary score × negative affect z score	−0.09 (0.08)	.31
O-6. How often have you ejaculated (“come”) more quickly than you would like?		
Intercept	4.55 (0.09)	< .001
Summary score of daily responses	−0.031 (0.002)	< .001
Positive affect z score ^b	0.25 (0.09)	.008
Negative affect z score ^c	0.07 (0.09)	.45
Daily summary score × positive affect z score	0.001 (0.003)	.78
Daily summary score × negative affect z score	−0.001 (0.003)	.64

^a We removed 1 influential observation (Cook's D > 1).

^b A z score version of the positive affect score using the grand mean and SD.

^c A z score version of the negative affect score using the grand mean and SD.

^d We removed 2 influential observations (Cook's D > 1).

^e We removed 2 influential observations (Cook's D > 1).