Reevaluating Sexual Satisfaction through an Expectancy Lens: Validation of the Sexual Activity Frequency and Expectation Scale

by

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Abstract

The method by which sexual satisfaction is conceptualized and measured varies widely across settings (e.g., research settings vs. clinical settings). However, consistent across settings is the use of inherently subjective Likert-type rating scales that may obscure results. The aim of the current study was to create and validate a measure of sexual satisfaction based on the actual and desired frequencies of a number of sexual behaviors using objective anchors. The Sexual Activity Frequency and Expectation (SAFE) scale conceptualizes sexual satisfaction as comprising sexual satiation and sexual dissatisfaction (i.e., over-satiation and deprivation) across a number of sexual behavioral domains. When compared to a composite measure of global sexual satisfaction, the SAFE scale demonstrated incremental validity in the prediction of relationship satisfaction, a known correlate of theoretical interest. Findings suggest that deprivation of sexual behaviors negatively impacts relationship satisfaction. Exploratory analyses further indicated that length of sexual relationship may underscore ambivalence about the relationship.
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Introduction

Sexual satisfaction is broadly defined as the degree to which an individual is happy with the sexual aspects of his or her intimate relationship (Sprecher & Cate, 2004). Individuals reporting higher levels of sexual satisfaction are more inclined to report higher levels of relationship satisfaction (e.g. Cupach & Comstock, 1990; Henderson-King & Veroff, 1994; Sprecher, 2002), and a change in the former is associated with changes in latter (Sprecher, 2002). This is notable because relationship distress is associated with its own set of negative outcomes, such as depression in women and alcohol abuse in men (Beach & O’Leary, 1986; Halford & Osgarby, 1993; Whisman & Uebelacker, 2009). Furthermore, sexual dissatisfaction is one of the most discussed issues in couple’s therapy (Metz & McCarthy, 2007), and sexual incompatibility is often one of the primary reasons given for marital dissolution (Ponzetti, Zvonkovic, Cate, Huston, 1992; Gigy & Kelly, 1992). Taken together, these, as well as other detrimental outcomes (for a review, see Halford, Bouma, Kelly, & Young, 1999), render the effects of sexual dissatisfaction on relationship functioning an important area for scientific investigation.

Despite a strong correlation between sexual and relationship satisfaction, the nature and direction of this association is currently unclear (Byers, 2005). Some theoreticians suggest that poor communication, unresolved conflicts within the relationship or low relational intimacy may lead to both lower sexual and relational satisfaction (Lawrence & Byers 1995). Although there is some support for this hypothesis (e.g. Haavio-Mannila & Kontula, 1997), other researchers posit that the sexual aspects of the relationship bear a more directional association with relationship
satisfaction. Yeh and colleagues (2006), for instance, found that sexual satisfaction consistently predicted marital satisfaction at a 1-year follow up for both husbands and wives, whereas the reverse association was not found (Yeh, Lorenz, Wickrama, Conger, & Elder, 2006). There is also research to suggest that the association between the two variables could be bidirectional. For example, Henderson-King and Veroff’s (1994) four-year longitudinal study found that affectional tension is correlated with sexual upset, affirmation is associated with joyful sex, and both are predictive of marital satisfaction in the expected directions.

Perhaps the relative validity of the aforementioned theoretical accounts is best characterized by the Dodo bird verdict; “everybody has won so all shall have prizes” (Carroll, 1865/1962, p. 412; also see Luborsky, Singer, & Luborsky, 1975). That is, all theories have received support and are potentially all in some way correct. This is problematic from a scientific standpoint, however, as many of these models are based on divergent assumptions and make different predictions. It is therefore likely that the heterogeneity of research findings may in part result from some other factor. As noted by Byers (2005), as well as others (e.g. Rosen & Bachmann, 2008), this other factor may encompass various psychometric difficulties across measures of sexual satisfaction. These issues are reviewed in the detail in the subsequent sections.

Definitional problems. Perhaps most notable, the operational definition of sexual satisfaction varies across studies. Divergent ideas about the domain of sexual satisfaction have very different implications pertaining to its measurement (Haynes, Richard & Kubany, 1995), and different indices may differentially associate with other variables (e.g., relationship satisfaction). For example, the Index of Sexual Satisfaction (ISS; Hudson, Harrison & Crosscup 1981) evaluates sexual satisfaction by asking how often an individual has certain feelings about
their sexual relationship (e.g. “my partner is sexually exciting”), whereas the Sexual Satisfaction Inventory (SSI; Whitley & Poulsen, 1975) assesses sexual satisfaction by evaluating how satisfied the respondent is with different sexual activities that occur before, during and after sexual interactions. If ostensibly different aspects of sexual satisfaction are provided the same label, and different underlying constructs that are treated as nominally synonymous bear different associations with relationship satisfaction (either concurrently or over time), then support for particular theoretical models may be contingent upon which definition and measurement of sexual satisfaction is used.

*Multidimensionality.* A related concern is that some measures of sexual satisfaction include a hodgepodge of items that may reflect distinct, albeit similar, constructs. For example, the ISS includes items that assess sexual satisfaction with behaviors frequently found in measures of intimacy (e.g., *holding hands with one’s partner or talking with one’s partner*; Whitley & Poulsen, 1975; for similar arguments, see Miller & Lefcourt, 1982; Waring & Reddon, 1983; Van den Broucke, Vandereycken, & Vertommen, 1995). The inclusion of such items potentially introduces additional variance to measures of sexual satisfaction that the construct does not truly encompass. As a consequence, correlations between sexual and relationship satisfaction may be misrepresented. Perhaps more problematic, inventories of sexual satisfaction also include items from measures of relationship satisfaction (see Sprecher & Cate, 2004). Any item overlap between constructs can inflate correlations between sexual and relationship satisfaction, which may obscure the actual association between the two constructs. Taken together, different studies may produce different results because measures of sexual and relationship satisfaction differ in the number of constructs they actually comprise, some of which may overlap directly as a result of shared item content.
Method variance. Associations between sexual and relationship satisfaction may also be confounded by shared method variance; evaluative bipolar continua (e.g., “Unsatisfied” to “Completely Satisfied”) are used to assess each construct at the global level (e.g., All things considered, how satisfied are you with your relationship). Shared method variance notwithstanding, the utility of this response format is potentially a limitation for each measure even when considered in isolation. Although subject to debate (Comrey, 1988; Clark & Watson, 1995), information about the individual is potentially lost because the psychometric space between Likert-scale response options may vary across participants (Loevinger, 1957). It is also possible that an individual may not keep the psychometric space constant across items within a measure. Because items are ultimately summed or averaged, the resulting index is difficult to interpret, as the items that comprise it may not be comparable (Loevinger, 1957). In addition, most measures of sexual satisfaction utilize only a small set of Likert-scaled items that solely measure attitudes at the global level (e.g. Sprecher, 2002). The subjectivity inherent to these items might lead to differences across respondents in the way they construe each item’s meaning, which makes the comparison of responses to an item (or summed indices based on these items) across individuals potentially more difficult.

The loss of potentially important differences in sexual satisfaction across individuals may also account for the ceiling effect that many of the currently used sexual satisfaction scales demonstrate (Rosen & Bachmann, 2008). Although sexual satisfaction is likely a negatively skewed phenomenon (Sprecher & Cate, 2004), it is unlikely that subjective evaluative judgments are identical even across highly satisfied individuals. Rather, it is possible that metric insensitivity to the full continuum of sexual satisfaction obscures actual differences in attitudes, and only the detection of grosser distinctions between individuals’ satisfaction are possible using
a Likert-scale format. Furthermore, the use of global rating scales may allow responses to be
determined by other attitudinal constructs that are also assessed using Likert-scaled global items
(e.g., relationship satisfaction; Hawkins, Carrère & Gottman, 2002). With respect to the current
topic, it is possible that individuals that are happy with their relationship inflate their actual level
of satisfaction to maintain consistency with their more global attitude; this effect is known as
halo error or sentiment override in the relationship literature (Hawkins, Carrère & Gottman,
2002). It is also possible that relationship satisfaction influences evaluations of sexual
satisfaction by way of selective recall. Given the potentially large amount of information
pertaining to the sexual aspects of one’s relationship, requesting a single evaluative judgment
might tax working memory (Cantor & Engle, 1993). In such situations, individuals may evaluate
the whole based on the most representative or available case (e.g., Tversky & Koehler, 1994). In
either case, the association between relationship and sexual satisfaction might be largely illusory.
Halo variance from relationship satisfaction may also account for the negative skew observed in
measures of sexual satisfaction, given that the former is also considered a negatively skewed
phenomenon (e.g., Ryder, 1973) and that the two constructs are correlated.

Towards a Better Measure

In light of some of the aforesaid limitations, Santtila et al. (2008) created the Desired and
Actual Sexual Activity Scale (DASA). On the DASA, individuals indicated their desired and
actual frequency for a sexual behavior on a nine-point Likert scale with frequency anchors where
“0” was “not at all” and “9” was “≥ 4 a times day.” A discrepancy score ranging from -8 to 8 was
generated by subtracting the indicated desired frequency from the indicated actual frequency.
Individuals with no discrepancy between their desired and actual frequency were described as
satisfied with that particular aspect of their sexual relationship. Dissatisfaction was indicated by
any deviation from zero (positive or negative). This method represents an improvement over existing global measures because it employs concrete behavioral markers (i.e. frequency) to assess satisfaction instead of evaluative statements that could be interpreted differently across participants, or potentially influenced by other affective feelings toward their partner. In addition, the DASA includes six broad domains of sexuality, which may facilitate the recall of prior sexual behaviors and therefore mitigate the impact of memory limitations and halo error on attitudinal judgments.

Although the DASA may circumvent the problems inherent to global measures of sexual satisfaction, it is limited in at least two ways. First, by rating the frequency of the behaviors on a nine-point frequency scale composed of ranges (e.g. “two to three times per week” or “≥ 4 times day”), the exact discrepancy between desired and actual frequencies is somewhat obscured. For example, an individual may indicate that they desire oral sex “2-3 times a week” and that their actual frequency is “2-3 times a week;” although their corresponding discrepancy score on the DASA would be 0, the actual value could be -1, 0, or 1. In other words, the DASA loses some of its ability to properly categorize individual differences by containing ranged response choices. This may unduly create statistical noise in scale scores across participants and, thus, increase Type II error rates.

Second, the discrepancy scores obtained by the DASA are compared irrespective of how often the behavior actually occurs or is desired. The premise of the DASA is that individuals vary in how often they participate in sexual activities and how often they desire sexual activity. However, by creating the discrepancy scores, the DASA loses a layer of differentiation between individuals, one that may be important in creating meaningful distinctions in the levels of sexual satisfaction. For instance, an individual that is currently not engaging in, yet desires a given
sexual act to occur at least once (i.e., +1) is potentially different from an individual that is already engaging in the behavior and wanted it to increase by the same degree (i.e., +1). Stated differently, quantitatively identical discrepancy scores (e.g. 2) may be qualitatively different depending on the magnitude of either of its constituent terms (i.e. the actual and desired frequencies of a given behavior).

*Development of the SAFE Scale*

Although the DASA potentially represents progression in the measurement of sexual satisfaction, given its limitations, other improvements in the assessment of this construct are needed so that the association it bears with relationship satisfaction can be more accurately ascertained. To that end, the Sexual Activity Frequency and Expectation scale (SAFE) was developed, which extends previous measures of sexual satisfaction in several ways. The SAFE scale includes a wider range of behaviors about which participants rate their satisfaction. Santtila et al. (2008) adapted the Sexual Drive subscale (scale III) from the Derogatis Sexual Function Inventory (DSFI; Derogatis & Melisaratos, 1979) to create the DASA, which consisted only of four sexual behavior domains (i.e. sexual fantasies, kissing and petting, intercourse, and masturbation) and defined ideal frequency as how often the individual would like the activity to occur (Derogatis & Melisaratos, 1979). The DASA differs from the Sexual Drive subscale in that it includes anal intercourse and oral sex as evaluated behaviors, as well as inquires about desired frequency in addition to actual frequency. The SAFE Scale expands on the measure created by Santtila et al. (2008) by further “unpacking” broad sexual behavioral domains into many of their component behaviors. The behaviors utilized for the SAFE scale were based off of the 17 behaviors presented in the Sexual Interaction Inventory (Lopiccolo & Steger, 1974) and the 61
items on the Cowart-Pollack Scale of Sexual Experience (Cowart-Steckler, 1984), as well as feedback about additional behaviors obtained from pilot data.

Similar to the DASA, the SAFE scale utilizes the frequency of sexual behaviors as a means by which sexual satisfaction is assessed. Frequency of sexual activity, defined as the number of times an individual participates in a given sexual behavior over a course of time, is shown to correlate positively with sexual satisfaction (Liu, 2003, Laumann et al., 1994), such that individuals endorsing higher frequencies of sexual activity also describe themselves as having higher levels of sexual satisfaction (Liu, 2003). However, unlike the DASA, the SAFE scale compares absolute instead of ranged frequencies, which enables a more precise accounting of individual differences.

With regard to the conceptualization of sexual satisfaction, the SAFE scale differs from many of the sexual satisfaction scales in that it does not treat satisfaction and dissatisfaction as bipolar ends on the same continuum. Instead, sexual satisfaction is conceptualized as being comprised of dissatisfaction, which is the extent that your sexual desire is not being met. Sexual dissatisfaction ranges between deprivation (e.g. desired frequency more than actual frequency) and over-satiation (e.g. actual frequency more than desired frequency). Sexual satisfaction is hypothesized to also comprise sexual satiation. Sexual satiation, as measured by the SAFE scale, is defined as the degree to which the actual frequency of a given sexual behavior met the desired frequency. The value for the satiation score reduces to the lower of the two values (i.e., desired versus actual) unless they are equal, in which case either score can be used as the index. The former construct (i.e. dissatisfaction) is identical to Santtila et al.’s (2008) operational definition of satisfaction, which included only difference scores without respect to the actual magnitude of the desired or actual frequencies. However, individuals may differ greatly in their desired and/or
actual frequency of sexual behaviors, irrespective of the discrepancy between them, and standard discrepancy scores would not accurately model these individual differences. In other words, potentially important variability across individuals in the degree to which actual frequency matched the desired is not evaluable; only the extent to which these values do not match are captured by discrepancy scores.

To illustrate, Figure 1 graphically represents the actual and desired frequency as orthogonal dimensions on the $x$- and $y$-axis, respectively. The origin represents the point at which there exists neither the desire for, nor occurrence of, sexual behavior ($x = y = 0$). The 45-degree vector that bisects the origin characterizes the range of points in which there is no dissatisfaction (i.e. actual and desired frequency are equal), but have components of increasing magnitudes. An individual whose actual and desired frequency is equal (e.g., individual A in Figure 1) would be considered sated, and the magnitude of satiation is definable in terms of either the $x$ or $y$ dimension (e.g., 2). Dissatisfaction can develop as a result of two conditions; deprivation and over-satiation. Deprivation occurs when sexual activity is withheld (e.g., individual B), whereas over-satiation occurs when the individual experiences a sexual behavior more than is desired (e.g., individual C). Note that both individuals B and C are satiated to some extent; half of individual B’s desired frequency was met, whereas individual C’s desired frequency was completely met. Considering both the magnitude of satiation and the magnitude and direction of dissatisfaction completely models all of the information in coordinate space and thus, sexual satisfaction.

**Current Study**

The current study aims to evaluate the convergent and incremental validity of the SAFE scale. The SAFE scale’s incremental validity was evaluated by comparing it to a composite
measure of global sexual satisfaction, the Global Satisfaction Scale (GSS). Hierarchical multiple regressions were used to compare the SAFE scale and the GSS using a one- and two-dimensional measures of relationship satisfaction as the criteria. By comparing actual and desired frequency counts of discrete sexual behaviors, the SAFE scale yields indirect indices of satiation and dissatisfaction that potentially circumvent the conceptual and psychometric problems that hamper existing measures of these constructs. As such, it was hypothesized that the SAFE scale would account for additional variance in relationship satisfaction beyond that of the global sexual satisfaction measure. As was previously noted, halo variance may account for some of the association between relationship and sexual satisfaction. Because this association is the one under scrutiny, a measure of general optimism (i.e., the Life Orientation Test [LOT-R]; (Scheier, Carver, & Bridges, 1994) was used to ascertain the amount of variance that can be attributed to general positive expectations. A better measure of sexual satisfaction would be less susceptible to halo error (Cooper, 1981). In addition, the resulting parameter estimate for global satisfaction would not be inflated by variance attributable to optimism, as including a measure of the latter would control for overlapping variance with the former. Predicated on these bases, it was hypothesized that when the variance attributable to a general level of optimism is accounted for by the LOT-R, the unique variance accounted for in relationship satisfaction by the measure of global satisfaction would be significantly diminished (i.e., mediated) when compared to the SAFE scale.
Method

Participants

Participants were recruited using online search engines (e.g. Google), online networking Websites (e.g. Facebook), online psychology study recruitment websites (e.g. Social Psychology Network) and relationship specific Websites (e.g. The Knot). Two hundred and fifty participants initiated the study and, of those, 128 were deemed completers because they a) were missing no more than two of the four target subscales of the SAFE, and b) had mostly complete demographics (i.e. 90% complete). In total, there was a 51% completion rate for the study. Significance testing indicated that completers of the study tended to have been in their relationships longer, \( t (180) = -2.10, p < .05 \), and have been sexually active with their partners for longer, \( t (178) = -2.10, p = .03 \). The majority of the completing sample comprised individuals that lived with their partner (48.6%), were female (68.8%), Caucasian (68.0%), had no children (68%), had some college or have completed an undergraduate degree (39.8% and 29.7%) and made between 0 and $50,000 (87.5%). Participants were compensated with a chance to win one of four $50 Visa gift cards.

Measures

Demographic Questionnaire. The demographic questionnaire consisted of a number of category variables, such as age, gender, ethnicity, education level, and yearly income. Also, a number of relationship specific variables are included in the demographic questionnaire, such as
relationship length, how the couple became acquainted, and the living arrangement with their partner.

Sexual Activity Frequency and Expectation scale (SAFE). The initial behaviors utilized for the SAFE scale were modeled after the 17 behaviors presented in the Sexual Interaction Inventory (Lopiccolo & Steger, 1974), the 61 items on the Cowart-Pollack Scale of Sexual Experience (Cowart-Steckler, 1984), as well as feedback from individuals about what additional behaviors added to their sexual satisfaction. From these sources, 177 items were initially generated and piloted in a brief online survey. The response ranges for each item of the initial pool were examined and items that appeared to elicit a wide range of responses were retained. Those items that had no endorsement were excluded. The remaining items were correlated with a measure of relationship satisfaction. Items that correlated with the criterion measure at a .20 level were retained. Additionally, items were evaluated by gender to ensure that items functioning differently across genders were not excluded.

The final SAFE scale is a 136-item inventory that assesses the frequency of and satiation with 31 sexually-related behaviors, as well as 19 intimacy/romance related behaviors. The items are divided into five categories that generally describe the types of behaviors participated in during sexual relations. The five behavioral areas assessed are foreplay, onanism (i.e. mutual masturbation), oral sex, intercourse, and romantic/intimacy behaviors. For the current study, the romantic/intimacy behaviors were excluded. Individuals are asked to indicate how often they have participated in a given activity in the previous two weeks. Additionally, participants are asked to indicate how much more or less they desired to participate in the given activity, this scale ranges from +5 to -5 (with text boxes allowing for ratings greater or less than +5 and -5), thus, indicating the 0 point as equal to the previously indicated actual. Furthermore, participants
are asked to indicate how often the behavior met their sexual need. Also included were questions related to a) partner’s initiation, b) global ratings of satisfaction within the domain of behaviors, and c) how representative the past 2 weeks were of the dyad’s typical frequency of these sexual behaviors.

The dissatisfaction index can be created by first multiplying the desired frequency score by -1, as numbers above zero indicate levels of deprivation and below zero levels of over-satiation discrepancy (see Figure 1). Discrepancy scores are computed for each item by summing the actual frequency and the inverted desired frequency scores. Finally, these discrepancy scores are summed within and across domains to create domain-level and global-level ratings of dissatisfaction; positive values indicate over-satiation, whereas negative values indicate deprivation. The index of satiation is created by including the actual frequency scores alongside the discrepancy scales in a regression model, with the partial coefficient representing the predictive validity of actual frequency assuming that the value of over-satiation/deprivation across participants is 0.

*Global Satisfaction Scale (GSS).* The GSS is a combination of 29 global satisfaction questions from 12 of the most frequently used measures of sexual satisfaction. These items were reviewed and checked for redundancy. Only one item was retained in cases where two or more items were identical or similar in content (e.g., “I am satisfied with my sex life.” and “Generally, I am satisfied with my sex life”). GSS items assesses positive and negative evaluative judgments of the sexual relationship (e.g. “I think my sex life is wonderful” and “My sexual relationship with my partner is lacking something,” respectively). The individual scales that comprise the GSS have shown good internal consistency and reliability, Cronbach’s alpha .80 to .95 in a variety of diverse samples including college students, married couples, and sexually
dysfunctional individuals (Pinney & Denney, 1987; Rosen, Brown, Heiman, Leiblum, & Meston, 2000; Lawrence & Byers, 1995). Principle components analysis with a Varimax rotation was conducted on the GSS. Four components emerged accounting for 74% of the variance. Factor 1 comprised items that appear to assess global sexual satisfaction (e.g., “I am very satisfied with the way my sexual needs are currently being met.”) and accounted for 63.83% of the variance. Factor 2, 3 and 4 appeared to assess expectations and of ideals of the sexual relationship (e.g., “My sexual relationship exceeds my original expectations.”), emotional needs in the relationship (e.g., “I am very unsatisfied with the way my emotional needs are currently being met.”), and level of indifference (e.g., “I am indifferent about my sexual relationship (no strong feelings either way)”, respectively. As the current study is aiming to compare the SAFE to the most stringent measure of global sexual satisfaction, only factor 1 of the GSS (representing global attitudes of satisfaction) was used. Factor score coefficients were created utilizing a regression method that estimates the placement of each participant on GSS factor 1 (for review of this technique see DiStefano, Zhu, & Mindrila, 2009).

**Positive and Negative Semantic Differential (PN-SMD)** The PN-SMD (Mattson et al., under review) is a 14-item measure that asks participants to rate the positive and negative aspects of their relationship separately. Items within each subscale (e.g., all positive items) were administered together. Participants are instructed to consider only the positive (negative) qualities of their relationship and to ignore the negative (positive) ones, when evaluating their relationship on specific qualities (7 per subscale). The PSD and NSD subscales were separated by additional questionnaires that were presented at random. The PSD and NSD subscales ranged from 0 – 49, with higher scores representing more positive and negative evaluations of the relationship, respectively. The PN-SMD subscales showed good internal consistency and
reliability, Cronbach alpha of .94 for the PSD and .93 for the NSD for the current study. The reasoning behind utilizing the PN-SMD is to obtain the additional indexes of attitudinal polarization (i.e., the absolute difference between the PSD and NSD) and ambivalence (i.e., \(|\text{PSD} + \text{NSD}| - |\text{PSD} - \text{NSD}|\)). Mattson et al. have demonstrated that these indexes add significantly to the model of relationship satisfaction and demonstrate an alternative formulation of relationship satisfaction. As such, the inclusion of these indexes as criterion allows for the examination of the association between the SAFE scale and a differing conceptualization of relationship satisfaction as well as a more traditional measure (i.e., CSI).

**Couples Satisfaction Index.** The Couple Satisfaction Index (CSI-4; Funk & Rogge, 2007) is a 4-item measure derived from an IRT analysis of eight widely used and validated measures of relationship satisfaction. Items are: “Please indicate the degree of happiness, all things considered, of your relationship;” “I have a warm and comfortable relationship with my partner;” “How rewarding is your relationship with your partner;” and “In general how satisfied are you with your relationship?” Scores range from 0 to 28, with higher scores being indicative of more satisfaction with one’s relationship. The CSI-4 was chosen over other measures of relationship satisfaction, because of its concise construction and precise evaluation of relationship satisfaction. Cronbach’s alpha for the current sample is .92.

**Life Orientation Test.** The Life Orientation Test-Revised (LOT-R, Scheier, Carver, & Bridges, 1994) is a 6-item measure that assesses overall optimism (e.g. “In uncertain times, I expect the best”). Items are rated on a 4 point Likert-type scale with “1” indicating “I agree a lot” and “4” indicating “I disagree a lot.” Cronbach’s alpha for the current study was .82.

**Personal Assessment Inventory (PAI) Validity Scales.** Two scales were used to assess the quality of the attention and effort put in by participants. The 8-item infrequency subscale from
the PAI (Morey, 1991) is made up of items with such extreme response distributions that 99% of respondents provided the same responses. This scale was scored by giving a point for each infrequent response with a total score range from 0 to 8. The inconsistency of respondents was assessed by the PAI inconsistency scale, which comprised 10 pairs of virtually identical items that will be given randomly throughout the study. The inconsistency subscale was scored by giving a point for every drastically different response and will range from 0 to 10. As the completion time for this study was long compared to other online studies, some endorsement of infrequent/nonsensical items and minor response inconsistencies were expected. To that effect, subtest scores were converted to z-scores; and the univariate outlier cut-off score (i.e., \( z = |3.29| \)) was used as the criterion for response invalidity. This method has been utilized in other studies (e.g., Mattson et al., under review)
Procedure

The study was conducted entirely online. Advertisements for the Assessment of Sexual Quality Study were posted on online search engines (e.g. Google), online networking websites (e.g. Facebook) online psychology study recruitment websites (e.g. Social Psychology Network), and relationship specific websites (e.g. The Knot). The study survey was created utilizing Qualtrics online survey software (Qualtrics Labs Inc., Provo, UT). Study advertisements contained links to the survey that directed participants to the study hosted on the Qualtrics server. Once on the website, participants were informed about the study, possible benefits and detriments of participation, and given the contact information of the researchers. To proceed to the study, participants indicated that they had read the information letter and were at least 19 years of age. Once consent had be given by selecting the “Yes” option and clicking the “Next” button, the participants were presented with the study measures in a random order to protect against order effects. At the conclusions of the study, a debriefing screen indicated the purpose of the study, as well as websites for therapist referrals (e.g., http://locator.apa.org/ and http://www.aasect.org/directory.asp) in the event that participation in the study had caused any psychological distress. Space was also provided on the debrief screen for participants to give feedback about their study experience. Additionally, participants had an opportunity to enter their e-mail address for the raffle drawing. Participants were directed to forward the study link to their partners to complete the study as well (refer to Appendix B for example).
Results

Preliminary Analysis

Prior to analysis, visual inspection of the data was conducted for missing values and accuracy of data entry. Although a number of participants were excluded from analysis because of large amounts of missing data, there was still a small percentage of missing data (i.e. < 10%) for key variables (e.g. CSI) for the completers. These missing values were replaced utilizing values obtained through the expectation maximization (EM) imputation procedure (Dempster et al., 1977; Peugh & Enders, 2004). Imputed values were obtained simultaneously for the CSI-4 and PNSMD, utilizing all demographic variables as predictors. Missing values on the SAFE scale were treated differently because of individual items represent count data and were non-normally distributed in many cases. Ipsative mean substitution was used for missing values on the SAFE scale (Shafer & Graham, 2002). Although it has been suggested that ipsative mean substitution violates theoretical and conceptual principles of missing data analysis, practical applications suggests this method fares well empirically and is a viable option for missing data when the content domain is clearly specified (Schafer & Graham, 2002). After initial data cleaning, descriptive statistics were obtained for the sample and independent samples $t$-tests were performed to examine differences across gender. These results are summarized in Table 1. Table 2 provides the correlations between the SAFE dissatisfaction and satiation scales with factor one of the GSS, the CSI and the Polarization and Ambivalence scores of the PN-SMD.
Incremental Validity of SAFE Scale over a Global measure of Sexual Satisfaction

The incremental validity of the SAFE scale was evaluated through hierarchical regression utilizing relationship satisfaction (derived from the CSI and PN-SMD) as the criterion. The first block included control variables (e.g., relationship length, relationship status and gender), block 2 consisted of factor 1 of the GSS, and block 3 consisted of the total dissatisfaction and satiation scores of the SAFE scale. Lastly, the LOT total score was added to block 4 to evaluate if accounting for optimistic tendencies absorbed the variance accounted for by the GSS and SAFE. When predicting attitude polarization, ambivalence towards the relationship was controlled for and vice versa, as the two are strongly negatively correlated. These results are summarized in Table 3. For the CSI and the Polarization scale of the PN-SMD, the SAFE scale (specifically the dissatisfaction score) significantly accounted for additional variance in relationship satisfaction over and above that of the GSS.

Exploratory Analyses

Taking into account the overall incremental validity of the SAFE total scores, additional analyses were performed to evaluate the association between the dissatisfaction and satiation scores on each of the behavioral sub-domains and relationship satisfaction. Again, hierarchal regressions were used to evaluate these relationships, with control variables in the first block and the dissatisfaction and satiation sub-domains of the SAFE scale in the second block. The dissatisfaction scores for foreplay, oral sex, and intercourse accounted for significant incremental variance in the CSI and polarization ($p < .05$) such that, as dissatisfaction approaches zero (i.e. becomes less deprived) CSI and polarization scores increase. These results are summarized in Table 4.
Discussion

The method by which sexual satisfaction is conceptualized and measured varies widely across setting (e.g., research settings vs. clinical settings). However, consistent across settings is the use of inherently subjective Likert-type rating scales that may obscure results. The aim of the current study was to create and validate a measure of sexual satisfaction based on the actual and desired frequencies of a number of sexual behaviors using objective anchors. The use of actual and desired frequency allows for a more objective measure of individual differences, as well as creates a wider range of responses. Although there have been other measures of actual and desired frequencies of sexual behavior, the current measure differs in that it 1) creates separate scores of satiation and dissatisfaction which can be obtained at the item, domain, and global levels, and 2) evaluates a number of behaviors that encompass an individual’s sexual experience. Results of the current study suggest that the total scores of the SAFE scale do associate in the expected directions with a measure of sexual satisfaction (convergent validity), as well as accounts for incremental variance in relationship satisfaction, a known correlate of theoretical interest.

Surprisingly, the SAFE satiation scale neither significantly added to the prediction of relationship satisfaction nor correlated with the GSS. Given the present modeling of satiation, this finding suggests that the actual frequency of sexual behaviors is perhaps less relevant to relationship satisfaction. Rather, the discrepancy between level of satiation and desire is the critical determiner. As such, the current study’s findings suggest that sexual frequency does not
reduce to sexual satisfaction (also see, Christopher & Sprecher, 2000; Liu, 2003), and may further suggest that individuals tend to be more sensitive to the areas of their sexual lives that are not being met (i.e. deprived), instead of focusing on those needs that are being met (i.e. level of satiation).

This same pattern also emerged when separately examining the behavioral sub-domains of the SAFE (except for onanism), possibly suggesting that deprivation of the behaviors that comprise foreplay, oral sex, and intercourse are particularly salient in the perception of sexual relationship, as well as relationship satisfaction. By comparison, a global measure, like the GSS, is unable to derive this level of specificity and can only give a general impression of the sexual relationship. Another interesting finding is that neither the SAFE total scores nor the GSS significantly added to the prediction of relationship ambivalence (i.e., opposing evaluations held simultaneously; see Klopfer & Madden, 1980). Notably, however, the length of the sexual relationship did significantly add to the prediction of ambivalence towards the relationship across models. It is possible that as the length of the sexual relationship increases, the novelty of the sexual interaction may decrease, but the level of intimacy derived from the interaction may increase. This reasoning also has been used to explain the precipitous drop in frequency of sexual interaction that occurs without a concurrent decrease in sexual satisfaction, as relationship length increases (Liu, 2003). In any case, based on the current data, aspects of sexual satisfaction may not appear pertinent to relationship ambivalence; however, the degree to which certain dimensions of the sexual relationship (i.e., duration) are connected with this sentiment may be in need of additional examination.
**Strengths and Limitations**

There were many notable strengths of the current study. First, the SAFE scale was piloted to aid in item selection, thus, allowing for the retention of behaviors that best relate to criterion of interest while still assessing a broad set of sexual behaviors. As the restricted range of sexual behaviors is often a criticism levied against multi-item measures of sexual satisfaction, the ability to maintain a statistically focused, yet broad scope strengthens the SAFE scales overall validity without sacrificing validity. Second, the utilization of the GSS provided a strong test of incremental validity, as it comprised many of the more commonly used items of sexual satisfaction. Use of the GSS allows for additional confidence in the incremental validity of the SAFE scale over other measures of sexual satisfaction.

Lastly, the current study attempted to account for possible correlation inflation between the Likert ratings of sexual and relationship satisfaction due to halo variance. However, it is noteworthy that the addition of the LOT in the regression models did not significantly alter the variance accounted for by the GSS which could indicate that halo variance does not account significantly for the association between relationship and sexual satisfaction (at least in this sample). Alternatively, it could indicate that a measure of dispositional optimism, like the LOT, does not significantly contribute to the phenomenon of sentiment override. Some studies suggest that while sentiment override and optimism may be associated in some cases, sentiment override is more influenced by actual perceptions of the romantic relationship (e.g., Story et al., 2007).

There were also a number of limitations for the current study. Most notably, there was a rather high attrition rate, and several differences between completers and non-completers were detected. First, the current sample tended to be in longer-term committed sexual relationships. It is possible that the findings may be different in samples of shorter-term sexual relationships,
which may have a) less defined sexual scripts; b) less opportunity for sexual relations; or c) less investment in the sexual relationship. These possible differences could affect the expected frequency of sexual behaviors, as well as the sensitivity of the SAFE to variation in these expectations as they relate to relationship satisfaction. Additionally, other aspects of the intimate relationship may impact ratings of relationship satisfaction in shorter-term versus longer-term couples. However, these differences would have also impacted ratings on the GSS as well.

Second, attrition may have been due to the sensitive and personal nature of the study or the survey length. As such, differences in openness to sexual experiences and/or views about sexual disclosure may have differed between completers and non-completers. The extent to which a more global measure of sexual satisfaction with less explicit measures of sexual behaviors would perform better, or if sexual aspects of the relationship would be less salient to relationship satisfaction for those individuals less open to sexual experience, is unknown. The possible lack of inclusion of these types of individuals reduces the ability to generalize to these specific populations. Similarly, the sample comprised online users and, although most individuals in American households own computers, the extent to which characteristics of those that do not own computers associate with the considerations of this study cannot be deduced. Last, a number of participants discontinued after only completing a few questions and, thus, the extent to which they differed from completers and other non-completers could not be ascertained.

In addition to attrition and generalizability issues, the present study had three additional limitations that are worthy of note. First, because the study was completed online, participants may have been distracted while completing the survey, potentially adding statistical noise to the data and inflating Type II errors. Second, the SAFE scale is currently only geared towards heterosexual couples, and there is increasing recognition of the differences in opposite versus
same-sex couples and, thus, the SAFE scale may not be appropriate for assessing all sexual behaviors across different relationship groups. Future studies of the SAFE scale should examine what items best apply for same-sex populations. Third, as the current study was not longitudinal, nor did it consider the responses from both partners of the sample, it is unknown if the current findings are maintained under these conditions.

**Conclusion**

The findings of the current study support the use of actual and desired frequency to examine the association between sexual and relational satisfaction. Although the SAFE scale was unsuccessful in the conceptualization of sexual satiation as it relates to sexual satisfaction, similar to relationship satisfaction, a two-continuum model may still best represent the sexual satisfaction construct. Further development of the SAFE scale’s conceptualization of sexual satisfaction is needed to accomplish this two-continuum model. However, the incremental validity demonstrated by the SAFE scale’s dissatisfaction score, as well as the various domains that are assessed by the measure, adds significantly to the conceptualization of sexual satisfaction as a whole.
References


Luborsky, L., Singer, B., & Luborsky, L. (1975). Comparative studies of psychotherapies: Is it true that ‘everyone has won and all must have prizes’?; *Archives of General Psychiatry, 32*, 995-1008.


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*Note.* CSI = Couples Satisfaction Index; PSD = Positive Semantic Dimension; NSD = Negative Semantic Dimension; AMB = Ambivalence; POL = Polarization; GSS = Global Sexual Satisfaction; LOT = Life Orientation Scale; *p < .05 **p < .01 (two-tailed).
Table 2. Correlations between SAFE scale Satiation and Dissatisfaction Indices and Measures of Relationship and Sexual Satisfaction

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*Note. CSI = Couples Satisfaction Index; GSS = Global Sexual Satisfaction; *p < .05 ** p < .01 (two-tailed).*
Table 3. Incremental Validity of SAFE scale beyond Demographic Variables and a One- and Two Dimensional Measure of Relationship Satisfaction

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Note. CSI = Couples Satisfaction Index; GSS= Global Sexual Satisfaction; *p < .05 ** p < .01 (two-tailed).
Table 4. Associations between Sexual Behavior Dissatisfaction and Satiation scores and Relationship Satisfaction

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**Note.** CSI = Couples Satisfaction Index; GSS= Global Sexual Satisfaction **p < .05** *p < .01* (two-tailed).
Appendix A
Study Measures

Couple Satisfaction Index

1. Please indicate the degree of happiness, all things considered, of your relationship.
   1. Very Unhappy
   2. Unhappy
   3. Somewhat Unhappy
   4. Neither Happy nor Unhappy
   5. Somewhat Happy
   6. Happy
   7. Very Happy

2. I have a warm and comfortable relationship with my partner
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

3. How rewarding is your relationship with your partner?
   1. Very Unrewarding
   2. Unrewarding
   3. Somewhat Unrewarding
   4. Neither Rewarding or Unrewarding
   5. Somewhat Rewarding
   6. Rewarding
   7. Very Rewarding
4. In general, how satisfied are you with your relationship?

1. Very Satisfied
2. Satisfied
3. Somewhat Satisfied
4. Neutral
5. Somewhat Dissatisfied
6. Dissatisfied
7. Very Dissatisfied
Positive Negative Semantic Differential

Considering only the positive qualities of your relationship and ignoring the negative ones, evaluate your relationship on the following qualities:

My relationship is...

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Considering only the negative qualities of your relationship and ignoring the positive ones, evaluate your relationship on the following qualities:

My relationship is...

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<th>A little</th>
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Life Orientation Test

1. In uncertain times, I usually expect the best
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

2. If something can go wrong for me, it will.
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

3. I'm always optimistic about my future
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

4. I hardly ever expect things to go my way
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree
5. I rarely count on good things happening to me.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

6. Overall, I expect more good things to happen to me than bad

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree
General Sexual Satisfaction

Considering the last three months please answer the following questions about your intimate relationship.

1. I think my sex life is wonderful.
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

2. I am very satisfied with the way my sexual needs are currently being met.
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

4. I am worried about the sexual aspects of my relationship.
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree
5. My sexual relationship exceeds my original expectations.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

6. I feel unhappy about my sexual relationship.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

7. I am very satisfied with the way my emotional needs are currently being met.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

8. My sexual relationship is very good compared to most.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree
9. My sexual relationship with my partner is lacking something.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

10. I am very unsatisfied with the sexual aspects of my life.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

11. In most ways my sex life is close to my ideal.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

12. I am generally pleased with the quality of my sex life.

   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree
13. I am disappointed about the quality of my sex life.
   
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

14. So far I have gotten the important things I want from my sex life.
   
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

15. I really think that our sexual relationship is sensational.
   
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree

16. The sexual relationship I have with my partner is very arousing to me.
   
   1. Strongly Disagree
   2. Disagree
   3. Somewhat Disagree
   4. Neither Agree nor Disagree
   5. Somewhat Agree
   6. Agree
   7. Strongly Agree
17. My sex life with my partner could not get much worse.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree

18. I would change aspects of my sexual relationship.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree

19. I think my sex life is awful.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree

20. I believe that my sexual relationship with my partner is not lacking anything.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree
21. I think my sexual relationship with my partner is:

1. Much Worse than Average
2. Worse than Average
3. Somewhat Worse than Average
4. About the Same than Average
5. Somewhat Better than Average
6. Better than Average
7. Much Better than Average

22. My physical needs are satisfied during love making.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree

23. I would change aspects of my sexual relationship.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree

24. I consider my sexual relationship with my partner unfulfilling.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree
25. I am indifferent about my sexual relationship (no strong feelings either way).

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree

26. I am ambivalent about my sexual relationship (strong positive and negative feelings pulling in different directions).

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree

27. Thinking about my sexual relationship with my partner is frustrating.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree

28. There is nothing I like about my sexual relationship.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree
29. I am very unsatisfied with the way my emotional needs are currently being met.

1. Strongly Disagree
2. Disagree
3. Somewhat Disagree
4. Neither Agree nor Disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree
SAFE scale

Foreplay

Below are behaviors related to foreplay; please indicate how often in the last two weeks you and your partner participated in each of the following behaviors. If the behavior occurred more than 7 times, please indicate the exact number of times the behavior occurred. After each statement please indicate how often you would have liked the behavior to have occurred more or less.

1. On how many occasions did you and your partner engage in "playful" wrestling?
   a. How many times, more or less, would you have liked this behavior to have occurred? [-5 -4 -3 -2 -1 0 1 2 3 4 5; if >5 or <-5 enter exact]
2. On how many occasions did you and your partner undress in front of the other?
3. On how many occasions did you and your partner cuddle while naked?
4. On how many occasions did you and your partner bathe/shower together?
5. On how many occasions did you and your partner view pornographic movies together?
6. On how many occasions did you and your partner read erotic materials together (e.g. magazines, books)?
7. On how many occasions did the man use his hands to play with the woman's breasts?
8. On how many occasions did the man touch his mouth to the woman's breasts?
9. On how many occasions did the woman stimulate the man's penis and/or scrotum with her hand?
10. On how many occasions did you receive a sensual massage from your partner?
11. In the last two weeks, how many times did your partner initiate foreplay?
12. Taking into account the frequency and the satisfaction derived from each of the previous behaviors, how satisfied are you with the foreplay aspect of the sexual relationship you have with your partner?*
13. Are the past two weeks an adequate representation of you and your partner's foreplay behaviors?
Onanism

Below are behaviors related to onanism (masturbation); please indicate how often in the last two weeks you and your partner participated in each of the following behaviors. If the behavior occurred more than 7 times please indicate the exact number of times the behavior occurred. After each statement please indicate how often you would have liked the behavior to have occurred, more or less.

1. On how many occasions did you masturbate with your partner?
2. On how many occasions did you masturbate while your partner watched?
3. On how many occasions did the male penetrate the woman's vagina with his fingers?
4. On how many occasions did your finger penetrate your partner's anus?
5. In the last two weeks, how many times did your partner initiate onanistic (masturbation) behaviors?
6. All things considered, how satisfied are you with the onanistic aspect of the sexual relationship you have with your partner?*
7. Are the past two weeks an adequate representation of you and your partner's onanistic behaviors?

Oral sex

Below are behaviors related to oral sex; please indicate how often in the last two weeks you and your partner participated in each of the following behaviors. If the behavior occurred more than 7 times please indicate the exact number of times the behavior occurred. After each statement please indicate how often you would have liked the behavior to have occurred, more or less.

1. On how many occasions was the vagina orally stimulated?
2. On how many occasions was the penis orally stimulated?
3. On how many occasions was there simultaneous oral stimulation of the vagina and penis?
4. On how many occasions was your perineum (sensitive skin between anus and genitals) orally stimulated by your partner?
5. In the last two weeks, how many times did your partner initiate oral sex behaviors?
6. Taking into account the frequency and satisfaction derived from the oral sex activities previously stated, how satisfied are you with the oral sex aspect of the sexual relationship you have with your partner?*
7. Are the past two weeks an adequate representation of you and your partner's typical oral sex behaviors?
Intercourse
Below are behaviors related to sexual intercourse; please indicate how often in the last two weeks you and your partner participated in each of the following behaviors (note: many of these behaviors can occur in a single sexual interaction). If the behavior occurred more than 7 times, please indicate the exact number of times the behavior occurred. After each statement please indicate how often you would have liked the behavior to have occurred, more or less

1. In total, how many times have you engaged in vaginal intercourse in the past two weeks?
2. On how many occasions did you have sexual intercourse with the male superior (on top, facing forward)?
3. On how many occasions did you have sexual intercourse where the vagina was entered from behind?
4. On how many occasions did you have sexual intercourse while standing?
5. On how many occasions did you have sexual intercourse where only you reached orgasm?
6. On how many occasions did you have sexual intercourse where only your partner reached orgasm?
7. On how many occasions did you have sexual intercourse where both partners reached orgasm?
8. On how many occasions did you have anal intercourse?
9. In the last two weeks, how many times did your partner initiate sexual intercourse?
10. Taking into account the frequency and satisfaction derived from the sexual intercourse activities previously stated, how satisfied are you with the sexual intercourse aspect of the sexual relationship you have with your partner?*
11. Are the past two weeks an adequate representation of you and your partner's typical intercourse behaviors?

Note: * indicates items that are answered utilizing a 6 point rating scale ranging from very dissatisfied to very satisfied; Each behavior requires
Appendix B

Debrief and Referral Screen

Thank you for your participation in the Assessment of Sexual Relationship Quality study! The survey you have just completed is geared towards finding a better way of assessing sexual quality and satisfaction. If you feel that completing this survey has brought up difficult issues for you or you would like to talk to someone about your relationship, marriage, and/or sexual issues, below is a list of websites that will facilitate you finding someone in your area that can help.

American Psychological Association:
http://locator.apa.org/

Association for Behavioral and Cognitive Therapies:
http://www.abct.org/members/Directory/Find_A_Therapist.cfm

American Association of Sexuality Educators, Counselors and Therapist:
http://aasect.org/directory.asp

American Association of Marriage and Family Therapy:
http://www.therapistlocator.net/index.asp

Thank you again for completing the Assessment of Sexual Relationship Quality study! Please direct your partner to the study site so they may also consider completing the study.

http://auburncla.qualtrics.com/SE/?SID=SV_d0mMfaHPULeW0Be
Note: DF = Desired Frequency, AF = Actual Frequency

*Figure 1.* The SAFE component model. This figure illustrates the conceptualization of sexual satisfaction.