



Sexual Behavior Mediates the Relationship Between Sexual Approach Motives and Sexual Outcomes: A Dyadic Daily Diary Study

Jean-François Jodouin¹ · Sophie Bergeron¹ · Frédérique Desjardins¹ · Erick Janssen²

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Abstract

Recent studies show that sexual approach (SA) motives, i.e., having sex to achieve a positive state such as sexual pleasure, are associated with higher sexual and relationship satisfaction. However, mechanisms linking SA motives to these outcomes are poorly understood, and the important distinction between SA motives that are self-directed (e.g., self-gratification) and other-directed (e.g., pleasing one's partner) has received little empirical attention, particularly in the everyday context of couples' sexuality. The present study focused, at an event level, on the associations between self-directed and other-directed SA motives, and sexual satisfaction and perceived partner responsiveness (PPR, an aspect of relationship intimacy). We also examined the mediating role of the couple's sexual behavior in these associations. Data were collected over a month-long daily diary study involving 35 newlywed heterosexual couples and analyzed using the Actor–Partner Interdependence Model. Results showed that men and women's self-directed SA motives were associated with their own higher sexual satisfaction and, in men, with their female partners' sexual satisfaction as well. For both men and women, these associations were mediated by sexual behavior: Self-directed SA motives were associated with more genitally focused sexual behavior (e.g., vaginal intercourse, oral sex), in turn associated with higher sexual satisfaction. For men, other-directed SA motives were associated with their own greater PPR and with that of their female partners. For women, self-directed SA motives were associated with their own greater PPR and with that of their male partners. Sexual behavior did not mediate associations with PPR. Theoretically, these findings support dyadic models of sexual satisfaction and intimacy and indicate that self-directed SA motives may be more important to sexual satisfaction than other-directed motives. Clinically, they support sex therapy approaches that integrate both partners and suggest that sexual motives and behavior may be relevant targets for intervention.

Keywords Sexual approach motives · Relationship intimacy · Perceived partner responsiveness · Sexual behavior · Dyadic daily diary study

Introduction

Sexuality plays an important role in the quality of romantic relationships. Sexual function and satisfaction have been linked to both partners' well-being and to the stability of the couple relationship (Heiman et al., 2011; McNulty, Wenner, & Fisher, 2016; Scott & Sprecher, 2000; Sprecher, 2002). Empirical studies have also shown associations between sexuality and feelings of

intimacy (Byers, 2005; Diamond, 2004). Unfortunately, many couples do not report a satisfying sex life. A survey of over 1400 English adults reported that more than 25% were sexually dissatisfied, and over 50% of individuals from general population samples report being dissatisfied with the sexual aspects of their relationship (Dunn, Croft, & Hackett, 2000; Laumann, Gagnon, Michael, & Michaels, 1995).

Recent research suggests that sexual motives play a pivotal role in sexual satisfaction. In particular, individuals engaging in sexual activity for sexual approach motives (i.e., seeking a positive state such as personal gratification or greater intimacy) report higher levels of sexual satisfaction and relational well-being (Impett, Peplau, & Gable, 2005). These results are important because they begin to identify the aspects of sexuality that positively influence sexual and relationship well-being. Unfortunately, the mechanisms that link sexual approach motives to

✉ Jean-François Jodouin
jean.francois.jodouin@umontreal.ca

¹ Department of Psychology, Université de Montréal,
Succursale Centre-Ville, C.P. 6128, Montreal, QC H3C 3J7,
Canada

² Institute for Family and Sexuality, KU Leuven, Louvain,
Belgium

sexual and relationship outcomes remain poorly understood. It is plausible that the couple's sexual behavior (i.e., the behaviors performed during sexual activity) plays a role in this association, as it has been linked independently to both motives and personal and relationship outcomes (Frederick, Lever, Gillespie, & Garcia, 2016; Muise, Giang, & Impett, 2014). However, this hypothesis has not been examined empirically. Furthermore, much of the research in this area has focused on individuals, and the everyday sexuality of couples has received little attention to date. The present study sought to address this gap by focusing on the event-level associations between sexual approach motives, sexual behavior and sexual and relational outcomes in newlywed couples.

Motives for Sex

Theorists have proposed that most, if not all, human behavior is purposeful (Ajzen, 1991; Austin & Vancouver, 1996). Although sexuality is distally influenced or shaped by socio-cultural factors, it is generally accepted that sexual behavior is proximally determined by sexual motives (Cooper, Barber, Zhaoyang, & Talley, 2011; Cooper, Shapiro, & Powers, 1998; Ingledew & Ferguson, 2007). A number of different frameworks have been proposed to facilitate the study of sexual motives, including the empirically derived YSEX? Scale (Meston & Buss, 2007). The validity and relevance of this scale have received recent empirical support (Armstrong & Reissing, 2014, 2015; Moore, Kulibert, & Thompson, 2017; Stephenson, Ahrold, & Meston, 2011), particularly in survey-based studies where the size of the measure is not an issue.

Conceptual frameworks have also been proposed for sexual motives, derived from the more general field of motivation. Perhaps the most studied is the approach/avoidance framework (Elliot & Covington, 2001; Gable, 2006; Gable & Impett, 2012), which distinguishes motives according to whether they orient behavior toward or away from a goal state. This distinction is a fundamental one, as approach (or appetitive) and avoidance (or aversive) motives appear to engage different neuronal circuitry (Carver, Sutton, & Sheier, 2000; Gray, 1987). Sexual approach and avoidance motives have also been associated with dispositional attributes such as attachment orientation (Gewirtz-Meydan & Finzi-Dottan, 2018; Impett, Gordon, & Strachman, 2008a). A second important, although less well studied, distinction is between self-directed and other-directed motives. Self-directed motives are focused on oneself (e.g., the desire for self-gratification). In contrast, other-directed motives focus on the other (e.g., the desire to please one's partner). Self-directed and other-directed sexual motives are differentially associated with outcomes such as sexual desire and sexual satisfaction, and are reported with different frequencies by men and women (Impett et al., 2005; Muise, 2011; Stephenson et al., 2011). Cooper et al. (1998, 2011) have crossed these two dimensions (approach/avoid and self-/other-directed),

resulting in four possible quadrants. Importantly, they note that self-directed and other-directed motives differentiate into two clearly observable groups at the approach end of the spectrum, and that this difference is less marked for avoidance motives.

The present study focused on daily sexual desire, sexual behavior and positive sexual outcomes in the dyad. Sexual approach motives have been strongly associated both with sexual desire and positive outcomes, in contrast to sexual avoid motives (Impett et al., 2005). Importantly, the approach end of the sexual motives spectrum is also where the distinction between self-directed and other-directed motives is most clear (Cooper et al., 1998).

Sexual Satisfaction, Intimacy, and Perceived Partner Responsiveness

Sexual satisfaction and relationship intimacy are two pivotal outcomes in the study of couple sexuality. These constructs have been studied both separately and together, and research to date suggests that they are associated with distinct, interrelated processes (Byers, 2005; Diamond, 2004).

Sexual satisfaction is associated with many measures of well-being, both physical and mental (Sanchez-Fuentes, Santos-Iglesias, & Sierra, 2014). In particular, greater levels of sexual satisfaction have been reported for individuals engaging in sexual activity for sexual approach motives (Gable & Impett, 2012; Impett et al., 2005, 2010; Impett, Strachman, Finkel, & Gable, 2008b; Impett & Tolman, 2006), and there are indications that these associations may differ in significance between self- and other-focused sexual approach motives (Muise, 2011; Stephenson et al., 2011). For example, Stephenson et al. reported, from a sample of 544 students responding to a 4-factor proxy of the YSEX? Scale, that sexual motives associated with sexual satisfaction differed between men and women. In particular, individual, self-focused approach motives were significantly and positively associated with sexual satisfaction for men, whereas social, other-focused approach motives were associated with sexual satisfaction for women. Muise (2011) reported similar results from a sample of 207 cohabiting couples, with the addition that individual, self-focused approach motives were associated with sexual satisfaction for both genders.

Intimacy is considered by many authors to be a fundamental human need (Baumeister & Leary, 1995). Indeed, being intimate with one's partner is associated with positive sexual outcomes, including sexual frequency, sexual satisfaction and relationship satisfaction (Rubin & Campbell, 2011; Štulhofer, Ferreira, & Landripet, 2013; Witherow, Chandraiah, Seals, & Bagan, 2016). Reis and Shaver (1988) defined intimacy as a dynamic process between two people involving interactions comprised of two components: one person's verbal or nonverbal self-disclosures and the other's empathic responses to them. In this model, the discloser's perception of the other's responses,

and in particular, how the discloser feels understood, valued and validated (Perceived Partner Responsiveness, or PPR) is the “active component” which drives variations in everyday feelings of intimacy. This proposal has received considerable empirical support (Laurenceau, Feldman Barrett, & Pietromonaco, 1998; Reis, Clark, & Holmes, 2004; Reis & Gable, 2015). PPR has been studied at the event level in committed couples, where it has been associated with relational outcomes such as dyadic adjustment (Gadassi et al., 2016; Laurenceau, Barrett, & Rovine, 2005), and sexual outcomes such as sexual desire (Birnbaum et al., 2016).

Sexual approach motives have been associated with greater relational outcomes such as relational satisfaction and quality (Impett et al., 2005, 2008b; Muise, 2011; Muise, Impett, Kogan, & Desmarais, 2013). However, there are, to our knowledge, no studies that have directly assessed the associations between self- and other-directed SA motives and relationship intimacy nor its key component, PPR.

Genital Sexual Behavior, Affectionate Sexual Behavior

There are indications that sexual behaviors (i.e., the behaviors performed during sexual activity) are associated both with sexual motives and outcomes such as sexual satisfaction and relationship intimacy. For example, Browning, Hatfield, Kessler, and Levine (2000) reported from a convenience sample of students that motives such as Love and Pleasure were, with gender, the strongest predictors of a range of statistically usual (i.e., frequently reported) and unusual (i.e., infrequently reported) behaviors, the former group including kissing, genital touch, intercourse and oral sex. Variations in sexual behavior have also been associated with outcomes such as sexual satisfaction, sexual functioning and relationship happiness (Fisher et al., 2015; Muise et al., 2014).

In the present study, the term genital sexual behavior refers to aspects of sexual behavior that have a more obvious focus on sexual pleasure (e.g., oral sex, vaginal, and anal intercourse). Genital sexual behavior has been examined within the context of romantic relationships, and recent correlational studies support the hypothesis that it is associated with both self-directed motives and sexual satisfaction. For example, an online survey of university students in the U.S. indicated that greater self-reports of SA motives (enhancement motives) were associated with greater frequency of genital sexual behaviors such as penetrative and oral sex (Patrick, Maggs, Cooper, & Lee, 2011). Similarly, a recent large online survey showed that more frequent genital sexual behavior (intercourse, oral sex) and more frequent orgasms were correlated with higher sexual satisfaction (Frederick et al., 2016).

In contrast with genital sexual behavior, we use the term affectionate sexual behavior to refer to behavior during sex that has a stronger focus on demonstrations of affection.

Affectionate behavior (including touching, holding, cuddling, and kissing) has been studied outside the context of sexuality, and there is general agreement that this behavior has beneficial effects both for the individual and for the couple. Affectionate touch between romantic partners is associated with improved relationship satisfaction, perceived intimacy, and mood (Fisher et al., 2015; Gallace & Spence, 2010; Gullledge, Gullledge, & Stahmann, 2003; Gullledge, Hill, Lister, & Sallion, 2007; Heiman et al., 2011). In long-term relationships, physical intimacy (physical expressions of affection, such as kissing and hugging) was found to be one of the determinants of psychological intimacy (Mackey, Diemer, & O'Brien, 2000). In a sample of women suffering from genito-pelvic pain, a positive association was observed between hugging and kissing, and sexual satisfaction, relationship satisfaction, and sexual function (Vannier, Rosen, Mackinnon, & Bergeron, 2016). Despite the importance of affectionate touch generally, this behavior has received relatively little empirical attention within the context of sexual activity. The few studies that do exist in this area suggest that the benefits of affectionate sexual touch also occur when having sex. For example, Muise et al. (2014) observed that the duration of post-sex affectionate behavior (*afterglow*) was positively related to sexual and relationship satisfaction for both partners. Similarly, a recent study by Dewitte, Van Lankveld, Vandenberghe, and Loeyts (2015) showed that affectionate and genital sexual behavior both predicted and were predicted by positive mood and relational context in heterosexual couples.

Clearly, genital and affectionate sexual behaviors tend to co-occur to varying degrees during a couple's sexual activity. Nevertheless, the differences in associations observed in empirical research suggest that these two forms of behavior may have different meanings for couples, and may be differentially involved in the processes underlying sexual satisfaction and intimacy in the couple. These forms of behavior have rarely been studied in a contrasted manner in the everyday sexuality of committed couples. The paucity of research in this area is surprising, given that sexual behavior is common to both partners during sexual activity, making it a natural event-level, dyadic measure.

Study Goals and Hypotheses

Much of the research in sexuality to date has focused on associations between intra-individual variables (so-called actor effects), disregarding the potential influence of the partner's internal state and behavior (partner effects). The scarcity of available data is increasingly perceived as a limitation, given that sexuality in committed couples is largely a dyadic phenomenon (McCarthy & Thestrup, 2008). Dyadic studies to date have reported numerous effects between partners, in particular, that sexual approach motives in one partner were associated with greater relationship satisfaction and relationship quality in the other partner (Impett et al., 2010; Muise,

Impett, & Desmarais, 2012). There are also indications that different facets of sexual behavior affect both partners. For example, a study of women suffering from genito-pelvic pain reported that on days with sexual activity where their partner reported more solicitous responses, both partners reported lower sexual satisfaction (Rosen, Muise, Bergeron, Delisle, & Baxter, 2015). However, partner effects have yet to be examined in a differentiated study of self-directed and other-directed approach motives.

Further, most sexuality studies involving couples are based on retrospective measures spanning one or more months. A potential difficulty with this approach is that longer-term retrospective measures of sexual activity are known to be subject to significant memory bias, the magnitude of which may exceed reported effect sizes (Gillmore, Leigh, Hoppe, & Morrison, 2010; Hoppe et al., 2008; McAuliffe, DiFranco, & Reed, 2007; McCallum & Peterson, 2012). In addition, recent studies report considerable daily variability in outcomes such as sexual satisfaction and sexual desire (Derogatis et al., 2011; Rosen et al., 2014, 2015; Rubin & Campbell, 2012)

The present study examined, at the event level, whether self-directed and other-directed SA motives were associated both within and between partners with sexual satisfaction and PPR, as well as the mediating role of genital and affectionate sexual behaviors in these putative associations. It was hypothesized that self-directed SA motives would be significantly associated with reports of greater sexual satisfaction, and that other-directed SA motives would be associated with greater PPR. Empirical data on partner effects were scarce, but these were expected to be in the same direction as actor effects. It was further hypothesized that genital sexual behavior would mediate the association between self-directed SA motives and sexual satisfaction. Given insufficient data, no hypothesis was formulated concerning the mediating role of affectionate sexual behavior in the association between other-directed SA motives and PPR.

Method

Participants

Thirty-four newlywed heterosexual couples participated in this study. Drawing on the marriage registry in Monroe County, Indiana (U.S.), 300 prospective couples were sent an invitation to participate by mail. Participants were then telephone-screened for eligibility, based on the following selection criteria: being aged between 18 and 40 years old, English-speaking, heterosexual, married for the first time within the year, no children, and not planning to move out of

Indiana. Participants received a compensation of 1\$ per day, with an additional 10\$ for responding over the entire period.

Procedure

Participants first completed an initial baseline questionnaire, of which only the demographic information was used here; for a more complete description, see Lykins, Janssen, Newhouse, Heiman, and Rafaeli (2012). Participants were then equipped with TREO smartphones, which they were trained to use to complete an electronic diary, a questionnaire composed of items covering their personal and relational state, and, on days where the participant had had sex, their sexual motives, sexual behavior, and sexual satisfaction. Diaries were to be completed every evening, individually and alone. Time required for this was 10–15 min per day, for up to 35 consecutive days.

Measures

A single item identified the days where the participants had engaged in sex (“Did you engage in sexual activity with your spouse in the last 24 h?”). On those days, the variables of interest were measured.

Sexual Motives

Sexual motives were assessed using a single checklist item (“Why did you engage in this activity?”) that allowed the participants to select between one and seven sexual motives, using a list adapted from previous work (Cooper et al., 1998; Impett et al., 2005) (see Table 1). Of these responses, this study focused on self-directed and other-directed sexual approach (SA) motives (checklist items: “to feel pleasure” and “to please my partner,” respectively). To facilitate subsequent analyses, these two dichotomous checklist responses were converted into two dichotomous variables, with no loss of information: Each variable was set to one if it had been selected in the checklist.

Sexual Behavior

Sexual behavior was also assessed using a checklist item (“What sort of sexual activity did you engage in?”) that allowed each participant to select between one and eight of the following behaviors: non-genital touch; genital touch; vaginal intercourse; anal intercourse; oral sex (me on my partner); oral sex (my partner on me); kissing; other sexual activities. This list is a subset of those studied elsewhere (Browning et al., 2000). All behaviors reported by the participants were potentially pertinent to this study. However, after analysis, two behaviors were excluded: First, the behavior

Table 1 Checklist items for sexual motivation

1 = To feel pleasure
2 = To feel close to my partner
3 = Reduce my negative feelings
4 = Reduce spouse's neg. feelings
5 = To please my partner
6 = Reduce/avoid marital problems
7 = To conceive a child
8 = No response

“anal intercourse” occurred only 9 times in the sample and could not be analyzed reliably. The behavior “other activity” was also excluded, as it was unclear what participants were referring to when they selected this checklist option.

A three-level (couple, participant, day), latent-factor confirmatory factor analysis was performed for the remaining sexual behaviors. Following recommendations by Raykov (2012), internal construct reliability of the factors was assessed using model fit and significance of factor loadings, an approach which is considered preferable to Cronbach's alpha in hierarchical models. In this analysis, a two-factor model was found to fit the data best. On the basis of these results, two composite variables were defined, and named affectionate sexual behavior (kissing, non-genital touch, non-penetrative genital touch) and genital sexual behavior (vaginal intercourse, oral sex self on other, oral sex other on self). Values for these variables were calculated by averaging item responses for each factor, resulting in continuous values ranging from 0 to 1. Paired *t* tests confirmed that there was no significant difference between partner's reports of affectionate sexual behavior ($t[499] = .000, p > .05$) and genital sexual behavior ($t[499] = .000, p > .05$). Nevertheless, each partners' affectionate and genital behavior variables were kept separate and analyzed individually.

Sexual Satisfaction

Participants' sexual satisfaction was measured using a single item (“How sexually satisfying was this activity for you?”), rated on a 5-point Likert scale (1 = “not at all” to 5 = “extremely”). Note that this item refers explicitly to the sexual activity(ies) performed on that day. To facilitate interpretation between variables and to minimize any artificial bias introduced by scale differences, this variable was linearly rescaled, resulting in a continuous variable ranging from 0 to 1. This transformation does not affect the direction nor the significance of the analysis results; this was verified by comparing models of scaled and unscaled data and confirming that results were comparable.

Perceived Partner Responsiveness (PPR)

PPR was determined by averaging three items assessing the partner's understanding (“To what extent today did you feel that your partner understood you?”), encouragement (“To what extent today did you feel that your partner expressed liking and encouragement for you?”) and caring/valuing (“To what extent today did you feel that your partner valued your abilities and opinions?”). All three items were rated on a 7-point Likert scale (1-“not at all” to 7-“very much”). To facilitate interpretation, this variable was linearly rescaled, resulting in a continuous variable ranging from 0 to 1. This measure of PPR was adapted from the Responsiveness model (Reis & Gable, 2015; Reis & Shaver, 1988) and has been used by other researchers, in particular, in daily dyadic studies (Gadassi et al., 2016; Laurenceau et al., 2005).

Data Analysis

Univariate analyses were performed using SPSS (IBM SPSS Statistics, v. 21.0).

Modeling was based on the Actor–Partner Interdependence Mediation Model or AIMeM (Cook & Kenny, 2005; Ledermann, Macho, & Kenny, 2011). Intra-individual (actor) effects, inter-individual (partner) effects and indirect (mediation) effects between self- and other-directed SA motives (independent variables), and sexual satisfaction and PPR (dependent variables) were assessed. We also tested whether genital and affectionate sexual behavior mediated these associations. Potential interactions between mediators were also tested; these were observed to be nonsignificant.

Independent and dependent variables from both the participant and the partner were included in the model, as well as the genital and affectionate sexual behavior reported by the participant. All variables were person-mean centered, and hence indicated differences from each participant's mean values. To reduce the number of free parameters, the models from both partners were crossed, and equivalent paths were constrained to be equal. To control for the nested dependencies present in daily dyadic journals, the model was adapted to a two-level (person, day) Hierarchical Structural Equation Model (HSEM) following recommendations by Laurenceau and Bolger (2012), and fixed (between) and variable (within) factors were disassociated by person-mean centering the variables (Preacher, Zhang, & Zyphur, 2011).

Analysis was performed in MPlus 7 (Muthén & Muthén, v.1.4). Robust ML estimators were used in model and parameter estimation, since the independent variables in this study were not multivariate normal (Kline, 2012; Muthén & Muthén, 2015). Model fit and parameter significance were assessed according to the following guidelines: Overall model fit was considered acceptable when Root Mean Square Error of Approximation (RMSEA) < .08, “within”

Standardized Root Mean Square Residual (SRMSR) $< .08$, and individual standardized residuals (σ) were “small” (Gefen, Straub, & Boudreau, 2000; West, Taylor, & Wu, 2012). Parameter estimates were considered significant when their t -value (i.e., the ratio of the estimate over its standard error) was $< .05$. Significance of mediation effects was tested following recommendations by (Preacher, 2011, 2015) and used intervals of 95% confidence. As MPlus does not support bootstrapping for hierarchical models, these were calculated using the Delta method (Sobel, 1982). Parameter estimates reported here were unstandardized.

Results

Sample Characteristics

A total of 70 participants (35 couples) completed the daily diaries. Participants ranged in age from 18 to 34 years ($M = 25.63$, $SD = 3.21$). Ninety-seven percent of the participants were White/non-Hispanic (1.5% Hispanic, 1.5% “other”). Forty-six percent reported their religion as Christian, and 50% as “none,” atheist or agnostic. Forty-seven percent were employed full-time, 12% employed part-time. Ninety-one percent were attending or had attended college. Participants had known their spouses 1–14 years ($M = 5.72$, $SD = 3.37$) at the time of the study.

Participants followed the daily diary protocol on average for 31 days out of the 35 days of the study ($SD = 1.42$), an 89% completion rate. Diaries were completed in the evenings (i.e., between 18 and 24 h) 84% of the time, as per requested; an additional 5% were completed between 12 and 13 h. Of the 35 couples in the sample, one indicated they were having sex to conceive. Their results differed significantly from the others, and they were removed from the sample. The final sample was composed of 2120 entries. On 645 (30%) of these days, respondents indicated having sex. Of these entries, seven were removed where the participants had not recorded their sexual satisfaction. The final corpus was therefore composed of 638 entries. Self-directed and other-directed SA motives were observed to overlap in 20% (males) and 19% (females) of these entries. Covariance of genital and affectionate sexual behavior was nonsignificant ($p > .289$).

Significant Direct and Indirect Associations

Model Fit

Direct (actor, partner) and indirect (mediation) effects were assessed using APIMeM. This model converged without error and with an acceptable model fit (RMSEA: $.000 < .08$; SRMR [within]: $0.060 < 0.08$).

Associations Between SA Motives and Sexual Satisfaction

Significant (actor) effects were found between self-directed SA motives and greater sexual satisfaction for both men ($b = .231$; $\beta = .236$; 95% CI [.150, .312]; $p = .000 < .01$) and women ($b = .233$; $\beta = .263$; 95% CI [.170, .297]; $p = .000 < .01$). A significant (partner) effect was found between men’s self-directed SA motives and their female partner’s sexual satisfaction ($\beta = .299$; $\beta = .098$; 95% CI [.185, .413]; $p = .000 < .01$). Associations between other-directed SA motives and sexual satisfaction were not significant. See Fig. 1.

Mediating Role of Genital Sexual Behavior

The couple’s genital sexual behavior was found to mediate the (actor) association between self-directed SA motives and sexual satisfaction, for both men ($a \times b = .028$, $a \times b$ (std) = $.008$, 95% CI [.006, .049]; $p = .032 < .05$) and women ($a \times b = .023$, $a \times b$ (std) = $.007$, 95% CI [.007, .039]; $p = .020 < .05$), as well as the (partner) association between men’s self-directed SA motives and their female partner’s sexual satisfaction ($a \times b = .027$, $a \times b$ (std) = $.007$, 95% CI [.016, .038]; $p = .000 < .001$). Interaction effects between these mediation effects were not found to be significant ($p = .239 > .05$). See Fig. 2.

Associations Between SA Motives and Perceived Partner Response (PPR)

A significant (actor) effect was found between men’s other-directed SA motives and their own greater PPR ($b = .059$; $\beta = .067$; 95% CI [.025, .093]; $p = .004 < .01$), and between women’s self-directed SA motives and their own greater PPR ($b = .059$; $\beta = .067$; 95% CI [.035, .084]; $p = .011 < .05$).

A significant (partner) effect was found between men’s other-directed SA motives and their female partner’s greater PPR ($b = .052$; $\beta = .020$; 95% CI [.013, .091]; $p = .047 < .05$), and between women’s self-directed SA motives and their male partner’s greater PPR ($b = .048$; $\beta = .013$; 95% CI [.027, .069]; $p = .029 < .05$). See Fig. 1.

Affectionate Sexual Behavior

Self-directed SA motives were significantly and positively associated with the couple’s affectionate sexual behavior, for both men ($b = .168$, $\beta = .238$, 95% CI [.057, .209]; $p = .004 < .01$) and women ($b = .133$, $\beta = .158$, 95% CI [.079, .257]; $p = .002 < .05$). Other-directed SA motives were significantly and positively associated with the couple’s affectionate sexual behavior, for both men ($b = .058$, $\beta = .098$, 95% CI [.013, .102]; $p = .032 < .01$) and women ($b = .082$, $\beta = .153$, 95% CI [.022, .142]; $p = .024 < .05$). Associations between

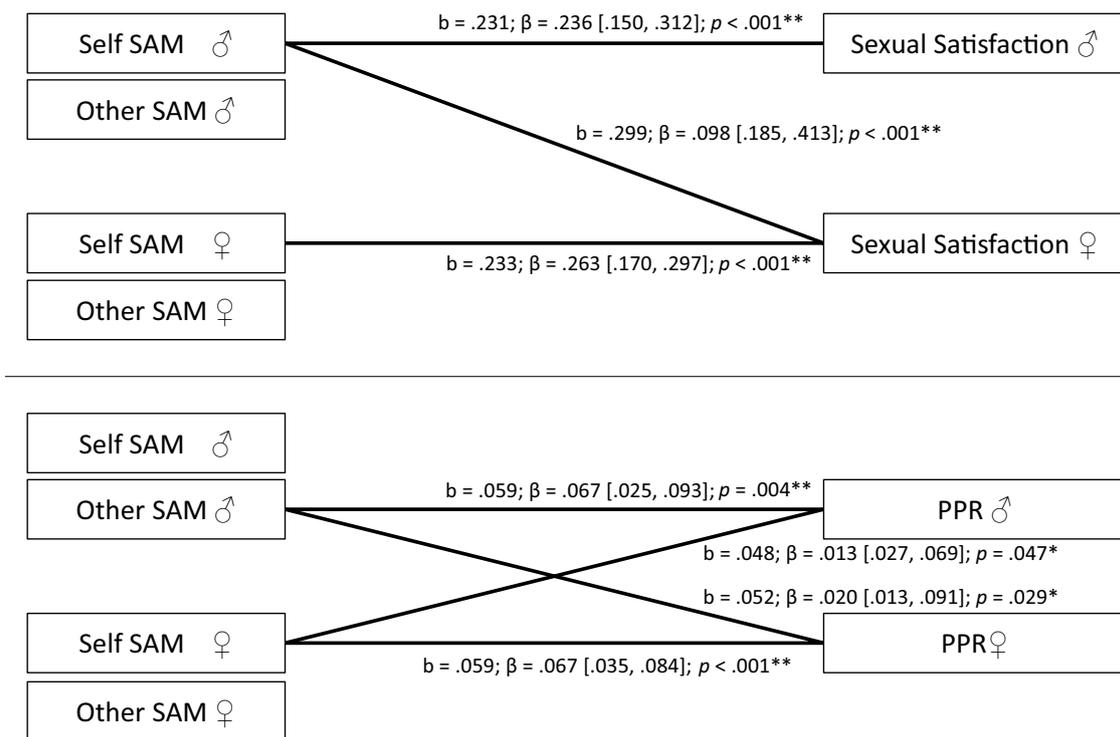


Fig. 1 Top: Main effects (actor, partner) between sexual approach motivations (self, other) and sexual satisfaction for men (♂) and women (♀). Bottom: Main effects (actor, partner) between sexual approach motivations and PPR. Positive associations represented by full lines, and negative associations with dashed lines. Parameters

values are unstandardized (b) and standardized (β). Significance of parameter estimates is represented as stars (* $p < .05$; ** $p < .01$) and confidence intervals (95% CI) noted in square brackets. Not represented for clarity: covariance relations between independent variables, and between dependent variables

affectionate sexual behavior and sexual satisfaction and PPR did not reach significance. See Fig. 2.

Discussion

This study examined event-level associations between self- and other-directed sexual approach (SA) motives, and sexual satisfaction and perceived partner responsiveness (PPR) in a sample of newlywed couples. The mediating role of sexual behavior in these associations was also tested. Significant positive associations were found between men and women's greater self-directed SA motives and their own greater sexual satisfaction, and between men's greater self-directed SA motives and their female partner's sexual satisfaction. These associations were mediated by genital sexual behavior, such that self-directed SA motives were associated with greater genital sexual behavior, which in turn was associated with greater sexual satisfaction for both partners. Furthermore, associations were found between greater SA motives and both participants' own and their partners' greater PPR. For men, this association was significant only for greater other-directed SA motives and for women, only for greater self-directed

SA motives. These associations were not mediated by either genital or affectionate sexual behavior. Overall, these findings are in line with the study's hypotheses and support dyadic models of sexual satisfaction and intimacy (Byers, 1999; Dewitte, 2014).

For both men and women, engaging in sexual activity to please oneself was associated with greater genitally focused behavior, and ultimately, with greater sexual satisfaction on the same day. Previous studies have reported associations between SA motives and sexual satisfaction (Muise et al., 2012). The present study adds to those results by suggesting that this association is most significant for self-directed SA motives. Nevertheless, our findings differ from those of Stephenson et al. (2011), which indicated that for women, other-focused approach motives were also associated with sexual satisfaction—an association that was observed to be positive but not significant in our sample. This difference may be due to the fact that this study's sample was composed of relatively young newlyweds, where partners may have a greater focus on individual pleasure. Alternatively, these variations in results may be due to differences in the measures used to examine approach motives and sexuality outcomes, as well as to the event-level methodology espoused in the present study.

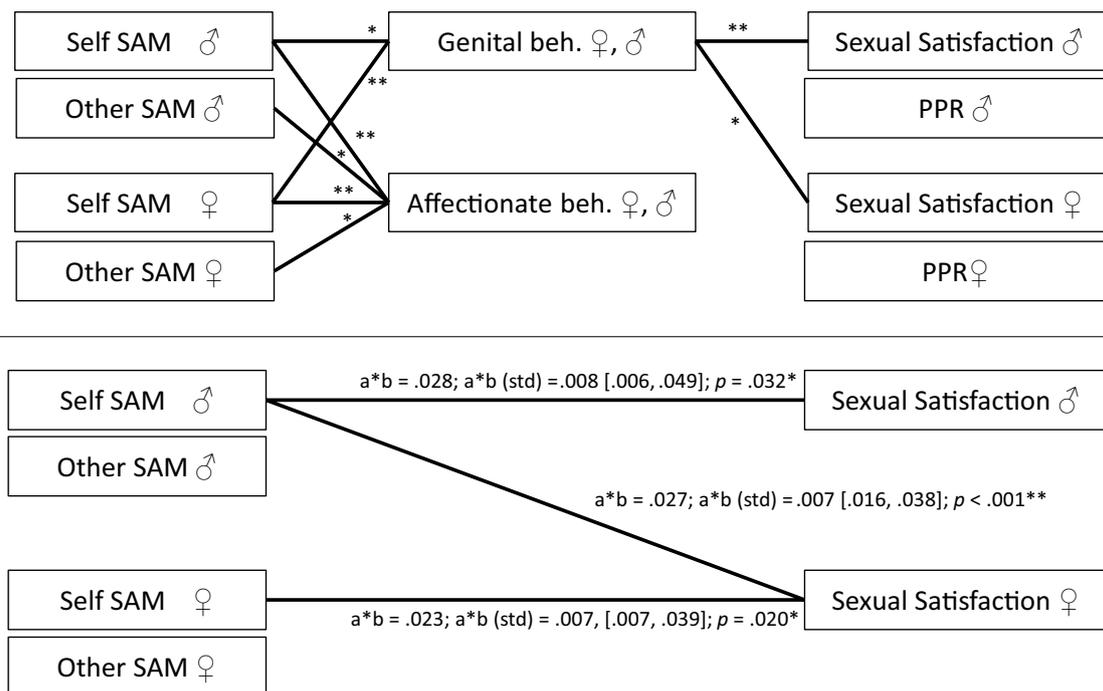


Fig. 2 Top: Significant associations between sexual approach motivations (self, other) and sexual behavior (genital, affectionate), and between sexual behavior and sexual satisfaction, for men (♂) and women (♀). Bottom: Mediation of genital sexual behavior on the actor and partner associations between sexual approach motivations and sexual satisfaction. Parameters values are unstandardized ($a \times b$)

and standardized ($a \times b(\text{std})$). Significance of parameter estimates are represented as stars ($*p < .05$; $**p < .01$) and confidence intervals (95% CI) noted in square brackets. Not represented for clarity: covariance relations between independent variables, and between dependent variables

The mediating role played by genital sexual behavior in this association is, to our knowledge, a novel result, and suggests that at least in this sample, the motive to please oneself sexually is expressed through an increased likelihood of genital sexual behavior (here, vaginal intercourse and oral sex). A gendered partner effect was also observed in this process, whereby men's self-directed SA motives resulted in greater sexual satisfaction in their female partners, this association also being mediated by genital sexual behavior. A possible interpretation of this result is that in heterosexual couples, sexual activity such as vaginal penetration and oral sex is more frequently initiated by men than women (Clark, 1989; DeLamater, 1987), and that such genital sexual behavior may result in greater satisfaction for both partners given it is associated with sexual arousal and a higher likelihood of orgasm.

The associations between SA motives and greater PPR in men are generally consistent with the study's hypotheses. Specifically, men's other-directed SA motives were associated with their greater PPR. It is possible that for men, a greater focus on the partner results in greater feelings of intimacy. Indeed, there is some empirical support for this hypothesis. For example, a daily diary study reported an association between engaging in sexual activity to please the other, and greater feelings of authenticity and greater

relationship well-being (Impett, Javam, Le, Asyabi-Eshghi, & Kogan, 2013). The opposite interpretation is also plausible, such that on days of greater intimacy, men may be more open and perceptive of their partner's needs (thereby acting more strongly through other-directed motives). Findings also indicated that men's other-directed SA motives were associated with their female partner's PPR. Men's greater focus on their female partner during sexual activity may be expressed by more attention to what is unfolding in the sexual interaction, including erotic preferences, leading women to feel closer to their male partners.

Contrary to study hypotheses, women's self-directed SA motives were associated with their own greater PPR. This result may be understood in light of the Responsiveness model (Reis et al., 2004), which posits that a partner's feelings of intimacy are increased when they perceive that their disclosures is responded to positively by the other partner. Indeed, in these relatively highly satisfied couples, it is probable that when women were motivated by their own pleasure, they communicated their sexual needs more clearly and in turn, their male partners responded positively. Hence, according to Reis and colleagues' model, this positive response would result in the women feeling greater intimacy with their partner. The responsiveness model is also helpful in

interpreting the gender differences observed in the associations between sexual motives and PPR. Arguably, expressing motives that are less gender-stereotyped (for men, relational motives, and for women, a greater focus on self-pleasure [Browning et al., 2000; Impett et al., 2005]) is a more vulnerable form of disclosure. Assuming a positive reception from the partner, expressing these motives would therefore lead to a greater feeling of intimacy than when expressing gender-typical motives. Alternatively, these gender differences may be due to “ceiling effects” in the analysis. Indeed, participants tended on average to report gender-stereotyped motives more frequently. Hence, person-centered variance for these variables was lower, and associations with PPR may not have reached significance because of it. In contrast, reports of motives that run contrary to gender stereotypes involve a greater difference from individual averages, and are more salient in this analysis. That none of the associations with PPR were mediated by sexual behavior suggests that the link between sexual motives and relational intimacy is not explained via sexual behavior, or that it is associated with more subtle forms of verbal and nonverbal behaviors than were measured in this study. Indeed, examples of subtle behavioral interactions between partners have been observed in other contexts such as the communication of feelings of pain through facial expressions (Craig, Prkachin, & Grunau, 2010; Vervoort, Trost, Prkachin, & Mueller, 2013); it is likely that they occur in sexual contexts as well. An alternative explanation for this result is that the sample may not have provided sufficient statistical power to reliably reject the hypothesis of sexual behavior’s mediating role.

One important limitation of this study is that results reported here are correlational. Hence, care should be taken in considering both potential directions in the associations observed in these data. A further limitation is the use of a single-item measure of sexual satisfaction, which did not allow us to differentiate between the different possible interpretations of this term by the study participants. Furthermore, the use of PPR as a relational outcome measure may have contributed to the nonsignificant role played by behavior. Indeed, although important, PPR is only one aspect of relationship intimacy, and this restricted focus may have missed associations present with other aspects of intimacy. More comprehensive measures of relationship intimacy may provide a clearer picture—particularly if these are worded to be more focused on the sexual activity that has just occurred. Further, the checklist measures of motives and behavior used here does not provide a view of the relative intensity of these variables. Using graded (e.g., Likert style) measures would yield a more fine-grained understanding of sexual motives and their associations with sexual behavior in a future study. Finally, the homogeneity of the sample, being composed of young, primarily White, newly married heterosexual participants, may limit the generalizability of the results. It is hoped

that future research will address this limitation by sampling from a more diverse population.

Despite these limitations, the present study contributes to our dyadic understanding of sexuality as involving interactive cognitive and behavioral processes between partners, some self-directed, others, other-directed, in which sexual approach motives and genital sexual behavior appear to play a role in sexual satisfaction. Studies based on dyadic daily diaries remain relatively rare in sex research, despite their ability to limit recall biases and to examine event-level phenomena (Bolger, Davis, & Rafaeli, 2003; Gunthert & Wenzel, 2012). The present work’s focus on the dyad at the level of daily sexual activity is novel in this regard and provides high ecological validity. Theoretically, these findings support dyadic models of sexual satisfaction and intimacy (Dewitte et al., 2015), and indicate that self-directed SA motives may be more important to sexual satisfaction than other-directed motives. Clinically, they support sex therapy approaches that integrate both partners and suggest that sexual motives and behavior may be relevant targets for intervention. Specifically, cognitive-behavioral therapy (CBT) models that involve the modification of sexual behavior, including the sexual script, may be relevant for increasing couples’ sexual satisfaction. Third-generation CBT, which focuses on valued goals, may be particularly relevant for working on sexual motives as they relate to sexual behavior.

In conclusion, results showed that men and women’s self-directed SA motives were associated with their own higher sexual satisfaction, and that these associations were mediated by sexual behavior. For men, other-directed SA motives were associated with their own greater PPR and with that of their female partners, whereas for women, self-directed SA motives were associated with their own greater PPR and with that of their male partners. Associations with PPR were not mediated by sexual behavior. These results support theoretical and clinical approaches that focus on partner interactions, and emphasize the motivational and behavioral aspects of these interactions during sexual activity. They suggest that clinical models such as third-generation CBT may be of particular relevance for working on sexual motives.

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