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Amy Muise, Gillian K. Boudreau & Natalie O. Rosen

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Seeking Connection Versus Avoiding Disappointment: An Experimental Manipulation of Approach and Avoidance Sexual Goals and the Implications for Desire and Satisfaction

Amy Muise

*Department of Psychology and Neuroscience, Dalhousie University, and Department of Obstetrics
and Gynaecology, IWK Health Centre*

Gillian K. Boudreau

Department of Psychology and Neuroscience, Dalhousie University,

Natalie O. Rosen 

*Department of Psychology and Neuroscience, Dalhousie University, and Department of Obstetrics
and Gynaecology, IWK Health Centre*

Previous correlational research has demonstrated an association between people's reasons for having sex (i.e., their sexual goals) and their sexual desire and sexual and relationship satisfaction. Across two studies of people in romantic relationships (N = 396) we extend previous research and demonstrate, for the first time, that manipulating the salience of approach sexual goals (i.e., engaging in sex to pursue positive outcomes, such as enhanced intimacy) compared to avoidance sexual goals (i.e., engaging in sex to avert negative outcomes, such as a partner's disappointment) or a control condition leads people to feel higher sexual desire for their romantic partners and to report higher sexual and relationship satisfaction. In addition, in Study 2 we demonstrate that focusing on approach sexual goals over the course of a week leads people to report more satisfying sexual experiences during that week, as well as higher desire and overall relationship satisfaction, compared to a control group. The current findings advance approach–avoidance theory by providing evidence that it is possible to manipulate people's sexual goals and, in turn, impact their feelings of desire and satisfaction. Results are promising for the development of interventions to promote sexual and relational well-being.

Satisfying sexual interactions are a crucial predictor of the quality of romantic relationships (for reviews, see Impett, Muise, & Peragine, 2014; Muise, Kim, McNulty, & Impett, 2016). At the same time that sex can connect partners and bring them great pleasure, sexual desire and satisfaction can be difficult to maintain over the course of a relationship, and sex can be a source of conflict for some couples (for reviews, see Impett et al., 2014; Muise et al., 2016; Risch, Riley, & Lawler, 2003). A growing body of research drawing on approach–avoidance motivational theory (for a review, see Gable & Impett, 2012) informs when and for whom sex contributes to happiness in a relationship and when sex might detract from satisfaction. This theoretical perspective on sexual motivation contrasts *approach sexual goals* (which involve pursuing sex to obtain positive outcomes, such as one's own physical pleasure, a partner's pleasure, or greater relationship intimacy) and *avoidance sexual goals* (which

involve pursuing sex to avert negative outcomes, such as avoiding sexual tension, a partner's disappointment, or relationship conflict) (Impett, Strachman, Finkel, & Gable, 2008; Muise, Impett, & Desmarais, 2013).

Previous work on sexual goals suggests that people's reasons for engaging in sex have a profound impact on their sexual experiences and relationship quality. Pursuing sex for approach goals is associated with greater sexual and relationship quality and higher sexual desire, whereas pursuing sex for avoidance goals is associated with dissatisfaction and lower desire (Impett et al., 2008; Impett, Peplau, & Gable, 2005; Muise et al., 2013). What is not yet known from this prior research is whether people's sexual goals can be modified and, in turn, impact their sexual and relationship outcomes.

Approach–Avoidance Sexual Motivation

Although research suggests that, in general, engaging in more frequent sex with a romantic partner is associated with greater sexual and relationship satisfaction (Brezsnyak &

Correspondence should be addressed to Amy Muise, Dalhousie University, 6299 South St., Halifax, Nova Scotia B3H 4R2 Canada.
E-mail: muiseamy@gmail.com

Whisman, 2004; Call, Sprecher, & Schwartz, 1995; Laumann, Gagnon, Michael, & Michaels, 1994; Muise, Schimmack, & Impett, 2015), research on sexual motivation suggests that not all sexual experiences are equally satisfying and that people's reasons for engaging in sex have a significant impact on the quality of their sexual experiences and relationships (Impett et al., 2008; Muise et al., 2013). While more than 200 reasons for having sex have been identified (Meston & Buss, 2007), researchers have recently categorized sexual goals into a smaller number of meaningful categories. One important distinction is based on approach–avoidance theories of motivation (for a review, see Gable & Impett, 2012). In both cross-sectional and daily experience studies, engaging in sex for approach goals is associated with personal and relational benefits, such as greater well-being, enhanced relationship satisfaction, and more positive sexual experiences (Cooper, Barber, Zhaoyang, & Talley, 2011; Impett et al., 2005; Impett & Tolman, 2006; Muise et al., 2013; Sanchez, Moss-Racusin, Phelan, & Crocker, 2011). In contrast, engaging in sex for avoidance goals is associated with more negative feelings about sex, lower levels of sexual satisfaction and relationship satisfaction, and more conflict in the relationship (Cooper et al., 2011; Cooper, Shapiro, & Powers, 1998; Impett et al., 2005; Muise et al., 2013; Sanchez et al., 2011). These findings have also been replicated in a clinical population of women with provoked vestibulodynia (PVD; i.e., sexual pain) and their romantic partners (Rosen, Muise, Bergeron, Impett, & Boudreau, 2015). In addition, sexual goals influence relationship and sexual quality over time. People who had sex more frequently for avoidance goals over the course of a three-week daily-experience study reported lower sexual satisfaction at a four-month follow-up and had partners who felt less sexually satisfied and committed to maintaining their relationship (Muise et al., 2013).

In addition to affecting sexual and relationship satisfaction, researchers have shown that individuals who are motivated by approach goals report higher daily sexual desire and are more likely to sustain high levels of sexual desire for their partners over time (Impett et al., 2008). In two daily-experience studies, on days when people engaged in sex with their partner for approach goals, both partners reported higher sexual desire and, in turn, felt more satisfied with the sexual experience and their relationship. In contrast, on days when people engaged in sex for avoidance goals, such as to avoid disappointing their partner, they and their partners reported lower desire and satisfaction (Muise et al., 2013). In a six-month longitudinal study, people who pursued more approach goals in their relationships, such as heightened intimacy, growth, and connection with their partner, maintained high sexual desire over time, whereas those with lower approach goals experienced declines in sexual desire over time (Impett et al., 2008). In summary, engaging in sex for approach goals is associated with higher desire and satisfaction for both partners in a relationship, whereas having sex for avoidance goals may inadvertently bring about the negative outcomes that individuals are attempting to avoid.

Manipulating Sexual Goals

One key implication of the previous work on approach–avoidance sexual motivation is that modifying goals for sex may help boost levels of sexual desire and sexual and relationship satisfaction in couples. Outside of the domain of sexuality, Strachman and Gable (2006) have shown that it is possible to manipulate approach and avoidance social goals in the lab. In this study, participants were told that the researchers were interested in first impressions, and they were asked to write a brief statement about themselves to be presented to a person they were meeting for the first time. Participants in the approach condition were primed toward approach social goals (to have a good time, to make a good impression) and those in the avoidance condition were primed toward avoidance social goals (not to have a bad time, not to make a bad impression). After reading a description of the person they were meant to meet, participants in the avoidance condition remembered more negative descriptors and expressed more dislike toward the person than those in the approach condition. These findings suggest that approach and avoidance goals can be manipulated and have real-world consequences for the quality of interactions and relationships.

Although previous research has not manipulated people's own sexual goals, one previous study using scenarios demonstrated that people rated a hypothetical couple as having higher sexual desire, sexual satisfaction, and relationship satisfaction when they were said to have engaged in sex for approach as opposed to avoidance goals (Muise et al., 2013). Although this study is limited in that it relied on the use of hypothetical scenarios, research in other domains of sexuality suggests it is possible to modify people's sexual cognitions and ultimately impact their sex lives and relationships. For example, research on mindfulness (i.e., the awareness and acceptance of one's feelings, thoughts, and bodily sensations) suggests that when women who are experiencing low sexual desire or arousal engaged in a series of mindfulness exercises, including focusing on the positive aspects of their sexual experiences, they reported enhanced sexual desire and arousal (Brotto, Krychman, & Jacobson, 2008). In another study on sexual communal motivation (i.e., being motivated to meet a partner's sexual needs)—a construct conceptually similar to approach motivation—people who were asked to write about all the things they do to meet a partner's sexual needs, in comparison to those in a control condition, reported that they would experience greater sexual and relationship satisfaction when engaging in sex with a partner when they have low sexual desire (Day, Muise, Joel, & Impett, 2015).

The Current Research

In the current set of studies, for the first time, we experimentally manipulated the salience of approach and avoidance sexual goals in participants' personal relationships and tested the effect on their feelings of sexual desire and sexual and relationship satisfaction. In Study 1, we tested our first

prediction, that focusing on approach-motivated sex versus avoidance-motivated sex (or a control task) will lead to higher sexual desire and higher sexual and relationship satisfaction. In Study 2, a three-part study where we first assessed people's baseline sexual goals, we tested our second prediction: that instructing people to focus on approach-motivated sex versus avoidance-motivated sex (using the same manipulation as Study 1) would boost their approach goals from their baseline goals, and the avoidance condition would boost their avoidance goals from baseline goals, and ultimately impact their desire and satisfaction. Specifically, we predicted that those in the approach condition would report greater increases in their sexual desire and satisfaction from baseline than those in the avoidance or control conditions, with people in the avoidance condition reporting significantly lower desire and satisfaction than those in the control condition. In Study 2, we also wanted to test whether boosting the salience of approach goals would have effects on desire and satisfaction in the context of people's actual relationships over time. Therefore, in Study 2 we also tested our third prediction: that people who are given the directive to focus on their approach sexual goals in their relationships will report higher desire and satisfaction at a one-week follow-up compared to control group members who were not given the directive.

Study 1

Participants

Participants were recruited through Amazon's Mechanical Turk (MTurk), an online recruitment source. Research indicates that participants recruited through MTurk are more demographically diverse than both standard Internet samples and American university samples (Buhrmester, Kwang, & Gosling, 2011). Access to the study was restricted to MTurk users living in the United States. To be eligible to participate in the study participants had to be 18 years of age or older, in a committed relationship for at least six months, had to have been sexually active with their partner in the past four weeks (defined as manual, oral, vaginal, or anal sex), and had to pass two attention checks within the survey (one multiple-choice question asking participants to select a specific response option and one open-ended question asking participants to report what the study was about). Of 186 participants, 12 were screened out based on eligibility criteria, five participants were excluded for failing one of the attention checks (i.e., either not selecting the requested response option or not correctly reporting what the study was about, or both), and 14 participants were excluded because they did not complete the manipulation task or completed it incorrectly.

The final sample included 155 participants (79 men, 76 women) who ranged in age from 18 to 64 years ($M = 33.4$ years; $SD = 10.05$). In this sample, 81.9% of participants identified as Caucasian American, 7.1% as

Asian, 5.8% as African American, 1.9% as Latin American/South American, 1.3% as Western European, and 0.6% as Native American or other. Participants reported a mean of 14.9 years of schooling ($SD = 2.26$), starting with first grade. The majority of participants were married or living with their partners (79.4%) and had been in their current relationship for an average of 6.88 years ($SD = 6.58$). Most participants were currently in a mixed-sex relationship ($n = 147$; 94.9%), and 8 (5.1%) participants were in a same-sex relationship.

Procedure

All participants provided their informed consent online and passed a brief eligibility screener. They were then randomly assigned to one of three conditions: approach, avoidance, or control. A previous pilot study revealed it was more difficult for participants to recall a relevant sexual situation in the avoidance condition. Therefore, we oversampled in that condition at a ratio of 5:5:7 (approach, control, and avoidance, respectively). To manipulate sexual goals we used a writing task based on manipulations employed in previous research on social goals (see Appendix A; Gable, 2006). Participants were asked to think about a time when they engaged in sexual activity to pursue a positive outcome (approach condition) or to avoid a negative outcome (avoidance condition). They were asked two open-ended questions about the interaction: "Please describe this experience using as many details as possible in the space provided" and "Please provide as much detail as possible about your reasons, as well as your thoughts and feelings about the sexual situation." They were asked to write for five minutes, collectively, if they were able. In the control condition, participants were asked to write about the room that they were currently in and then to describe another room that they were in earlier that day (based on Goldey & Van Anders, 2012). Following the manipulation task, participants completed measures of their sexual satisfaction, sexual desire, and relationship satisfaction. In line with MTurk standards, participants were paid 60 cents for their participation and read a written debriefing.

Measures

Eligibility Screener. To assess eligibility, we asked participants to report their age, their relationship status and the length of that relationship (in months), and asked, in a yes/no format, "Have you and your partner engaged in sexual activity together at least once in the past 30 days?," defining sexual activity as manual stimulation, oral sex, or intercourse (vaginal or anal). If participants selected a response that identified them as under 18 years of age, not in a committed relationship (or in a relationship for less than six months), and not sexually active with their partner within 30 days, then the survey software's logic presented them with a message informing them that they did not meet the criteria to be eligible for the study and thanking them for their interest.

Sexual Satisfaction. To assess feelings of sexual satisfaction following the manipulation, participants completed the Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1998) about their feelings at that moment. The measure includes five bipolar items (e.g., *Bad to Good*) rated on 7-point scales ($M = 29.55$, $SD = 6.64$, $\alpha = 0.97$). The GMSEX has demonstrated strong reliability and validity in prior research (Lawrance & Byers, 1998).

Sexual Desire. To assess feelings of sexual desire following the manipulation, we administered an adapted item from the Sexual Desire Inventory (SDI; Spector, Carey, & Steinberg, 1996), "How strong is your desire to engage in sexual activity with a partner at this moment?", using a 7-point scale from 1 (*No desire*) to 7 (*Strong desire*) ($M = 4.53$, $SD = 1.74$).

Relationship Satisfaction. To assess relationship satisfaction, we administered the satisfaction subscale of the Investment Model Scale (Rusbult, Martz, & Agnew, 1998). This subscale, which has demonstrated strong reliability and validity (Rusbult et al., 1998), is composed of five statements regarding participants' feelings of satisfaction with their current relationships, which they endorse on a Likert scale ranging from 0 (*Do not agree at all*) to 8 (*Agree completely*) ($M = 30.39$, $SD = 7.37$, $\alpha = 0.96$).

Manipulation Checks. The following items assessed the efficacy of the manipulation in terms of how salient approach or avoidance sexual goals became to participants following the task and how difficult they found the task to complete. Each of these items used a 7-point Likert scale. The first manipulation check was presented only to those in the approach or avoidance conditions and included two items asking to what extent they pursued approach and avoidance sexual goals in the situation that they wrote about from 1 (*Not at all*) to 7 (*A great deal*) (i.e., situation-specific sexual goals). The results revealed the manipulation was successful. Participants in the approach condition scored higher in situation-specific approach goals compared to participants in the avoidance condition (approach: $M = 6.39$, $SD = 0.9$; avoidance: $M = 4.98$, $SD = 1.52$), $F(1, 93) = 28.89$, $p < 0.01$, and people in the avoidance condition scored higher in situation-specific avoidance goals compared to people in the approach condition (approach: $M = 2.8$, $SD = 2.04$; avoidance: $M = 5.46$, $SD = 1.68$), $F(1, 93) = 48.14$, $p < 0.01$. The control group did not respond to this question because they completed a different task than the approach and avoidance groups.

The second manipulation check was completed by all participants and asked how difficult it was for them to think of the situation they wrote about, from 1 (*Very easy*) to 7 (*Very difficult*), referring to either the sexual situation or the second room that they wrote about, depending on condition. Participants did not differ across conditions in how difficult they found the writing task, $F(1, 93) = 0.91$, $p = .40$; in general, participants found the task relatively easy ($M = 2.47$, $SD = 1.71$).

Results

Effect of Sexual Goals on Sexual Desire, Sexual Satisfaction, and Relationship Satisfaction

The final sample included 44 people in the approach condition (22 men, 22 women), 50 in the avoidance condition (23 men, 27 women), and 61 in the control condition (34 men, 27 women). An analysis of variance (ANOVA) revealed no between-group differences in age, relationship length, or gender across conditions. To test our first key prediction—that people in the approach condition would report higher sexual desire and sexual and relationship satisfaction compared to those in the avoidance and control conditions—we conducted a multivariate analysis of variance (MANOVA), with condition as the independent variable and sexual desire, sexual satisfaction, and relationship satisfaction as the dependent variables. As depicted in Table 1, the results revealed significant differences in levels of sexual satisfaction, $F(2, 152) = 4.70$, $p = 0.01$, and sexual desire between groups, $F(2, 152) = 3.13$; $p = .04$, but no significant difference between groups in relationship satisfaction, $F(2, 152) = 1.82$; $p = 0.16$. Post hoc analyses using Tukey's procedure indicated that participants in the approach condition reported significantly higher levels of sexual satisfaction compared to participants in both the avoidance condition and the control condition. Participants in the approach condition also reported significantly higher levels of sexual desire as compared to participants in both the avoidance and control conditions. In addition, although there were no significant differences in the overall model, the difference in reports of relationship satisfaction between participants in the approach condition compared to participants in the avoidance condition was in the predicted direction but did not reach significance ($p = .05$; see Table 1).

Study 2

In Study 2, we aimed to replicate the findings from Study 1 by demonstrating, in an independent sample, that recalling an approach-motivated sexual experience leads to feeling higher desire and satisfaction in romantic relationships, compared to recalling an avoidance-motivated sexual experience or completing a control task. In Study 2, we

Table 1. Mean Comparisons Across Conditions on Sexual Satisfaction, Relationship Satisfaction, and Sexual Desire in Study 1

Variables	Approach ($n = 44$) M (SD)	Control ($n = 61$) M (SD)	Avoidance ($n = 50$) M (SD)
Sexual satisfaction	31.84 (6.44) ^{b,c}	29.34 (6.45) ^a	27.81 (6.45) ^a
Relationship satisfaction	31.93 (7.31)	30.33 (7.81)	29.10 (7.33)
Sexual desire	5.08 (1.66) ^{b,c}	4.37 (1.66) ^a	4.28 (1.67) ^a

Note. Superscript letters denote significant differences between ^aapproach, ^bcontrol, and ^cavoidance at $p < .05$.

also aimed to extend the findings from Study 1 by demonstrating that, in addition to between-person differences across conditions, we can also modify people's sexual goals from their baseline levels (i.e., demonstrate within-person differences). We predicted that the approach manipulation would increase people's approach goals from their baseline goals and the avoidance manipulation would increase people's avoidance goals from their baseline goals. We then predicted that those in the approach condition would report greater increases in their sexual desire and satisfaction from baseline than people in the avoidance or control conditions. Demonstrating movement from people's baseline sexual goals will have important implications for developing interventions to promote sexual desire and satisfaction. Finally, in Study 2 we also tested the prediction that being given the directive to focus on their approach sexual goals in their relationships would enhance participants' desire and satisfaction one week later.

Participants

As in Study 1, participants were recruited in the United States through Amazon's MTurk. The eligibility criteria were the same as in Study 1. Of the 408 participants who completed the Week 1 survey, 38 were deemed ineligible based on the eligibility screener. Of the 370 participants who qualified for the Week 1 survey, 96 (26%) individuals did not complete the Week 2 survey. The participants who did not complete Week 2 did not significantly differ on any of the key variables assessed at Week 1 compared to the participants who continued in the study. Of the remaining 274 participants, two participants (< 1%) were excluded for failing either one of the two attention checks at each of the three time points of the study. In addition, 13 participants (5%) were excluded because they did not complete the manipulation task or completed it incorrectly, and 18 participants (7%) were excluded because they rated the manipulation task as too difficult (i.e., they provided a rating of 6 or 7 on a difficulty scale of 1 to 7).

The final sample who completed the first two time points included 241 participants (104 men, 137 women) ranging in age from 19 to 70 years ($M = 35$ years, $SD = 11.01$). In this sample, 82.6% of participants identified as Caucasian American, 6.2% as African American, 3.3% as Asian, 2.1% as Latin American/South American, 1.7% as Biracial, 0.8% as Eastern European, African, or Caribbean, and 0.4% as Native American, Middle Eastern, or other. Participants reported a mean of 15.28 years ($SD = 2.17$) of schooling, starting with first grade. The majority were married or living with their partners (73%) and had been in their current relationship for an average of 6.95 years ($SD = 6.64$). Most participants were currently in a mixed-sex relationship ($n = 227$; 94.2%), and 14 (5.8%) participants were in a same-sex relationship. In all, 99% of participants ($n = 238$) who completed Weeks 1 and 2 and passed the relevant attention and manipulation-related checks also completed the follow-up to the booster, Week 3.

Procedure

Participants provided their informed consent online and passed a brief eligibility screener that was the same as Study 1. Study participation occurred across three weeks. At Week 1 (baseline), participants completed measures of their approach and avoidance sexual goals, sexual satisfaction, relationship satisfaction, and sexual desire with regard to how they typically feel (i.e., "in general"). At Week 2, they were randomly assigned to one of three conditions: approach, avoidance, or control. As in Study 1, we oversampled the avoidance condition at a ratio of 5:5:7 (approach, control, and avoidance, respectively). Participants completed the same manipulation tasks as in Study 1 (see Appendix A). Following the manipulation task, participants completed brief measures of their approach and avoidance sexual goals, as well as their sexual satisfaction, sexual desire, and relationship satisfaction.

Next, participants in both of the experimental conditions received a psychoeducational "booster" about approach sexual goals. They were asked to read information about the benefits of approach sexual goals and then to complete three brief questions about the information they read. They were then instructed to try to focus on approach sexual goals over the next week, were given several suggestions for how to do so (e.g., send your partner a text message describing an approach reason for having sex with him or her), and were asked to write in detail how they planned to focus on approach goals in the coming week. Participants in the control condition read information about how to redecorate a room and responded to questions about this information and the room in which they were currently located (see Appendix B for booster details). At Week 3, participants again completed brief measures of their approach and avoidance sexual goals, as well as their sexual satisfaction, sexual desire, and relationship satisfaction referring to the past week. In line with MTurk standards, participants were paid \$3.50 collectively for their participation (\$1.00 for Week 1, and \$1.25 for each of Weeks 2 and 3) and read a written debriefing.

Measures

Eligibility Screener. To confirm participants' eligibility, we used the same eligibility screener as in Study 1.

Approach and Avoidance Goals at Baseline. To assess baseline levels of approach and avoidance sexual goals, participants completed a 16-item measure adapted from Cooper et al. (1998) and used in prior research on sexual goals (Impett et al., 2005; Impett et al., 2008; Muise et al., 2013; Rosen et al., 2015). Participants rated the importance of 10 approach (e.g., "to feel closer to my partner"; $M = 5.78$, $SD = 1.00$, $\alpha = 0.89$) and six avoidance (e.g., "to prevent my partner from becoming upset"; $M = 3.84$, $SD = 1.87$, $\alpha = 0.92$) sexual goals in

influencing their decision to engage in sexual activity from 1 (*Not at all important*) to 7 (*Extremely important*).

Relationship Satisfaction. As in Study 1, relationship satisfaction was measured using the satisfaction subscale of the Investment Model Scale (Rusbult et al., 1998) at all time points. For Weeks 1 and 2, participants were instructed to think about their relationship in that moment (Week 1: $M = 32.1$, $SD = 8.78$, $\alpha = 0.96$; Week 2: $M = 29.47$, $SD = 6.8$, $\alpha = 0.97$), whereas in Week 3 they were asked to think about their relationship in the past week (Week 3: $M = 36.73$, $SD = 8.98$, $\alpha = 0.97$).

Sexual Satisfaction. As in Study 1, sexual satisfaction was assessed with the well-validated GMSEX (Lawrance & Byers, 1998) at all time points. For Weeks 1 and 2, participants were instructed to think about how they would describe their sexual relationship “right now” (Week 1: $M = 30.74$, $SD = 5.93$, $\alpha = 0.96$; Week 2: $M = 29.47$, $SD = 6.8$, $\alpha = 0.97$). At Week 3, only those participants who reported sexual activity ($n = 187$) in the past week were asked to rate their sexual satisfaction with their sexual experiences over the past week ($M = 29.82$, $SD = 6.95$, $\alpha = 0.97$).

Sexual Desire. At baseline, participants completed the well-validated dyadic subscale of the SDI (Spector et al., 1996). It is composed of eight questions that assess dyadic sexual desire (e.g., “How strong is your desire to engage in sexual activity with a partner?”) using a 9-point Likert scale from 0 (*No desire*) to 9 (*Strong desire*) ($M = 47.78$, $SD = 11.79$, $\alpha = 0.95$). As in Study 1, at Weeks 2 and 3 participants completed a single adapted item from the SDI (Spector et al., 1996): “How strong is your desire to engage in sexual activity with a partner at this moment?” (Week 2: $M = 4.67$, $SD = 2.33$; Week 3: $M = 6.33$, $SD = 1.89$). At Week 3, those participants who reported no sexual activity in the prior week ($n = 51$) were asked to think about how they felt in the past week, whereas those reporting sexual activity ($n = 187$) were asked to think about how they felt during sexual activity with their partner that week.

Manipulation Checks. The postmanipulation measures were intentionally brief to best capture the manipulation effects and as recommended by standards for conducting research on MTurk (Buhrmester et al., 2011). At Week 2, following the manipulation task, all participants responded to the item “How easy or difficult was it for you to complete this task?,” rated from 1 (*Very easy*) to 7 (*Very difficult*) ($M = 2.6$, $SD = 1.48$). In general, participants found the manipulation task relatively easy ($M = 2.6$, $SD = 1.48$); however, there was a significant difference across conditions in how difficult participants found the task, $F(2, 240) = 4.54$, $p = 0.01$. That is, participants in the avoidance condition found the task more difficult than did the control participants (avoidance: $M = 2.88$, $SD = 1.38$; control: $M = 2.22$, $SD = 1.41$; $t(169) = 3.12$, $p < 0.01$), but

there were no differences between the participants in the control and approach condition, or the avoidance and approach conditions (approach: $M = 2.66$, $SD = 1.6$) in how difficult they found the task. Due to these differences, we ran additional analyses where we included task difficulty as a covariate to test whether this variable could account for our effects.

To capture between-person differences in approach and avoidance goals, at Week 2, participants in the approach and avoidance conditions were asked “In the sexual situation that you just wrote about, to what extent did you have sex with your partner to pursue positive outcomes?” and “In the sexual situation that you just wrote about, to what extent did you have sex with your partner to avoid negative outcomes?,” rated on a Likert scale ranging from 1 (*Not at all*) to 7 (*A great deal*) ($n = 161$; approach condition: $M = 5.52$, $SD = 1.41$; avoidance condition: $M = 3.93$, $SD = 2.23$). We tested whether, following the manipulation, people in the approach condition reported higher approach sexual goals compared to those in the avoidance condition, and whether people in the avoidance condition reported higher avoidance goals compared to those in the approach condition. An ANOVA revealed that participants in the approach condition reported higher situation-specific approach sexual goals ($M = 5.97$, $SD = 1.35$) compared to people in the avoidance condition ($M = 4.91$, $SD = 1.68$), $F(1, 161) = 18.30$, $p < 0.001$, and people in the avoidance condition reported higher situation-specific avoidance goals ($M = 4.73$, $SD = 2.00$) compared to those in the approach condition ($M = 2.44$, $SD = 1.86$), $F(1, 161) = 54.55$, $p < 0.001$.

To capture within-person differences in goals (i.e., changes from baseline levels), at Week 2, participants in all conditions were asked “In general, to what extent do you have sex with your partner to pursue positive outcomes?” and “In general, to what extent do you have sex with your partner to avoid negative outcomes?,” rated on a Likert scale ranging from 1 (*Not at all*) to 7 (*A great deal*) ($n = 240$; approach condition: $M = 5.73$, $SD = 1.33$; avoidance condition: $M = 3.05$, $SD = 1.86$). We conducted paired-samples t tests for each condition, comparing participants’ general levels of baseline approach and avoidance goals to their general sexual goals following the manipulation. Approach and avoidance goals were assessed differently at baseline and postmanipulation so the scales were standardized for these analyses. The results revealed that, in the approach condition, participants’ general approach goals following the manipulation ($M = 5.84$, $SD = 1.41$) were significantly higher than their approach goals at baseline ($M = 5.66$, $SD = 1.12$), $t(68) = -2.14$, $p = 0.04$, but there was not a significant difference between their avoidance goals at baseline and following the manipulation, $t(68) = 1.30$, $p = 0.20$. In the avoidance condition, participants’ general avoidance goals were higher following the manipulation ($M = 3.96$, $SD = 2.01$) compared to their baseline avoidance goals ($M = 3.16$, $SD = 1.62$), but this was not a significant difference, $t(91) = -1.92$, $p = 0.06$,

and their approach sexual goals did not differ from baseline to following the manipulation, $t(91) = .09, p = 0.93$. People in the control condition showed no significant differences between approach ($M = 5.83, SD = .92$) and avoidance goals ($M = 3.83, SD = 1.82$) at baseline and their approach ($M = 5.62, SD = 1.37$) and avoidance goals ($M = 3.02, SD = 1.92$) following the manipulation, $t(78) = 1.06, p = 0.29$; $t(77) = 0.24, p = 0.81$, respectively.

Results

Effect of Sexual Goals on Sexual Desire, Sexual Satisfaction, and Relationship Satisfaction

The final sample included 70 people in the approach condition (29 men, 41 women), 92 people in the avoidance condition (40 men, 52 women), and 79 people in the control condition (35 men, 44 women). An ANOVA revealed no significant differences in relationship duration, sexual and relationship satisfaction, sexual desire, approach sexual goals, or avoidance sexual goals across groups prior to the manipulation. There was, however, a significant difference in participant age across groups, $F(2, 282) = 3.07, p = 0.05$, where participants in the approach condition were older ($M = 37.41, SD = 12.73, \text{range} = 20 \text{ to } 70$) than those in the avoidance condition ($M = 33.1, SD = 9.83, \text{range} = 19 \text{ to } 68$), $t(160) = 2.44, p = 0.02$. Therefore, in addition to task difficulty, we also tested the model with age as a covariate to determine whether this could account for our effects.

To test our second key prediction—that having people focus on approach sexual goals as opposed to avoidance sexual goals or a control task would lead to increases in sexual satisfaction, relationship satisfaction and sexual desire—we conducted a multivariate analysis of covariance (MANCOVA). Our dependent variables were significantly correlated, $r = 0.36 \text{ to } 0.73$, all $ps < 0.001$, and therefore we entered all outcomes simultaneously. To isolate the effects of the manipulation we entered participants' baseline reports of sexual satisfaction, relationship satisfaction, and sexual desire as covariates, and condition (approach, avoidance, control) as the independent variable.

The results revealed that condition had a significant effect on participants' reports of sexual satisfaction, $F(1, 238) = 3.43, p = 0.03$, and relationship satisfaction, $F(1, 238) = 6.10, p = 0.003$. However, though it was in the expected direction, there was no significant effect on sexual desire, $F(1, 238) = 2.85, p = 0.06$. As depicted in Table 2, after accounting for their baseline levels of sexual satisfaction, relationship satisfaction, and sexual desire, post hoc tests using Tukey's procedure indicated that participants who were asked to write about their approach goals for sex reported higher sexual and relationship satisfaction compared to participants in both the avoidance and control conditions. There was no significant difference in sexual or relationship satisfaction between the avoidance and control conditions. Participants in the approach condition also

Table 2. Mean Comparisons Across Conditions on Sexual Satisfaction, Relationship Satisfaction, and Sexual Desire in Study 2

Variables	Approach ($n = 70$) $M (SD)$	Control ($n = 79$) $M (SD)$	Avoidance ($n = 93$) $M (SD)$
Sexual satisfaction	30.81 (9.59) ^{b,c}	28.90 (9.08) ^a	28.88 (8.28) ^a
Relationship satisfaction	31.33 (7.68) ^{b,c}	29.71 (7.28) ^a	29.01 (6.63) ^a
Sexual desire	0.23 (1.54) ^c	-0.07 (1.45)	-0.02 (1.32) ^a

Note. Superscript letters denote significant differences between ^aapproach, ^bcontrol, and ^cavoidance at $p < .05$.

reported significantly higher sexual desire compared to the avoidance condition but did not report significantly higher sexual desire compared to the control condition. Again, there were no significant differences in sexual desire between the avoidance and control conditions.

Finally, because there were differences across condition by age and task difficulty, we tested whether these variables could account for the reported effects. When we entered age and task difficulty as covariates in the model, all the significant effects reported remained significant, and none of the effects were significantly moderated by age, suggesting the effects are consistent across age groups. All effects also remained significant when we controlled for participants' baseline levels of approach and avoidance goals, as well as when we accounted for participants' gender.

Effects of the Approach Sexual Goals “Booster”

In Study 2 we also tested whether we could extend the effects of our manipulation outside of the laboratory. Following the manipulation at Week 2, we gave participants in the approach and avoidance conditions an approach goals “booster,” as described. Our goal was to replicate the type of brief intervention that might occur in a therapeutic context (i.e., provide education, discuss ideas, make a plan) to extend the effects outside the lab. We followed up with participants one week later (Week 3) and assessed their sexual satisfaction regarding the sexual experiences they had during that week as well as their feelings regarding sexual desire and relationship satisfaction.

We tested whether the booster manipulation affected participants' relationship and sexual outcomes at Week 3. We conducted a MANCOVA with booster condition as our independent variable; relationship satisfaction, sexual satisfaction, and sexual desire at Week 2, and original condition as covariates; and relationship satisfaction, sexual satisfaction (if sex was engaged in over the previous week) and sexual desire at Week 3 as the dependent variables. As depicted in Table 3, the results revealed that people who received the approach goals booster at Week 2 reported higher relationship satisfaction, $F(1, 177) = 4.73, p = 0.03$, and sexual satisfaction, $F(1, 177) = 5.97, p = 0.02$, at Week 3 compared to participants in the control condition. There were no significant differences in sexual

Table 3. Mean Comparisons Between Approach Booster and Control on Sexual Satisfaction, Relationship Satisfaction, and Sexual Desire in Study 2

Variables	Approach Booster (<i>n</i> = 159) <i>M</i> (<i>SD</i>)	Control Booster (<i>n</i> = 79) <i>M</i> (<i>SD</i>)
Sexual satisfaction	32.07 (5.42)*	29.72 (6.98)*
Relationship satisfaction	39.15 (7.20)*	35.63 (9.25)*
Sexual desire	0.29 (0.96)	0.15 (1.23)

**p* < 0.05.

desire, $F(1, 177) = 0.59$, $p = 0.44$. Again, all significant findings reported here remained significant when we controlled for age, task difficulty, and gender—with one exception. The exception was that when age was entered as a covariate the effect of booster condition on relationship satisfaction at Week 3 became nonsignificant ($p = 0.08$). Given this we also tested age as a moderator of the effects, but none of the effects were significantly moderated by participants' age. In addition, all of the effects remained significant when we controlled for participants' baseline levels of approach and avoidance sexual goals.

Finally, we tested whether the effects depended on whether participants were originally in the approach or avoidance condition. To do this, we selected only participants who received the booster and compared those originally in the approach condition to those originally in the avoidance condition on their Week 3 outcomes. There were no significant differences among those who received the booster on sexual satisfaction, $F(1, 149) = 0.03$, $p = 0.87$, relationship satisfaction, $F(1, 149) = 0.04$, $p = 0.84$, or sexual desire, $F(1, 149) = 0.003$, $p = 0.96$, at Week 3, suggesting the booster worked for both participants originally in the approach and those originally in the avoidance condition.

Discussion

Across two studies we demonstrated, for the first time, that manipulating the salience of approach and avoidance sexual goals has implications for people's feelings of relationship and sexual satisfaction, and sexual desire for their partner. In Study 1, we found support for our first prediction that when people focused on a time when they pursued sex with their partner for approach goals (compared to avoidance goals or a control task) they would report higher sexual satisfaction and higher sexual desire. In Study 2, we also demonstrated that it was possible to increase participants' approach sexual goals from their baseline levels with a simple and brief intervention. After accounting for people's baseline levels of sexual goals, relationship satisfaction and sexual satisfaction and desire, those who focused on approach-motivated sexual experiences reported higher sexual and relationship satisfaction compared to participants who focused on avoidance-motivated sex or those in a

control group, providing support for our second prediction. Also, participants in the approach condition reported higher sexual desire compared to those in the avoidance condition, but not compared to those in the control condition. Finally, participants who were given additional information about the benefits of approach goals and were asked to focus on their approach goals for sex in the upcoming week reported higher sexual and relationship satisfaction one week later (although the effect of the booster on relationship satisfaction was reduced once age was accounted for), providing support for our third prediction. Although age accounted for one of the effects in Study 2, age did not significantly moderate any of the effects. Therefore, the set of studies provides evidence that it is possible to enhance people's approach sexual goals and, in turn, their sexual and relationship satisfaction.

The current findings provide experimental evidence for previous correlational work showing associations between approach-motivated sex and higher desire and satisfaction (Impett et al., 2005; Impett, Strachman, et al., 2008; Muise et al., 2013). The findings also extend theoretical (for a review, see Gable & Impett, 2012) and experimental evidence (Strachman & Gable, 2006) on the benefits of approach social goals to the domain of sexuality. It is important to note that the current findings can be attributed to increases in approach sexual goals enhancing satisfaction rather than increases in avoidance sexual goals decreasing satisfaction. In our community sample of individuals in relationships, our manipulation was successful in increasing approach goals but not in increasing avoidance goals. Also, participants in the approach condition reported higher satisfaction compared to both the avoidance condition and the control condition, and there were no differences between avoidance and control conditions on sexual and relationship outcomes. One reason for this finding may be that, in community samples, sex tends to be much more approach motivated than avoidance motivated (Impett, Strachman, et al., 2008; Muise et al., 2013). That is, on average, people's mean level of approach goals is much higher than their mean level of avoidance goals, and therefore it may be easier to recall approach-motivated sexual experiences and as such be easier to enhance approach sexual goals than avoidance sexual goals. An important avenue for future research is to try to decrease the salience of avoidance motivation and test the effects on desire and satisfaction. It is possible that combining a task that enhances the salience of approach sexual goals with one that diminishes the salience of avoidance sexual goals might have the strongest effects on feelings of satisfaction and desire. For example, an avoidance "reducer," in which educational information about the detrimental impact of avoidance goals is given, could be tested.

Finally, in the current research we did not explore the mechanisms for our effects, but there are several possibilities. Approach goals may enhance desire and satisfaction because they boost positive affect and make people feel more authentic about their decision to engage in sex. In research on sacrifice goals in romantic relationships, people who sacrificed for approach goals felt happier and more authentic about making

a sacrifice for their romantic partners, and this was associated with greater relationship quality (Impett, Javam, Le, Asyabi-Eshghi, & Kogan, 2013). It is also possible that approach sexual goals are linked to desire and satisfaction through enhanced intimacy with the partner, which has been shown to be associated with greater relationship quality (Laurenceau, Feldman Barrett, & Rovine, 2005). Finally, approach sexual goals may increase feelings of desire and satisfaction due to the cognitive shift toward more positive feelings and sensations, as has been found in previous research on mindfulness and sexual desire (Brotto et al., 2008).

Implications, Limitations, and Future Directions

A key implication and future direction of the current findings is extension to clinical interventions for couples experiencing low desire or other sexual issues. Recently, theories of approach–avoidance sexual motivation have been extended to clinical populations. In a correlational study of women experiencing chronic, unexplained vulvovaginal pain and their romantic partners, women’s pursuit of approach goals was associated with higher sexual and relationship satisfaction, whereas women’s pursuit of avoidance goals was associated with lower sexual satisfaction and relationship satisfaction, as well as with greater depressive symptoms (Rosen et al., 2015). These findings suggest that targeting approach and avoidance sexual goals has the potential for improving the sex lives and relationships of couples affected by sexual dysfunction, and may be able to impact clinical outcomes such as depression or genital pain. However, additional research is needed before applying these findings to clinical samples to determine the reliability of the effects. First, in the current research, we used brief measures of sexual goals at subsequent time points; instead, it would be ideal to test the predictions using the full validated measures at each time point. Second, future work should also attempt to determine the people or couples for whom sexual goals interventions might be most effective, as well as to determine the most effective strategies for enhancing people’s approach motivation. In a recent review paper (Impett, Muise, & Rosen, 2015), suggestions for specific clinical interventions were outlined, but these are yet to be tested. For example, clinicians working with individuals and couples coping with sexual dysfunction could assist them in identifying and focusing on their approach sexual goals and could encourage clients to monitor their reasons for having sex, noting any links between their goals and sexual experiences. In Study 2, the booster condition was designed to be consistent with a brief version of this kind of intervention that provides education and reframing of sexual goals, and in the current sample, this was successful in enhancing sexual and relationship satisfaction.

In nonclinical samples, enhancing approach sexual goals may help couples maintain desire and satisfaction over time. One limitation of the studies, however, is that we included only one member of romantic couples. An important direction for

future research is to test whether these types of interventions can also impact the sexual and relationship satisfaction of a person’s romantic partner. Cross-sectional and daily experience studies have found that one partner’s sexual goals impact the other partner’s desire and satisfaction (Muise et al., 2013; Rosen et al., 2015). Therefore, it is likely that enhancing one partner’s approach motivation will have positive consequences for both partners’ feelings of satisfaction.

An additional limitation of the current research is that we tested our predictions using an online manipulation in samples of participants recruited from MTurk. Although MTurk participants have been shown to provide reliable data and to be more diverse than university samples (Buhrmester et al., 2011), future research could aim to replicate the current findings using alternative data collection strategies and an in-person manipulation before applying the findings to clinical settings.

Conclusions

Sexuality is a key factor in the maintenance of romantic relationship quality, yet sexual desire and satisfaction can be difficult to maintain over time. People’s reasons or goals for sex have been shown to be a crucial predictor of sexual desire and sexual and relationship quality. The current set of studies extended previous correlational work and demonstrated that it is possible to experimentally enhance the salience of approach sexual goals and, in turn, increase people’s feelings of satisfaction. We were less successful at increasing the salience of people’s avoidance goals for sex, but it is possible that it would be easier to decrease the salience of people’s avoidance goals; this is an important avenue for future research. The findings are, however, promising for the success of future interventions aimed at helping couples maintain desire and satisfaction over the course of a relationship, or enhancing these outcomes among those struggling with sexual problems.

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ORCID

Natalie O. Rosen  <http://orcid.org/0000-0002-4525-0770>

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Appendix A. Experimental Manipulation

Approach Condition

People engage in sexual activity with their partner for many different reasons.

Think about the most recent time when you engaged in sexual activity with your current partner to pursue a *positive outcome* in your relationship, such as to feel closer to your partner, to make your partner happy, or to enhance intimacy in your relationship.

How long ago, in days, was this sexual interaction? _____

Try to remember as many details as you can about this situation. For example, where were you? What time of day was it? What were the circumstances surrounding the sexual interaction? What was your partner's reaction in the sexual situation? Please describe this experience using as many details as possible in the space provided.

Essay-style text box

Thinking about the *positive outcomes in your relationship* that you were pursuing for this sexual situation (e.g., to feel closer to your partner, to make your partner happy, or to enhance intimacy), please describe your specific reasons for engaging in sexual activity in this situation in the space provided.

Please provide as much detail as possible about *your reasons*, as well as your *thoughts and feelings* about the sexual situation. If you are able to write for 5 minutes, please do so.

Essay-style text box

Avoidance Condition

People engage in sexual activity with their partner for many different reasons. Think about the most recent time when you engaged in sexual activity with your current partner to *avoid a negative outcome* in your relationship, such as to avoid disappointing your partner, to avoid declining your partner's sexual advances, or to avoid conflict in the relationship.

How long ago, in days, was this sexual interaction? _____

Try to remember as many details as you can about this situation. For example, where were you? What time of day was it? What were the circumstances surrounding the sexual interaction? What was your partner's reaction in the sexual situation? Please describe this experience using as many details as possible in the space provided.

Essay-style text box

Thinking about the *negative outcomes in your relationship* that you were trying to avoid for this sexual situation (e.g., to avoid disappointing your partner, to avoid making your partner feel unattractive, or to avoid conflict in your relationship), please describe your specific reasons for engaging in sexual activity in this situation in the space provided.

Please provide as much detail as possible about *your reasons*, as well as your *thoughts and feelings* about the sexual situation. If you are able to write for 5 minutes, please do so.

Essay-style text box

Control

In as much detail as possible, first describe the room/location that you are currently located in in the box below.

Essay-style text box

Next, in the second box, please describe another room you were in today.

If you are able to write for 5 minutes, please do so.

Essay-style text box

Appendix B. Booster

Please read the information on the next page *carefully*. Afterwards, you will be asked some questions about this information. Feel free to re-read the information as many times as you like. However, you *will not be able* to go back once you hit "next" and advance the survey.

[Page Break]

Approach Booster

For Approach and Avoidance Groups

What relationship and sexual outcomes have researchers found to be linked with reasons for having sex?

There are many different reasons that people have sex. Some of these reasons can be placed into one of two categories: (1) approach goals and (2) avoidance goals. When you have sex to pursue a positive outcome, such as increasing intimacy with your partner, or to make your partner feel desired, this is called an approach goal. When you have sex to try to avoid a negative outcome, such as making your partner feel badly or avoiding an argument, this is called an avoidance goal. Few decisions are purely approach motivated or avoidance motivated, but are often a mix of the two types of goals, with one type being more important to you in that particular situation.

How do my reasons for engaging in sex affect my life?

Researchers are interested in how these approach and avoidance reasons for having sex affect people's relationships and sexual lives. Recently, researchers from the University of Toronto published a study in the highly respected academic journal called *Personality and Social Psychology Bulletin*. In this study, they found that when people have sex for approach goals they experience more positive feelings about sex in general, including greater sexual desire both in the short and long term in their relationships (Muise et al., 2013). Approach goals have also been shown to be related to greater satisfaction in people's sexual lives and their overall relationships, as well as less conflict between partners (Impett et al., 2005; Muise et al., 2013). Taken together, this research suggests that holding stronger approach goals for having sex can improve people's sex lives and relationships!

[Page Break]

What relationship and sexual outcomes has research found is linked to holding stronger approach goals for sex?

Essay-style text box

Please briefly list the three approach goals that you most often hold for having sex with your partner.

Essay-style text box

[Page Break]

Over the next week, we ask that you try to focus on your approach goals for engaging in sexual activity with your partner.

How can I increase my approach goals for sex?

There are many different ways that you can enhance your approach goals for sex. Here are some ideas:

- Write down some of your common approach goals for sex with your partner and post them on a note beside your bed.
- Spend a few minutes each day thinking about the positive aspects of your sexual experiences or about the positive memories from past sexual events with your partner. What sensations felt pleasurable? What positive emotions were you feeling? What did you enjoy about your partner's response?
- Send your partner a text, e-mail, or note describing an approach reason for having sex with him or her.

- During sex, focus on having a good time and the pleasurable aspects of the sexual experience, such as connecting with your partner, the pleasurable sensations, and positive emotions you are feeling.

[Page Break]

In detail, please tell us how you plan to focus on your approach sexual goals in the coming week?

Essay-style text box

Control Booster

Experts have many tips for redecorating a room. If you plan to make cosmetic changes such as repainting the walls, take your time when choosing the colors. For example, be sure to look at the paint and flooring colors together in different kinds of lighting. Your perfect shade of gray paint in daylight may look purple when the sun goes down!

If you plan to rearrange your furniture or buy new furniture you may want to think about how you use this room now, and how it could be better used. Experts suggest that you should watch how everyone in the house uses that space before beginning the redecoration. Keep an eye out for parts of the room that tend to collect clutter. Once you have a good idea of the strengths and weaknesses of your current arrangement, you can make better decisions about how to make the room a more usable space that everyone can enjoy.

[Page Break]

Briefly, what are the two things that the author suggests you do before starting a redecorating project?

Essay-style text box

If you were able to change two things about the room you are currently in, what would they be?

Essay-style text box

What is your favourite thing about the room that you are currently in?

Essay-style text box