

Self-expansion is associated with greater relationship and sexual well-being for couples coping with low sexual desire

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Abstract

Regular positive sexual interactions are one reason why relationships have health and well-being benefits, yet low sexual desire is among the most common sexual problems reported by women. One interpersonal factor that has been associated with greater sexual desire and satisfaction in community couples is self-expansion (i.e., expanding one's sense of self through novel, exciting, and broadening activities with a partner). In the current study, we recruited 97 couples in which the woman was diagnosed with clinically low sexual desire to test how self-expansion was associated with both partners' sexual and relationship well-being. When women with low desire reported higher self-expansion, they reported greater relationship and sexual satisfaction, higher desire, and couples were more affectionate. When their partners reported higher self-expansion, they felt more satisfied with their sex life and relationship (and so did the women), lower sexual distress and less relationship conflict, and couples were more affectionate. Our findings suggest that self-expansion is associated with greater relationship and sexual well-being for couples with low desire, as well as less sexual distress and relationship conflict. Theoretical and clinical implications are discussed.

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Regular positive sexual interactions are one reason why romantic relationships have long-term health and well-being benefits (for a review, see Diamond & Huebner, 2012), yet a lack of interest in sex, plus significant associated distress, is among the most common sexual problems reported by women (Mitchell et al., 2013; Rosen et al., 2009). Women who report low sexual desire tend to feel more negatively about their sexuality and relationship compared to women without low desire (Parish & Hahn, 2016; Sarin, Amsel, & Binik, 2016), and their partners also tend to report feeling less satisfied and more distressed with their sex lives (Rosen, Dubé, Corsini-Munt, & Muise, 2019). Conflict and distress are common for couples coping with a sexual problem and may even contribute to sexual dysfunction (Metz & Epstein, 2002). In general, a lack of interest in sex tends to be associated with poorer well-being (e.g., stress; Bodenmann, Atkins, Schär, & Poffet, 2010), whereas having more intimate sexual encounters is associated with greater well-being (e.g., positive affect; Kashdan, Goodman, Stikma, Milius, & McKnight, 2018).

A growing body of research emphasizes interpersonal factors in the maintenance of sexual dysfunctions in relationships (e.g., Muise, Bergeron, Impett, & Rosen, 2017; Rosen et al., 2009). Past work suggests that physical closeness can help couples navigate sexual issues (Herbenick, Mullinax, & Mark, 2014). In a sample of married women reporting attributions for low sexual desire, women described overfamiliarity with their partner, comfort in the relationship detracting from excitement, and predictability (Sims & Meana, 2010). In fact, in community samples of couples, the opposite features—novelty, excitement, and broadening (i.e., *self-expansion*) in a relationship—have been associated with higher sexual desire (Ferreira, Fraenkel, Narciso, & Novo, 2015; Muise et al., 2019). In the current research, we investigate the role of self-expansion in the sexual and relationship well-being of women coping with low sexual desire and their partners.

The consequences of low sexual desire for relationships

Women with low desire report poorer relationship and sexual well-being compared to women without low desire (Parish & Hahn, 2016; Sarin et al., 2016), and distress about experiencing low desire tends to exacerbate the negative associations with satisfaction (Rosen et al., 2009). When women in relationships are coping with low desire, it is also likely that they and their partner experience discrepant sexual interests. Sexual disagreements are one of the top three sources of conflict between partners (Risch, Riley, & Lawler, 2003) and tend to be associated with lower sexual and relationship satisfaction for both partners (Davies, Katz, & Jackson, 1999).

Despite the impact of low sexual desire on women's sexual relationships, limited research has considered the consequences for partners. In a study comparing women with clinically low sexual interest/arousal and their partners to their control counterparts, partners of women with low desire reported lower sexual satisfaction and sexual

function, poorer sexual communication, and higher sexual distress (Rosen et al., 2019). It is also possible that partners of women with low desire do not feel sexually desirable or are rejected for sex more frequently, which can ultimately detract from sexual and relationship quality (e.g., Byers & Heinlein, 1989; Muise, Stanton, Kim, & Impett, 2016).

Given the impact of a woman's low desire for both partners, there has been a growing interest in factors that might help couples better cope (Rosen et al., 2009). Pharmacological treatments for low sexual desire have been developed in recent years but have shown limited evidence of effectiveness, whereas research on nonpharmacological treatments has been scarce (for a review, see Brotto & Luria, 2014). A small but growing body of research has begun to demonstrate that relational factors play a crucial role in the maintenance of low desire and sexual problems (Hayes et al., 2008; McCarthy & Wald, 2015). In the current research, we draw on self-expansion theory to gain novel insights into how couples coping with low sexual desire can maintain sexual and relationship well-being.

Applying self-expansion theory to couples coping with low desire

One factor that has been associated with higher satisfaction in relationships is self-expansion. In general, people are motivated to seek opportunities that provide novelty and broaden their perspective (Aron, Lewandowski, Mashek, & Aron, 2013). In the context of romantic relationships, self-expansion represents the extent to which a partner facilitates the attainment of new resources, perspectives, and characteristics, as well as provides opportunities for novel and exciting experiences (Lewandowski & Ackerman, 2006; Lewandowski & Aron, 2002; Muise et al., 2019). Engaging in shared self-expanding activities as a couple is associated with greater self-other overlap (i.e., expanding the self to include aspects of the partner) and can motivate partners to engage in more relationship maintenance behaviors (e.g., physical affection, accommodation, and willingness to sacrifice; Aron & Aron, 1996; Ledbetter, 2013; McIntyre, Mattingly, & Lewandowski, 2015). Experimental evidence from in-lab studies (Aron, Norman, Aron, McKenna, & Heyman, 2000; Graham & Harf, 2015) and "homework-style" studies (e.g., engaging in one exciting activity per week for 90 min; Coulter & Malouff, 2013; Reissman, Aron, & Bergen, 1993) demonstrates that self-expansion increases relationship quality. However, past research on self-expansion has primarily focused on community samples who are typically highly satisfied with their relationships. Given that couples coping with low desire tend to have poorer relationship quality than couples without low desire (Rosen et al., 2019), we hope to advance self-expansion theory by considering the potential benefits in a sample with greater variability in relationship quality.

Recently, self-expansion theory has been applied to sexuality (Muise et al., 2019). In two daily experience studies with community couples, on days when participants reported higher levels of self-expansion, they reported higher sexual desire, and in turn were more likely to engage in sex with their partner, report higher sexual satisfaction when they did engage in sex, and feel more satisfied with their relationship (Muise et al., 2019). Similarly, in a qualitative study, couples reported that change and novelty (e.g.,

doing new things together that are outside of the couples' typical routine) are key factors that promoted their desire (Ferreira et al., 2015). In other qualitative research on women navigating sexual desire, women described novelty (e.g., date nights) as a factor that helped them maintain desire and predictability and stability as factors that detracted from their desire (Herbenick et al., 2014; Sims & Meana, 2010). Therefore, self-expansion has the potential to be associated with higher sexual desire, even among women coping with low desire.

Women coping with a sexual dysfunction also tend to avoid physical touch with their partner to prevent negative sexual experiences (Hinchliff, Gott, & Wylie, 2012); however, when they do report affectionate behaviors (e.g., cuddling), they feel more satisfied with their sex life and relationship (Vannier, Rosen, Mackinnon, & Bergeron, 2017). Engaging in self-expanding activities in a relationship is associated with increased closeness (e.g., Aron & Aron, 1996) and relationship maintenance behaviors, such as physical affection (Ledbetter, 2013). It is possible that couples coping with low sexual desire who report high levels of self-expansion will also report more affection in their relationship. In addition, in community samples, self-expansion is one reason why mindfulness interventions promoting physical touch (e.g., nonjudgmentally processing one's thoughts, feelings, and sensations; Bishop, Lau, Shapiro, & Devins, 2004) have benefits for sexual relationships (Carson, Carson, Gil, & Baucom, 2007). In a recent pilot study, women with clinically low sexual desire who received training in mindfulness reported improvements in desire, sexual function, and sexual distress from pre- to post-treatment (Paterson, Handy, & Brotto, 2017). Thus, it seems that mindfulness training can be self-expanding for the relationship and this, in turn, is associated with relationship quality (Carson et al., 2007).

Self-expansion may also help buffer couples against conflict and sexual distress. Past work suggests a bidirectional link between sexual dysfunctions and distressing relationship conflicts (Metz & Epstein, 2002). Couples who engage in self-expanding activities might exert more effort in their relationships and, therefore, more successfully navigate conflict (Mattingly & Lewandowski, 2013). Similarly, emotional capital theory posits that positive relationship experiences can accumulate to help people cope with relationship challenges and maintain satisfaction (Feeney & Lemay, 2012; Walsh, Neff, & Gleason, 2017). Applied to the current research, greater self-expansion might be associated with less sexual distress and conflict because people higher in self-expansion might build up a larger arsenal of positive experiences and exert greater effort in their relationship. Therefore, self-expansion in a romantic relationship might also be associated with lower levels of conflict and sexual distress.

Consistent with research and theory on the dyadic nature of self-expansion in romantic relationships (e.g., Muise et al., 2019), one partner's self-expansion can influence both their own and their partner's outcomes (Muise et al., 2019). In her book *Mating in Captivity*, Perel (2007) explains that people feel higher sexual desire for their partner when they see them in new settings or in situations in which their partner expands their sense of self (i.e., giving a work presentation). In an empirical study in which couples had double date style interactions with another couple, when these interactions were self-expanding (i.e., involved high disclosure), people felt closer to their partner (Slatcher, 2010). Finally, in an experimental study in which people anticipated exciting

events, long-term couples reported higher relationship satisfaction after receiving active support for self-expansion from their partner (Fivecoat, Tomlinson, Aron, & Caprariello, 2015). Therefore, higher self-expansion can have implications for both partners' sexual and relationship well-being.

The current study

We conducted a dyadic cross-sectional survey with couples coping with low desire to test the prediction that self-expansion would be associated with greater relationship (i.e., relationship satisfaction and affection frequency) and sexual (i.e., sexual desire and satisfaction) well-being for both partners. There is evidence that self-expansion can buffer against negative outcomes (Harasymchuk & Fehr, 2010; Lewandowski & Ackerman, 2006), so in the current study, we also assessed whether self-expansion would be associated with lower negative indicators of sexual and relationship well-being—sexual distress and relationship conflict. To test whether there are unique effects of self-expansion for couples coping with low desire, we compared our results to a community sample (see Online Supplemental Material for information about this sample). It is possible that couples coping with low desire might be able to draw less on self-expansion for well-being benefits, but it is also possible that they have more room for improvement, given that they tend to be lower in sexual and relationship well-being (Rosen et al., 2019). Lastly, we conducted a set of additional analyses to determine whether any effects differed by relationship duration, duration of time couples had been coping with the woman's low sexual desire, couple's sexual frequency, or relationship satisfaction.

Method

Participants

To ensure couples were coping with distressing levels of low sexual desire, we recruited women who met the diagnostic criteria for Female Sexual Interest/Arousal Disorder (FSIAD) in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2013). The criteria required that women endorse three or more of the following symptoms for at least 6 months, accompanied by significant distress: a lack of or reduced interest in sex, few/no sexual thoughts, lack of receptivity to a partner's sexual invitations and no/reduced initiation of sexual activity, absent/reduced excitement or pleasure during sexual activity (at least 75% of the time), lack of/reduced responsive desire to sexual cues, and absent/reduced or nongenital sensations during sexual activity (at least 75% of the time; APA, 2013).

Participants were recruited across Canada and the United States between September 2016 and May 2018 through online and physical advertisements as part of a larger study (Rosen et al., 2019). In addition to endorsing FSIAD criteria, the inclusion criteria for participants were (a) both partners had to be 18 years or older, (b) be in a committed relationship for a minimum of six months, (c) have previous sexual experience with their romantic partner, (d) have in-person contact for at least four times per week, and (e) be

fluent in English. In terms of sample size, we aimed to recruit 100 couples based on recommendations by Kenny, Kashy, and Cook (2006). Our final sample consisted of 97 women with FSIAD and their partners ($N = 88$ men, 6 women, 3 other). Women with FSIAD in the current sample ranged in age from 19 years to 58 years ($M = 31.03$, $SD = 7.73$) and their partners ranged from 19 years to 70 years ($M = 32.25$, $SD = 9.27$). The sample was primarily Caucasian (75%) and the average relationship length in the current sample was 7.67 years ($SD = 7.10$). Finally, couples ranged from being married (42%), living-together (27%), common-law (13%), dating (10%), or engaged (7%). See Online Supplemental Material (Table S1) for additional demographic information.

Procedure

Once consent was obtained, participants were instructed to begin an online survey which included the current measures as well as additional measures that are included in another paper (Rosen et al., 2019). Partners were asked to complete the survey separately, without discussing their responses with each other. Once surveys were completed, participants were compensated with a CAD \$18.00 gift card to Amazon.

Measures

In addition to the key variables, both partners reported their age, ethnicity, household income, sexual frequency (i.e., intercourse with vaginal penetration) in the last 4 weeks, and relationship status and duration. Women with FSIAD reported the duration of their sexual problem (i.e., how many months they have been experiencing low sexual interest and/or arousal; see Table S1 in Online Supplemental Material). Correlations between study variables are reported in Table 1. Age, income, sexual frequency, relationship duration, and problem duration were significantly correlated with some of our key variables, but all of the significant effects reported below remained significant when controlling for these covariates. Therefore, we present the models without covariates.

Self-expansion. Relational self-expansion was measured with 6 items adapted from the Self-Expansion Questionnaire (Lewandowski & Aron, 2002; see also Muise et al., 2019). Participants rated items such as “How much does being with your partner result in you having new experiences?” on a scale from 1 = *not very much* to 7 = *very much* ($\alpha = .91$ and $.94$ for women and partners, respectively). Higher scores indicate higher self-expansion (women: $M = 4.79$, $SD = 1.33$; partners: $M = 5.36$, $SD = 1.31$).

Sexual desire. Sexual desire was assessed with 2 items from a modified version of the desire subscale of the Female Sexual Function Index to capture desire for a partner (Rosen et al., 2000; see also Masheb, Lozano-Blanco, Kohorn, Minkin, & Kerns, 2004): “Over the past four weeks, how often did you feel sexual desire or interest for your partner?” (1 = *almost always or always* to 5 = *almost never or never*) and “Over the past four weeks, how would you rate your level (degree) of sexual desire or interest?” (1 = *very high* to 5 = *very low or none at all*). Items were reverse coded, so higher scores indicate higher sexual desire (women: $M = 1.79$, $SD = 0.70$; partners: $M = 3.95$,

Table 1. Correlations between key variables in couples coping with low sexual desire.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	.89***	.16	.79***	-.19	.44***	-.38***	-.35***	-.12	-.28**	-.28**	.08	.08
2. Income	.27**	.85***	.25*	-.07	.32**	-.16	-.02	.05	-.09	.06	-.02	-.21*
3. Relationship duration	.70***	.38***	1.00***	-.07	.44***	-.37***	-.42***	-.09	-.24*	-.22*	.04	.04
4. Sexual frequency	-.09	-.03	-.06	—	.05	.18	.17	.30**	.29**	.12	-.04	-.11
5. Low desire duration	.38***	.34**	.44***	.05	—	-.17	-.28**	-.18	-.12	-.14	.15	-.20
6. Affection frequency	-.38***	-.08	-.37***	.18	-.17	—	.31**	.10	.33**	.49***	-.28**	-.02
7. Self-expansion	-.24*	-.08	-.29**	.05	-.17	.43***	.10	.27**	.32**	.39***	-.12	-.14
8. Sexual desire	-.09	-.04	.06	.06	-.06	.18	.12	-.28**	.30**	.23*	.03	-.16
9. Sexual satisfaction	-.21*	-.20*	-.23*	.37***	-.28**	.28**	.46***	.09	.42***	.38***	-.05	-.35***
10. Relationship satisfaction	-.16	.02	-.05	.11	-.19	.50***	.68***	.30**	.59***	.47***	-.55***	-.02
11. Conflict	.07	-.14	-.02	.03	.02	-.34**	-.32**	-.05	-.24*	-.57***	.49***	-.07
12. Sexual distress	.08	-.05	.05	-.23*	.01	-.20*	-.43***	-.11	-.63***	-.58***	.18	.12

Note. Women with low desire's correlations are above the diagonal. Partner's correlations are below the diagonal. Bolded correlations are between women with low desire's and partner's scores.

*** $p < .001$; ** $p < .01$; * $p < .05$.

$SD = 0.89$). Items were highly correlated for women ($r = .54, p < .001$) and their partners ($r = .66, p < .001$).

Sexual satisfaction. Sexual satisfaction was assessed using the Global Measure of Sexual Satisfaction (Lawrance & Byers, 1995). Participants rated their overall sexual relationship on five bipolar 7-point scales which are summed with higher scores indicating higher sexual satisfaction (women: $M = 20.98, SD = 5.48$; partners: $M = 23.80, SD = 6.22$): *very bad–very good*; *very unpleasant–very pleasant*; *very negative–very positive*; *very unsatisfying–very satisfying*; *very worthless–very valuable* ($\alpha = .87$ and $.92$ for women and partners, respectively).

Sexual distress. Sexual distress was assessed using the 13-item Female Sexual Distress Scale–Revised (DeRogatis, Clayton, Lewis-D’Agostino, Wunderlich, & Fu, 2008), which has also been validated in men (Santos-Iglesias, Mohamed, Danko, & Walker, 2018). Participants rated items such as “How often did you feel distressed about your sex life?” in the past 30 days on a 5-point scale from 0 = *never* to 4 = *always* ($\alpha = .91$ for women; $.92$ for partners). Items were summed with higher scores indicating higher sexual distress (women: $M = 30.08, SD = 9.85$; partners: $M = 17.48, SD = 10.46$).

Relationship satisfaction. Relationship satisfaction was assessed with the 16-item Couples Satisfaction Index (Funk & Rogge, 2007). Participants rated items such as “In general, how satisfied are you with your relationship?” with a variety of 6- and 7-point scales ($\alpha = .97$ for women and $.96$ for their partners). Higher scores indicate higher relationship satisfaction (women: $M = 58.37, SD = 15.40$; partners: $M = 60.33, SD = 13.05$).

Dyadic conflict. Conflict in the relationship was assessed using 2 items from the Dyadic Adjustment Scale (Busby, Christensen, Crane, & Larson, 1995): “How often do you and your partner quarrel (i.e., argue, disagree, conflict)?” and “How often do you and your partner “get on each other’s nerves?”” rated on a 6-point scale from 0 = *all the time* to 5 = *never*. Items were reverse coded so higher scores represent more conflict (women: $M = 3.89, SD = 1.41$; partners: $M = 3.65, SD = 1.28$). Items were highly correlated for women ($r = .67, p < .001$) and their partners ($r = .63, p < .001$).

Affection frequency. Affection frequency was measured with 5 items from the Physical Affection Scale (Light, Grewen, & Amico, 2005; adapted from Diamond, 2000) assessing how frequently couples held hands, sat close or lay close to each other, gave each other neck or back massages (or warm touches), hugged, and kissed (Debrot, Meuwly, Muise, Impett, & Schoebi, 2017). Items were rated on 9-point scales with response options including 1 = *never*, 2 = *<1 time per month*, 3 = *1–2 times per month*, 4 = *1 time per week*, 5 = *2–3 times per week*, 6 = *4–6 times per week*, 7 = *1 time per day*, 8 = *2–3 times per day*, 9 = *4 or more times per day*. Cronbach’s α s were $.87$ for women and $.88$ for their partners. Partners’ reports of affection were highly correlated ($r = .64, p < .001$); therefore, we used the mean of partners’ scores to create a couple-level affection frequency variable. Higher scores indicate more frequent affection ($M = 6.23, SD = 1.51$).

Sexual frequency. Sexual frequency was assessed with 1 item about the frequency in which couples engaged in penetrative sex in the last 4 weeks. Response options included 0 = *not at all*, 1 = *once or twice*, 2 = *once a week*, 3 = *2–3 times a week*, 4 = *4–5 times a week*, 5 = *once a day*, and 6 = *more than once a day*. Partners' reports of sexual frequency were highly correlated ($r = .60, p < .001$); therefore, we used the mean of partners' scores to create a couple-level sexual frequency variable. Higher scores indicate more frequent sex ($M = 1.22, SD = 0.89$).

Data analyses

Data and syntax for the analyses are available at https://osf.io/h6w24/?view_only=9add458aded420690fd97bbe836b4c4. Data were analyzed using multilevel modeling in SPSS version 23.0, guided by the actor–partner interdependence model (Kenny, Kashy, & Cook, 2006). We tested two-level models where persons are nested within dyads (Kenny et al., 2006) with separate intercepts and slopes for women with low desire and their partners. All models included both partners' reports of self-expansion entered simultaneously as predictors, and predictors were centered around the grand mean. The coefficients reported are unstandardized betas (b) and interpreted as the change in the outcome for every one-unit increase in the predictor from the sample mean. For affection frequency, which did not vary within the dyad, we conducted linear regression analyses where both partners' self-expansion was tested as independent variables with the couple-level variable as the outcome. To test whether the effects differed from community couples, we combined the current sample with a sample of community couples, reran the analyses, and tested for moderations by sample (1 = *couples coping with low desire*; 0 = *community couples*; see Online Supplemental Material for more information; Holmbeck, 2002).¹ We also attempted to rule out additional explanations for our effects by testing moderations by relationship duration, duration of women's low sexual desire, and couple's sexual frequency. To assess and probe interactions, we calculated simple slope effects using 1 SD value below and above the mean score of the outcome variable (Aiken, West, & Reno, 1991).

Results

Self-expansion and sexual well-being

First, as reported in Table 2, when women with clinically low sexual desire reported higher self-expansion, they reported feeling higher sexual desire in the past 4 weeks² and felt more satisfied with their sex lives than women in our sample who reported lower self-expansion. When partners reported higher self-expansion, both the women and partners reported higher sexual satisfaction and partners (but not women) reported less sexual distress. There were no significant associations between women's self-expansion and their partner's desire and sexual satisfaction, their own or their partner's sexual distress, a partner's self-expansion and either their own or the woman's sexual desire, or a partner's self-expansion and the woman's sexual distress.

Table 2. Associations between self-expansion and sexual well-being in couples coping with low desire.

Women's sexual desire		Partner's sexual desire		Women's sexual satisfaction		Partner's sexual satisfaction		Women's sexual distress		Partner's sexual distress	
b (SE)	t	b (SE)	t	b (SE)	t	b (SE)	t	b (SE)	t	b (SE)	t
0.14 (0.05)	2.71**	-0.02 (0.07)	-0.30	1.23 (0.39)	3.17**	0.50 (0.43)	1.16	-1.07 (0.76)	-1.41	0.50 (0.77)	0.66
0.02 (0.05)	0.44	0.08 (0.07)	1.15	1.14 (0.39)	2.90**	2.13 (0.44)	4.90***	0.56 (0.77)	0.73	-3.44 (0.75)	-4.61***

Note. Beta values are unstandardized coefficients. Degrees of freedom ranged from 91.72 to 94. S-E = self-expansion.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Self-expansion and relationship well-being

Next, as reported in Table 3, when women reported higher self-expansion, they reported higher relationship satisfaction and couples reported more frequent affection in the relationship. When their partners reported higher self-expansion, both the women and partners reported higher relationship satisfaction, couples reported more frequent affection in the relationship, and partners reported less conflict in the relationship. There were no significant associations between women's self-expansion and their partner's relationship satisfaction, their own or their partner's conflict, or between a partner's self-expansion and the women's conflict.

Comparison to a community sample

Next, we aimed to determine whether associations between self-expansion and sexual and relationship well-being differed for couples with low desire compared to a community sample of 119 couples (i.e., all couples included a woman, 112 of the partners were men, 5 were women, and 2 identified as "other"; age: $M_{\text{years}} = 32.63$, $SD_{\text{years}} = 10.17$; relationship duration: $M_{\text{years}} = 8.59$, $SD_{\text{years}} = 8.45$; primarily White [65%] and married [48%]). To test this, we combined the current data with the sample of community couples and tested whether associations between self-expansion and sexual and relationship well-being differed by sample (see Online Supplemental Material). As expected, women in the low desire sample ($M = 1.79$, $SD = 0.70$) reported significantly lower sexual desire compared to women in the community sample ($M = 3.55$, $SD = 0.89$, $t[213.76] = 16.23$, $p < .001$). Women with low desire also reported significantly lower self-expansion ($M = 4.79$, $SD = 1.33$) than women in the community sample ($M = 5.48$, $SD = 1.17$, $t[214] = 4.03$, $p < .001$). Of the original effects found for couples coping with low desire, one effect was moderated by sample (i.e., low desire couples versus community couples). The association between partner's self-expansion and conflict was significantly moderated by sample, $b = -0.25$, $SE = .12$, $t(209.43) = -2.11$, $p = .04$. For partners of women in the low desire sample, higher self-expansion was associated with lower conflict ($b = -0.28$, $SE = .07$, $t[209.74] = -3.83$, $p < .001$). This effect was not significant for partners in the community sample ($b = -0.03$, $SE = .09$, $t[209.24] = -0.27$, $p = .79$).

Ruling out alternative explanations and generalizability

Given that our data are correlational, we also aimed to rule out possible alternative explanations for the effects and test whether our effects differed based on couples' relationship length, women's duration of low desire, and sexual frequency. First, given that both self-expansion and sexual desire tend to be higher in the early stages of relationships (Aron, Paris, & Aron, 1995; Klusmann, 2002), we wanted to rule out the possibility that couples in shorter relationships are driving the observed effects. All effects reported above remained significant when relationship length (a couple-level variable created by taking the mean of partners' reports) was controlled. None of the

Table 3. Associations between self-expansion and relationship well-being in couples coping with low desire.

	Women's relationship satisfaction		Partner's relationship satisfaction		Couple affection frequency		Women's conflict		Partner's conflict	
	b (SE)	t	b (SE)	t	b (SE)	t	b (SE)	t	b (SE)	t
Women's S-E	4.25 (1.07)	3.98***	0.13 (0.75)	0.17	0.30 (0.10)	2.99**	-0.11 (0.11)	-1.04	0.05 (0.10)	0.48
Partner's S-E	2.71 (1.08)	2.50*	6.74 (0.76)	8.91***	0.46 (0.10)	4.48***	-0.18 (0.11)	-1.69	-0.32 (0.10)	-3.36**

Note. Beta values are unstandardized coefficients. Degrees of freedom ranged from 93.13 to 94.01. S-E = self-expansion.

*p < .05; **p < .01; ***p < .001.

effects were significantly moderated by relationship length, suggesting the findings are consistent for couples in our sample who are in both shorter and longer relationships.

Next, we tested whether our effects differed by the duration of time the couple had been coping with the woman's low sexual desire. Given that self-expansion has been associated with greater relationship and sexual outcomes in community samples without a clinical diagnosis of low sexual desire (Muisse et al., 2019), it is possible that couples who have been experiencing low desire for a shorter duration might report higher self-expansion and higher sexual and relationship well-being. However, all of the effects reported above remained significant when the duration of women's low desire was controlled, and none of the associations were moderated by women's low desire duration. These results suggest that the findings are consistent for couples in our sample who have been coping with women's low desire for shorter and longer durations.

Although self-expansion has been associated with a greater likelihood of engaging in sex in community samples (Muisse et al., 2019), in the current sample, self-expansion did not significantly predict greater sexual frequency ($ps > .11$). However, all effects remained significant controlling for couple's sexual frequency, and with one exception, none of the associations were significantly moderated by sexual frequency. The exception is that sexual frequency significantly moderated the association between women's self-expansion and their own sexual satisfaction ($b = 0.86, SE = .42, t[91] = 2.03, p = .05$). When women with low desire engaged in sex frequently, there was a significant association between self-expansion and sexual satisfaction ($b = 1.96, SE = .58, t[91] = 3.41, p = .001$). This effect was not significant for women with low desire who reported low sexual frequency ($b = 0.44, SE = .50, t[91] = 0.89, p = .38$). These results suggest that the reported findings are generally consistent regardless of how frequently couples coping with low desire engage in sex.

Finally, given that the link between self-expansion and relationship satisfaction is well-established (e.g., Muise et al., 2019) and might be driving the effects on sexual well-being, we tested whether the associations between self-expansion and sexual well-being remained significant when controlling for relationship satisfaction. The association between women with low desire's self-expansion and sexual desire and between women and partner's self-expansion and women's sexual satisfaction remained significant after controlling for relationship satisfaction. This suggests that relationship satisfaction is not driving the effects for women's desire or satisfaction. However, when controlling for relationship satisfaction, the associations between partner's self-expansion and sexual distress and satisfaction ($b = -0.50, SE = .90, t[89.83] = -0.55, p = .58$ and $b = 0.44, SE = .52, t[95.97] = 0.83, p = .41$, respectively) became nonsignificant.

In testing these models, it became apparent that relationship satisfaction might be mediating the links between partner's self-expansion and sexual satisfaction and sexual distress. In line with emotional capital theory (Feeney & Lemay, 2012; Walsh et al., 2017), one reason for the association between self-expansion and greater sexual well-being is having an arsenal of more positive relationship feelings (i.e., higher relationship satisfaction). Therefore, we conducted exploratory tests of mediation (Zhang, Zyphur, & Preacher, 2009) using the Monte Carlo method of assessing mediation with 20,000 resamples and 95% confidence intervals (CIs; MacKinnon, Lockwood, & Williams,

2004). For partners, higher relationship satisfaction explained the link between self-expansion and higher sexual satisfaction (95% CI [1.005, 2.805]) and lower sexual distress (95% CI [-4.431, -1.418]).

Discussion

A lack of interest in sex is linked to poorer sexual and relationship quality (Parish & Hahn, 2016; Sarin et al., 2016). Despite the relational implications of low desire, limited research has explored the interpersonal factors that are associated with greater sexual and relationship well-being for couples coping with low sexual desire. Our findings demonstrated that self-expansion is associated with greater sexual and relationship well-being for women with low sexual desire and their partners. Specifically, we found that when women reported higher self-expansion in the relationship, they reported greater relationship and sexual satisfaction, higher desire, and were more affectionate with their partners. When partners reported higher self-expansion, they felt more satisfied with their sex life and relationship (and so did the women), reported lower sexual distress, less dyadic conflict, and partners were more affectionate. We also provide evidence that these effects are relatively robust across relationship duration, low desire duration, sexual frequency, relationship satisfaction, and when compared to community couples. In fact, the association between self-expansion and lower levels of conflict was stronger for partners of women coping with low desire compared to partners in a community sample.

Contributions to theory and research on self-expansion

This work contributes to the literature on the benefits of self-expansion in romantic relationships (e.g., Aron et al., 2000). Consistent with past research in community samples (Muise et al., 2019), we found that self-expansion was associated with higher sexual desire for women coping with low desire and greater sexual and relationship satisfaction for both partners. In the current sample, self-expansion with a partner might detract from overfamiliarity by reinforcing unpredictability between partners, and this, in turn, could account for increased sexual desire (Sims & Meana, 2010). It is also possible that relational self-expansion might be associated with greater approach motivation for sex (i.e., pursuing sex to enhance positive outcomes in the relationship), as self-expansion could promote pro-relationship behaviors (Mattingly & Lewandowski, 2013), and approach goals have been linked to higher sexual desire and sexual and relationship satisfaction in community and clinical couples (Muise, Impett, & Desmarais, 2013; Rosen et al., 2018).

We also found that when partners of women with low desire reported more self-expansion from the relationship, the women with low desire felt more satisfied with their sex life and relationship. This finding is consistent with past research with community couples (Muise et al., 2019) and is part of a growing body of literature on the role of interpersonal factors (and the influence of the partner) in coping with a sexual dysfunction. For example, past research has shown that for women coping with pain during intercourse, when partners are more responsive, express greater affection, and encourage

adaptive coping, women report greater sexual and relationship satisfaction (Muise et al., 2017; Rosen, Muise, Bergeron, Delisle, & Baxter, 2015). It is possible that higher self-expansion is linked to a greater investment in coping with the women's low desire, and this, in turn, is associated with both partners' satisfaction. For couples coping with low desire, the associations between the partner's self-expansion and the women's satisfaction underscore the importance of including the partner in research and treatment of low desire.

Past research suggests that while it is common for women with low desire to avoid physical intimacy (Hinchliff et al., 2012), affectionate behavior can be beneficial for couples coping with sexual difficulties (Vannier et al., 2017). In the current study, we found that when women with low sexual desire and their partners reported higher self-expansion, they also reported more frequent affection. One of the processes through which self-expansion occurs is via a greater overlap between the self and the partner, which has been associated with relationship maintenance behaviors including physical affection (Ledbetter, 2013). In the context of a couple coping with low desire, it is possible, then, that higher self-expansion promotes greater comfort with physical affection, despite the woman's desire difficulties.

The bulk of the existing work on self-expansion has focused on associations with positive relational outcomes in community couples, such as relationship satisfaction and sexual desire (e.g., Muise et al., 2019), and limited work has tested the role of self-expansion in buffering against negative experiences in relationships. In the current research, when the partners of women with low desire reported more self-expansion from the relationship, they were less sexually distressed and reported less conflict. In research on couples in which the woman experiences pain during sex, pro-relationship behaviors (e.g., constructive sexual communication, responsiveness to a partner's sexual needs) have been associated with lower sexual distress and greater satisfaction (Muise et al., 2017; Rancourt, Flynn, Bergeron, & Rosen, 2017). Self-expansion might motivate partners to exert greater effort in maintaining their relationship and thus help them to better cope with challenging relationship experiences (Mattingly & Lewandowski, 2013). For couples coping with low desire, this might mean working to mitigate the negative consequences of their sexual problem by being more responsive and engaging in positive (i.e., open and honest) discussions about the sexual issue (Herbenick et al., 2014). Consistent with emotional capital theory (e.g., Walsh et al., 2017), we found significant indirect effects through relationship satisfaction for associations between partner's self-expansion and their sexual satisfaction and distress, suggesting that positive relationship feelings are one reason why self-expansion helps reduce partners' sexual distress and maintain their sexual satisfaction. However, these mediation analyses are tentative as the current study is cross-sectional; future longitudinal research is necessary to provide evidence for the significant indirect effects.

Finally, research suggests that couples in longer versus shorter relationships who are more comfortable and may experience less excitement and desire, as well as new parent couples who have less time for intimacy in their relationships, might *especially* benefit from relationship-promoting activities (Muise, Giang, & Impett, 2014; Slatcher, 2010). In the current research, we found that the strength of the associations between self-expansion and relationship and sexual well-being were similar between couples

coping with low desire and community couples, and in one case, there was a stronger association between self-expansion and less conflict for partners of women with low desire. It is possible that self-expansion might be linked with less conflict for partners of women with low desire because, similar to couples in longer relationships or new parents, they may have more room to improve because coping with low desire can be a distressing issue. While we provide initial evidence for the unique benefits of self-expansion for couples coping with low desire, there are some limitations with our control sample. The community sample was collected for another study and we did not screen participants for the absence of a sexual dysfunction. Given the high prevalence of sexual dysfunctions (Mitchell et al., 2013), it is possible that we might see even larger differences in the associations if we screened for and excluded people with a sexual dysfunction.

Implications for couples coping with low sexual desire

Our findings add to a small but growing literature highlighting the importance of interpersonal factors in the satisfaction of couples coping with low desire and identifying a possible novel target for couple-based interventions. Few empirically supported psychological interventions are currently available for coping with low desire, but one that has shown promise is mindfulness practice. Sexual challenges are associated with more cognitive distractions during sex, which may make it difficult for women to notice their sexual sensations and desire (Nobre & Pinto-Gouveia, 2006; Paterson et al., 2017). There is preliminary evidence that mindfulness training is associated with positive sexual outcomes for women with clinically low desire, perhaps by targeting negative thoughts to reinforce women's sexual awareness (Paterson et al., 2017). One possible mechanism for the association between mindfulness and enhanced relationship outcomes is self-expansion (Carson et al., 2007). Evidence from community samples also suggests that boosting self-expansion has positive implications for sexual desire (Muisse et al., 2019). Future research may consider orienting couples coping with low desire toward opportunities for self-expansion in their relationship (e.g., through behavioral interventions) to test the implication for couples' sexual and relational well-being and provide stronger evidence for the causal direction of the effects.

Limitations and future directions

A key strength of the current study is investigating the role of self-expansion in the sexual and relationship well-being of both members of a clinical sample of couples. By assessing couples, we demonstrate how one person's self-expansion is associated with both their own and their partner's outcomes, underscoring the importance of including both partners when treating low desire and targeting interpersonal factors. However, our findings may not be generalizable to all couples coping with low desire because couples seeking to participate in research may be more motivated to seek treatment than other couples. Future research could explore other personal and relationship characteristics to inform who might benefit most from interventions targeting self-expansion in the relationship.

The current study is cross-sectional and there is much to be gained by following couples over time. Sexual desire tends to normatively decline over time (e.g., Klusmann, 2002), and self-expansion is theorized to decline as partners become more comfortable and familiar (Aron & Aron, 1996). Future research could test how self-expansion influences the trajectory of sexual desire and whether higher levels of self-expansion help couples maintain satisfaction over time, even when coping with chronically low sexual desire.

The current findings suggest that higher levels of self-expansion are associated with sexual and relationship well-being; however, we have not identified specific activities that lead to higher self-expansion for couples coping with low desire. Future research—ideally in which couples with low desire are surveyed over time in their daily lives—could provide insight into the specific self-expanding activities that ultimately promote greater well-being. This information could be incorporated into the development of interventions for couples coping with low desire.

Conclusion

The current study extends self-expansion theory to demonstrate that, for couples coping with low sexual desire, higher self-expansion was associated with greater relationship and sexual well-being, including less conflict and lower distress. Our findings contribute to a body of literature that emphasizes interpersonal factors associated with coping with a sexual dysfunction and low sexual desire in particular (McCarthy & Wald, 2015; Muise et al., 2017). We also provide initial evidence that self-expansion in relationships has implications for couples coping with low sexual desire and may be a novel target for clinical interventions.

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Open research statement

As part of IARR's encouragement of open research practices, the author(s) have provided the following information: This research was not pre-registered. The data and materials used in the research can be obtained at: https://osf.io/h6w24/?view_only=ddee94987c614942b6bece328b03fceb or by emailing: raposos@yorku.ca.

Supplemental material

Supplemental material for this article is available online.

Notes

1. Comparison analyses were conducted in response to a comment raised in the review process.
2. We also tested the associations between self-expansion and two other measures of desire—the sexual desire subscale from the Female Sexual Function Index (FSFI; Rosen et al., 2000) and the partner-focused dyadic subscale of the Sexual Desire Inventory (SDI; Moyano, Vallejo-Medina, & Sierra, 2017; Spector, Carey, & Steinberg, 1996). When women reported higher self-expansion in their relationship, they reported higher desire as assessed by the FSFI ($b = 0.14$, $SE = .06$, $t(94) = 2.44$, $p = .02$). Using the dyadic subscale of the SDI, this effect was in the expected direction but did not reach significance ($b = 1.10$, $SE = .69$, $t[94] = 1.58$, $p = .12$).

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