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The Costs and Benefits of Sexual Communal Motivation for Couples Coping With Vulvodynia

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Objective: Most women with vulvodynia—a prevalent, chronic, vulvovaginal pain condition—engage in intercourse with their partners despite experiencing pain. Their motivation for doing so appears to be interpersonally oriented (e.g., to meet their partners' sexual needs), but the costs and benefits of such motivations are unknown. We tested whether sexual communal strength (being responsive to a partner's sexual needs) and unmitigated sexual communion (focusing on a partner's sexual needs to the exclusion of one's own needs) were associated with sexual function, and sexual and relationship satisfaction in couples with coping with vulvodynia. ***Method:*** In an 8-week daily experience study, 95 women diagnosed with vulvodynia and their partners reported on sexual communal strength, unmitigated sexual communion, sexual function, and sexual and relationship satisfaction on days when sexual activity occurred. ***Results:*** On days when women reported higher sexual communal strength, both they and their partners reported greater sexual function and satisfaction, and their partners reported greater relationship satisfaction. When women's partners reported higher sexual communal strength, both they and the women reported better sexual function, partners reported greater sexual satisfaction, and women reported greater relationship satisfaction. On days when women reported higher unmitigated sexual communion, they reported poorer sexual function and lower sexual satisfaction, and both the women and partners reported lower relationship satisfaction. When women's partners reported higher unmitigated sexual communion, they reported poorer sexual function. ***Conclusions:*** These novel aspects of sexual motivation should be targeted in psychological interventions aimed to improve the sexual and relationship well-being of affected couples.

Keywords: vulvodynia, couples, sexual motivation, sexual function, satisfaction

Vulvodynia is a highly prevalent vulvovaginal pain condition that affects 8% of reproductive-aged women (Harlow et al., 2014). The most common subtype of vulvodynia is provoked vestibulodynia (PVD), a recurrent pain specific to the vulvar vestibule that is elicited via pressure in sexual and nonsexual contexts (Bergeron, Binik, Khalifé, Pagidas, & Glazer, 2001). Women with vulvodynia typically score in the clinical range of sexual dysfunction for low desire and arousal (Masheb, Lozano-Blanco, Kohorn, Minkin, & Kerns, 2004) and report lower sexual satisfaction compared with women without vulvodynia (Bergeron, Rosen, & Morin, 2011). Similarly, controlled studies show that male partners of women with vulvodynia report more erectile difficulties and lower sexual satisfaction compared with pain-free controls (Pazmany, Bergeron, Verhaeghe, Van Oudenhove, & Enzlin, 2014; Smith & Pukall, 2014). Given that sexual and relationship satisfaction are highly interdependent and bidirectional (McNulty, Wenner, & Fisher, 2016), it is perhaps not surprising that both women with vulvodynia and their partners report negative consequences to their romantic relationships, such as poorer communication and less affection (Elmerstig, Wijma, & Berterö, 2008; Smith & Pukall, 2014).

Like many pain conditions, the etiology and maintenance of vulvodynia is multifactorial (Bergeron et al., 2011). Interpersonal factors are particularly relevant because the functional "disability" associated with vulvodynia is its interference with partnered sexual activities. Prior studies have linked interpersonal variables such as

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intimacy and communication to the sexual and relationship adjustment of couples coping with vulvodynia (Bois et al., 2016; Pazmany, Bergeron, Verhaeghe, Van Oudenhove, & Enzlin, 2015). Given that over 85% of affected women reported engaging in sex at least once in the past 6 months (Reed et al., 2012), sexual motivation—or the reasons why a person engages in sex with their partner—is an emerging factor that has implications for the sexual and relationship well-being of couples coping with vulvodynia (Dewitte, Van Lankveld, & Crombez, 2011). In several chronic pain populations, researchers have established associations between goals for persisting with painful activities and the experience of pain, disability, and distress, although such studies have rarely incorporated interpersonal goals (Affleck et al., 1998, 2001; Hamilton, Karoly, & Zautra, 2005; Massey, Garnefski, & Gebhardt, 2009; Van Damme, Van Ryckeghem, Wyffels, Van Hulle, & Crombez, 2012). In a cross-sectional study, when women with vulvodynia engaged in sex to pursue positive outcomes in their relationship (e.g., to enhance intimacy), they reported greater sexual and relationship satisfaction, but when they engaged in sex to avoid negative outcomes (e.g., to avoid conflict), they felt less satisfied with their sex life and relationship (Rosen, Muise, Bergeron, Impett, & Boudreau, 2015). Meeting a partners' sexual needs appears to be a driving force behind the motivation to continue engaging in painful sexual activities (Brauer, Lakeman, van Lunsen, & Laan, 2014; Elmerstig et al., 2008). It is therefore important to investigate how this type of motivation facilitates or detracts from the sexual and relationship well-being of couples coping with vulvodynia. We draw on novel aspects of sexual motivation—sexual communal strength and unmitigated sexual communion—to test the costs and benefits of engaging in sex to meet a partner's sexual needs in the daily lives of couples coping with vulvodynia.

Sexual Communal Motivation

Theories of communal motivation—a willingness to accrue costs to meet a partner's needs (Clark & Mills, 2012; Mills, Clark, Ford, & Johnson, 2004)—have been applied to the sexual domain of relationships (see review by Muise & Impett, 2016). *Sexual communal strength* is the extent to which people are motivated to be noncontingently responsive to their partner's sexual needs (Muise, Impett, Kogan, & Desmarais, 2013). Somewhat paradoxically, focusing on meeting the needs of one's partner leads to increased benefits for the self: In community couples, both men and women higher in sexual communal strength reported higher sexual desire and relationship and sexual satisfaction (Day, Muise, Joel, & Impett, 2015; Muise & Impett, 2015) and were more likely to maintain sexual desire over time (Muise et al., 2013). Perhaps, more intuitively, individuals with partners higher in sexual communal strength reported that their partners were, in fact, highly responsive to their needs during sex, and, in turn, they felt more satisfied with their relationships (Muise & Impett, 2015). People higher in sexual communal strength tend to meet their partner's sexual needs out of genuine care and concern for their partner's well-being (Muise et al., 2013). In couples in which one person experiences chronic pain, helping a partner for autonomous reasons (i.e., inherent enjoyment) as opposed to controlled reasons (i.e., internal obligation or guilt) has been associated with greater positive affect, less distress, and greater relationship quality for both the person with pain and their partner (Kindt et al., 2015; Kindt, Vansteenkiste, Loeys, & Goubert, 2016).

In qualitative reports, young women experiencing pain during intercourse have indicated that satisfying their partner's sexual needs is of primary importance and a key reason for continuing to have intercourse (Elmerstig et al., 2008). However, it may be more challenging to be responsive to a partner's sexual needs (i.e., to be sexually communal) in the context of sexual dysfunction (Impett, Muise, & Rosen, 2015). Indeed, in one population-based sample of over 5,000 Finnish women, 10% reported that their partner had sexual needs that they did not want to satisfy, and endorsing this item was significantly associated with having a sexual dysfunction (Witting et al., 2008). Given that people higher in sexual communal strength are perceived by their partners as being more responsive to their sexual needs (Muise & Impett, 2012), a factor which has been linked to greater sexual and relationship satisfaction in couples with vulvodynia (Bois et al., 2016; Rosen, Bois, Mayrand, Vannier, & Bergeron, 2016; Rosen, Muise, et al., 2015), sexual communal strength may facilitate daily sexual function and sexual and relationship satisfaction for both women with vulvodynia and their partners.

Unmitigated Sexual Communion

Research on communal giving does not suggest that partners should *always* be willing to meet one another's sexual needs. Meeting a partner's sexual needs to the *exclusion* of one's own needs is unlikely to be beneficial for either person in the relationship. *Unmitigated communion*—consistently placing others' needs before one's own, worrying excessively about others' problems, and focusing on others to one's own detriment (Fritz & Helgeson, 1998)—is associated with greater distress, poorer health behaviors, and lower levels of psychological and interpersonal well-being in community samples (Fritz, 2000; Fritz & Helgeson, 1998; Helgeson & Fritz, 1999, 2000). Unmitigated communion is not simply a high level of communal giving, but is distinguished from communion (i.e., a construct similar to communal strength) as care for others that involves self-neglect (Helgeson & Fritz, 1999). In essence, people higher in unmitigated communion take the value of interpersonal connectedness to an unhealthy extreme, prioritizing the needs of others while neglecting their own psychological and physical well-being (Fritz, 2000; Helgeson, 1993). For example, women with rheumatoid arthritis who reported higher (relative to lower) unmitigated communion were more psychologically distressed and reported more functional disability related to their pain (Danoff-Burg, Revenson, Trudeau, & Paget, 2004). In addition, patients recovering from their first coronary event who were higher in unmitigated communion had spouses who reported poorer relationship adjustment (Helgeson, 1993). Previous research has demonstrated that although people higher in unmitigated communion tend to report greater anxiety and insecure attachment styles, trait levels of anxiety or insecurity do not account for the associations between unmitigated communion and well-being. High unmitigated communion is characterized by distress in response to meeting a partner's needs, and this quality has a unique impact on a person's distress and well-being (Helgeson & Fritz, 1998).

Past research suggests that unmitigated sexual communion might be especially relevant in women with vulvodynia. In a large

study of adolescent girls who reported experiencing pain during intercourse, 47% reported continuing intercourse despite the pain, 33% did not tell their partners about the pain, and 22% feigned enjoyment during sexual activity (Elmerstig, Wijma, & Swahnberg, 2013). Consistent with being high in unmitigated sexual communion, a primary reason young women reported for continuing to engage in sex was to prioritize their partner's sexual enjoyment above their own (Elmerstig et al., 2013). More globally, women with vulvodynia may feel pressure to focus on their partner's sexual pleasure while devaluing their own pleasure (Elmerstig, Wijma, Sandell, & Berterö, 2012), which could have negative repercussions for their own and their partner's satisfaction. In addition, the partners of women with vulvodynia might feel pressure to focus on the needs of their female partner because of her pain.

One key reason why unmitigated communion is associated with more distress and lower well-being is because people high in unmitigated communion are reluctant to ask for and receive support from others, and feel that seeking support is a burden to others (Helgeson & Fritz, 2000). In the context of vulvodynia, greater unmitigated sexual communion might therefore interfere with couples' communication about the pain and adaptation of sexual activities, resulting in lower sexual and relationship well-being for affected women and partners.

The Current Study

We conducted a dyadic daily experience study with couples coping with vulvodynia to investigate the associations between sexual communal strength and unmitigated sexual communion and sexual function, sexual satisfaction and relationship satisfaction. We used a daily experience design because sexual experiences are affected by physical, relational, and psychological factors, which may vary across sexual interactions, as evidenced in prior vulvodynia studies (e.g., Rosen, Muise, et al., 2015). In the current study, we predicted that on days when women with vulvodynia and their partners reported higher sexual communal strength, both partners would report better sexual function, and greater sexual and relationship satisfaction, whereas on days when women and partners reported higher unmitigated sexual communion, both partners would report poorer sexual function, and lower sexual and relationship satisfaction.

Method

Participants

Ninety-five women and their partners were recruited in two Canadian cities between May 2014 and June 2016 through the following means: 65 (68.4%) from print and online advertisements, 17 (17.9%) from participating in a previous study conducted by the authors, nine (9.5%) were referred by a physician, and four (4.2%) were recruited by word of mouth. The inclusion criteria for women were (a) pain during intercourse that was subjectively distressing, occurred on 80% of intercourse attempts, and had lasted for at least 6 months; (b) pain limited to pressure to the vestibule; (c) pain during the diagnostic gynecological examination; and (d) in-person contact with their romantic partner a minimum of four times per week for at least 3 months, with a minimum level of sexual activity of once per month in the previous 3 months. Sexual activity was broadly defined to include intercourse, manual, or oral stimulation but did not require vaginal penetration. Exclusion criteria were presence of one of the following: active infection previously diagnosed by a physician or self-reported infection, pregnancy, age less than 18 or greater than 45 years, and had started menopause. The only exclusion criterion for partners was age less than 18.

Of 143 interested couples, 47 (33%) were ineligible: 12 (9%) did not receive a diagnosis of PVD by the gynecologist, 22 (15%) women or partners withdrew before starting the daily surveys, 10 (7%) couples ended their relationship during eligibility process, and three (2%) were ineligible for other reasons (e.g., pain location criteria, unable to complete diaries unassisted). Of the 96 eligible couples, one couple was not included in the analyses because they did not report engaging in sex during the study. Therefore, the final sample size was 95 women diagnosed with PVD and their partners (n = 93 men and 2 women). Table 1 provides complete participant demographics.

Procedure

Women were screened for eligibility using a structured interview over the telephone, and then scheduled for a gynecological examination if they were not referred directly from a physician who had conducted an examination. The gynecological exam involved a well-validated, standardized "cotton swab test"—the recommended gynecological procedure to diagnose PVD (Bergeron et al., 2001). The examination included a randomized palpation using a dry cotton swab of three locations of the vestibule surrounding the hymeneal ring (i.e., 3, 6, and 9 o'clock), to which participants rated their pain at each site on a scale of 0 (*no pain*) to 10 (*worst pain ever*). After eligibility was confirmed, couples attended an orientation session in which they each provided informed consent, and completed online questionnaires that included sociodemographics and self-report measures not pertinent to the present study. Participants then completed daily surveys for 8 consecutive weeks through links to a secure survey server site that was emailed individually to each participant. They were instructed to begin the diaries that evening and to complete them each evening (reflecting on the previous 24 hr), and independently from their partner. Several strategies supported diary completion: (a) a research assistant telephoned participants twice a week as a reminder and to answer questions, (b) a research assistant helped couples identify any barriers to completing the daily surveys, (c) participants were given a reminder flyer to post in their home, and (d) participants received a nightly reminder email at 10:00 p.m. if they had not yet completed the survey for that day. Daily measures included variables not relevant to the present study, as well as an item inquiring about whether or not the participant had engaged in sexual activities in the preceding 24 hr. If the participant indicated that sexual activity had occurred (i.e., caressing, foreplay, mutual masturbation, sexual intercourse), then they completed measures of sexual communal strength and unmitigated sexual communion as well as their sexual function, sexual satisfaction, and relationship satisfaction. The overall rate of diary completion was 89.04% (9,135 diaries of a possible 10,260). Participants reported a mean of 8.62 sexual activity days (SD = 5.70; range = 1–31). After completing the study, participants received psychoeducational information about vulvodynia

Table 1
Descriptive Statistics for Demographic and Key Study Variables (N = 95 Couples)

Demographic variable	Women		Partners	
	M (range) or *n*	*SD* or %	*M* (range) or *n*	*SD* or %
Characteristic				
Age (years)	25.51 (18–45)	5.61	26.67 (18–50)	6.49
Cultural background				
Blinded for review	49	51.6%	43	45.3%
Blinded for review	31	32.6%	32	33.7%
European	5	5.3%	9	9.5%
Other	10	10.5%	11	11.5%
Annual income (household; CAD$)				
$0–$19,999	29	30.9%	—	—
$20,000–$39,999	13	13.8%	—	—
$40,000–$59,999	17	18.1%	—	—
$60,000–$79,999	17	18.1%	—	—
$80,000–$99,999	9	9.6%	—	—
≥$100,000	9	9.6%	—	—
Relationship status				
Married	18	19.2%	—	—
Cohabitating	46	48.9%	—	—
Dating	30	31.9%	—	—
Relationship duration (months)	34.57 (6–168)	35.32	—	—
Women's pain intensity	6.62 (1.7–10)	1.64		
Women's pain duration (months)	63.71 (6–264)	56.98		
Study variables (daily)				
Sexual communal strength	2.39 (0–4)	1.15	2.63 (0–4)	1.15
Unmitigated sexual communion	2.53 (1–5)	1.11	2.80 (1–5)	.99
Sexual function	29.33 (4–54)	11.35	40.41 (11–54)	7.61
Sexual satisfaction	5.44 (1–7)	1.36	5.74 (1–7)	1.28
Relationship satisfaction	5.73 (1–7)	1.00	5.80 (1–7)	1.00

and references to local health professionals with expertise in this condition. Women received $20.00 for the gynecological examination; both partners received $10.00 each for attending the orientation session and up to $96.00 each for completing the daily experience study (payment was prorated based on the number of diaries completed). The research ethics boards at the IWK Health Center, Dalhousie University, and the Centre Hospitalier de l'Université de Montréal approved the present study.

Measures

Participants reported their age and relationship duration, and women reported their pain duration (in months) at background. In the daily surveys, sexuality measures were assessed on days when sexual activity occurred and relationship satisfaction was assessed on all days. We used brief daily measures to increase efficiency and to reduce participant burden (Bolger, Davis, & Rafaeli, 2003). Means and standard deviations of all measures are presented in Table 1.

Sexual communal strength. We used three items from a previously validated measure of sexual communal strength (Muise et al., 2013) that were adapted to be in reference to sexual activity that occurred that day. Items included "During sex, I was focused on meeting my partner's needs," "During sex, I did things to meet my partner's needs without expecting him or her to directly reciprocate," and "Meeting my partner's needs was a high priority for me during sex." Items were rated on a 5-point scale from 0 (*not at all*) to 4 (*extremely*), and the scale demonstrated good internal consistency for women (α = .83) and partners (α = .88).

Unmitigated sexual communion. We adapted three items from a validated measure of unmitigated communion (Helgeson, 1993; Muise et al., 2013) to focus on a sexual encounter that occurred that day. Items included "During sex, I was only focused on meeting my partner's needs," "During sex, I put my partner's needs ahead of my own needs," and "During sex, it was impossible for me to satisfy my own needs if they conflicted with my partner's needs." Items were rated on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Internal consistency was good for women (α = .78) and partners (α = .74).

Sexual function. Sexual function was assessed with the Monash Women's Health Program Female Sexual Satisfaction Questionnaire (MFSSQ; Davison, Bell, La China, Holden, & Davis, 2008). The 11-item MFSSQ assesses the nature and quality of a recent sexual experience (within 24 hr), including sexual receptivity, ease of arousal, vaginal lubrication, degree of pleasure, and satisfaction. The MFSSQ was previously adapted to assess male partners' sexual function (Rosen et al., 2014). The potential range in scores for both women and men was 5 to 54, with higher scores reflecting better functioning. The scale demonstrated good internal consistency for both women and partners (α = .86 for both).

Sexual satisfaction. Daily sexual satisfaction was assessed with the Global Measure of Sexual Satisfaction scale (Lawrance & Byers, 1995). This measure consists of five bipolar items (e.g., bad—good, unpleasant—pleasant) to which participants respond

on a 7-point scale. The scale demonstrated high internal consistency for both women ($\alpha = .94$) and partners ($\alpha = .95$).

Relationship satisfaction. Daily relationship satisfaction was assessed with the Kansas Marital Satisfaction Scale (Schumm et al., 1986) adapted for nonmarital relationships and for the daily context. Items were rated on a 7-point scale from 1 (*extremely dissatisfied*) to 7 (*extremely satisfied*). Internal consistency was good for women and partners ($\alpha = .96$ for both).

Results

Data Analyses

Data were analyzed with multilevel modeling in SPSS Version 20.0, guided by the Actor–Partner Interdependence Model (Kenny, Kashy, & Cook, 2006). In the analyses, we were interested in the associations between a person's daily sexual motivation (i.e., sexual communal strength and unmitigated sexual communion) and their own sexual function, sexual satisfaction, and relationship satisfaction (i.e., actor effects), and the associations between a person's daily sexual motivation and their partner's sexual function, sexual satisfaction, and relationship satisfaction (i.e., partner effects). We ran three models, one for each outcome: sexual function, sexual satisfaction, and relationship satisfaction. All models included women and partners' ratings of sexual communal strength and unmitigated sexual communion entered simultaneously as predictors. We tested two-level cross models with separate random intercepts for women and partners, in which persons are nested within dyads, and person and days are crossed to account for the fact that both partners completed the daily surveys on the same days (Kenny et al., 2006). All daily-level predictors were person-mean centered such that coefficients reflect associations between deviations from a person's mean score on each sexual motivation variable and each outcome measure (Raudenbush, Bryk, Cheong, & Congdon, 2004). As such, these analyses account for between-person differences in sexual communal motivation and unmitigated sexual communion, and assess whether day-to-day *changes* from a participant's own mean on the sexual motivation variables are associated with corresponding changes in sexual function and sexual and relationship satisfaction for both partners. Given that the sexual motivation variables were only assessed on days when sexual activity occurred, the analyses only included sexual activity days. The coefficients reported are unstandardized betas (*b*) and are interpreted as the change in the outcome for every one-unit increase in the predictor; these act as an indication of the effect size. Correlations between all study variables are reported in Table 2. Participants' age, relationship duration, sexual frequency, and women's pain duration and intensity were correlated with our key variables at less than .3 (all *r*s between −.25 and .18) and were not included as covariates in the analyses. In addition, sexual communal strength and unmitigated communion did not differ based on cultural background.

Daily Associations Between Sexual Motivation and Sexual Function

As predicted and reported in Table 3, on days when women reported higher sexual communal strength, both the women and their partners reported better sexual function. Similarly, on days when partners reported higher sexual communal strength, both women and partners reported better sexual function. However, on days when women reported higher unmitigated sexual communion, women reported poorer sexual function, but there was no association with their partner's sexual function. On days when partners reported higher unmitigated sexual communion, the partners also reported poorer sexual function, but there was no association with women's sexual function. That is, for both women with PVD and their partners, being motivated to meet a partner's sexual needs and having a partner who is more motivated to meet their sexual needs was associated with better sexual function, whereas when women and partners were overly focused on meeting the other person's sexual needs to the exclusion of their own needs, they reported poorer sexual function.

Daily Associations Between Sexual Motivation and Sexual Satisfaction

As predicted and reported in Table 3, on days when women reported higher sexual communal strength, both women and partners reported greater sexual satisfaction. On days when partners reported higher sexual communal strength, both women and partners reported feeling more sexually satisfied. However, on days when women reported higher unmitigated sexual communion, both women and partners reported lower sexual satisfaction. Partners' unmitigated sexual communion was not associated with their own or the women's sexual satisfaction. That is, being highly motivated to meet a partner's sexual needs was associated with feeling more sexually satisfied for both women and their partners, but when women were overly focused on meeting their partner's sexual needs, both the women and their partners had less satisfying sexual experiences.

Table 2
Correlations Among Key Study Variables

Variable	1	2	3	4	5
1. Sexual communal strength	**.11**	.70***	.01	−.02	.20*
2. Unmitigated sexual communion	.75***	**−.14**	−.23*	−.29**	.01
3. Sexual function	.13	−.12	**−.15**	.50***	.02
4. Sexual satisfaction	.05	−.12	.41***	**.58****	.39***
5. Relationship satisfaction	.15	−.04	.58***	.59***	**.52****

Note. Correlations are between aggregates of the daily variables; women's correlations are above the diagonal; partner's correlations are below the diagonal; bolded correlations are between women and partner reports.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3
Daily Associations Between Sexual Communal Strength and Unmitigated Sexual Communion and Sexual Function, Sexual Satisfaction, and Relationship Satisfaction

	W's sexual function		P's sexual function		W's sexual satisfaction		P's sexual satisfaction		W's relationship satisfaction		P's relationship satisfaction	
Predictor	*b* (*SE*)	*t*	*b* (*SE*)	*t*	*b* (*SE*)	*t*	*b* (*SE*)	*t*	*b* (*SE*)	*t*	*b* (*SE*)	*t*
W's SCS	1.53 (.41)	2.85**	2.44 (.59)	4.12***	.20 (.06)	3.16**	.17 (.06)	2.76**	.04 (.04)	1.17	.11 (.03)	3.33**
P's SCS	1.47 (37)	3.95***	.93 (.41)	2.25*	.18 (.07)	2.62**	.22 (.07)	3.35**	.10 (.05)	2.07*	.06 (.04)	1.62
W's USC	−5.35 (.56)	−9.58***	−17 (.72)	−.24	−.42 (.07)	−6.54***	−.15 (.06)	−2.35*	−.13 (.04)	−2.97**	−.11 (.04)	−3.12**
P's USC	−.72 (.39)	−1.86	−1.36 (.50)	−2.71*	−.19 (.08)	−1.16	−.15 (.08)	−1.81	−.10 (.06)	−1.73	−.03 (.05)	−.68

Note. *b* values are unstandardized coefficients; degrees of freedom ranged from 416.17 to 522.96. W = women; P = partner; *SE* = standard error; SCS = sexual communal strength; USC = unmitigated sexual communion.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Daily Associations Between Sexual Motivation and Relationship Satisfaction

As predicted and reported in Table 3, on days when women reported higher sexual communal strength, their partners reported greater relationship satisfaction, but there was no association with the women's own relationship satisfaction. On days when partners reported greater sexual communal strength, women reported greater relationship satisfaction, but there was no association with the partner's relationship satisfaction. However, on days when women reported higher unmitigated sexual communion, both women and partners reported lower relationship satisfaction. That is, both women and their partners felt more satisfied in their relationship when their partner was highly motivated to meet their sexual needs, but on days when women were overly focused on meeting their partner's sexual needs, both the women and their partners felt less satisfied with their relationship.

Discussion

In the current study, we demonstrated the costs and benefits of being motivated to meet a partner's sexual needs in a sample of couples coping with vulvodynia. This work contributes to a growing body of research demonstrating the role of interpersonal factors in chronic pain (Hadjistavropoulos et al., 2011). Our findings revealed that although being motivated to meet a partner's sexual needs can be beneficial for the sex lives and relationships of couples with vulvodynia, if this motivation is taken too far and a partner's sexual needs are focused on to the exclusion of one's own needs, then there may be negative sexual and relationship repercussions.

Specifically, we found that on days when women with vulvodynia reported higher sexual communal strength, both the women and their partners reported better sexual function and greater sexual satisfaction, and their partners reported greater relationship satisfaction. On days when women's partners reported higher sexual communal strength, both they and the women reported better sexual function and greater sexual satisfaction, and women reported greater relationship satisfaction. These findings are consistent with research in community samples of couples (Day et al., 2015; Muise & Impett, 2015). In the current sample of couples coping with vulvodynia, being more motivated to meet a partner's sexual needs might promote couples' abilities to adapt their sexual script to accommodate the pain, and this, in turn, might allow them to be more fully immersed in the positive aspects of the sexual experience (e.g., intimacy, pleasurable sensations), thereby enhancing overall sexual functioning as well as satisfaction. Another reason why people higher in sexual communal strength may report these benefits is because they tend to engage in sex to pursue positive outcomes in their relationship (i.e., for higher approach goals), such as to enhance intimacy and feel closer to their partner (Muise et al., 2013). Previous research has demonstrated that when women with vulvodynia had stronger approach goals for engaging in sex, they reported greater sexual and relationship satisfaction (Rosen, Muise, et al., 2015).

In past research, the partners of individuals higher in sexual communal strength indicated that their partner was, in fact, more responsive to their needs during sex, and perceptions of partner responsiveness was one key reason why they reported greater relationship satisfaction (Muise & Impett, 2015). Therefore, it is possible that in the current sample, on days when people were higher in sexual communal strength, their partners reported greater sexual and relationship well-being because they perceived their partner as more responsive. In fact, in an observational study of couples with vulvodynia, when women and their partners expressed greater empathic response during an in-lab conversation, they both reported greater sexual satisfaction (Bois et al., 2016), and women's empathic response was also linked to her own and her partner's greater relationship satisfaction (Rosen et al., 2016).

The current study also demonstrated that overfocusing on a partner's sexual needs was associated with negative repercussions for couples affected by vulvodynia. On days when women reported higher unmitigated sexual communion, they reported poorer sexual function and both the women and their partners reported lower sexual and relationship satisfaction. It is important to note that there was no significant association between women's unmitigated sexual communion and partners' sexual function, suggesting that even on days when women reported being overly focused on their partner's sexual needs, their partners did not report benefits. In addition, on days when partners were higher in unmitigated sexual communion, they reported poorer sexual function. These findings are consistent with previous findings demonstrating that high unmitigated communion has a unique impact on a person's distress and well-being (Helgeson & Fritz, 1998). Taken together, the results suggest that being overly focused on a partner's sexual needs in the context of vulvodynia detracts from a person's own sexual and relationship well-being (especially for women), is not

beneficial for the partner, and, instead, detracts from a partner's relationship quality.

Unmitigated communion has been associated with difficulty self-disclosing and discomfort in receiving support from others (Helgeson & Fritz, 2000), which may be one reason why unmitigated sexual communion was associated with lower sexual and relationship well-being in the current study. Although partners' unmitigated sexual communion was negatively associated with their own sexual function, women's unmitigated sexual communion was more consistently associated with negative outcomes for both themselves and their partners, suggesting that when women with vulvodynia are overly focused on meeting their partners' sexual needs to the exclusion of their own needs, this is especially detrimental. In one sample of women who reported pain during intercourse, nearly half of the women persisted with intercourse despite the pain, and one third did not express their pain to their partners (Elmerstig et al., 2013). It is possible that when women with vulvodynia are higher in unmitigated sexual communion, they have poorer sexual communication with their partners and, therefore, are less likely to pursue activities that might facilitate pleasure and reduce pain (e.g., nonpenetrative sexual activities), thus enhancing sexual function. Cross-sectional studies have shown that women with vulvodynia have poorer sexual communication than pain-free controls, and that their lower levels of sexual communication were associated with lower sexual and relationship satisfaction for both partners (Pazmany et al., 2014, 2015; Rancourt, Rosen, Bergeron, & Neilis, 2016). In addition, people higher in unmitigated communion tend to have lower self-worth and are overly focused on their partner's needs in order to feel important and valuable (Helgeson & Fritz, 2000). Women experiencing pain during sex report feeling inadequate and inferior to their partner (Elmerstig et al., 2013). Other research has shown that women with vulvodynia whose self-worth is contingent on maintaining their sexual relationship report more sexual distress, poorer sexual function, and lower sexual satisfaction (Glowacka, Rosen, & Bergeron, 2016). Therefore, women with vulvodynia who are higher in unmitigated sexual communion may have a precarious sense of self-worth that is contingent on meeting their partner's sexual needs, ultimately leading to poorer sexual function and lower sexual and relationship satisfaction.

Whereas people higher in sexual communal strength perceive their partners as willing and able to meet their needs (Muise & Impett, 2015), people higher in unmitigated communion have trouble asserting their needs, which has been associated with greater psychological distress (Fritz & Helgeson, 1998; Helgeson & Fritz, 1999). Thus, women with vulvodynia who are higher in unmitigated sexual communion may have trouble communicating about and advocating for their sexual needs. Past research has shown that when women with vulvodynia reported less sexual assertiveness—that is, they were more inhibited in their expression of sexual feelings and desires—they reported poorer sexual function and both the women and their partners reported lower sexual satisfaction (Leclerc et al., 2015). Moreover, male partners of women with vulvodynia generally tend to underestimate their female partner's pain (Rosen, Sadikaj, & Bergeron, 2015). It is possible that when women with vulvodynia are higher in unmitigated sexual communion, their experience of pain is less clear to their partner and their partners are less responsive to their needs, resulting in lower sexual and relationship well-being.

The current study has several strengths. The use of daily experience methods allowed us to assess both partners' motivations for meeting their partners' sexual needs for a specific sexual encounter, in recognition of the great variability in thoughts, feelings, and behaviors across sexual interactions. Although individuals with chronic pain, including vulvodynia, frequently hold goals of pain avoidance, the importance of goals related to task persistence (in this case engaging in sex), some of which may be interpersonally driven, should not be ignored (Karsdorp & Vlaeyen, 2011). The current study demonstrated the relevance of two novel types of interpersonal goals—sexual communal strength and unmitigated sexual communion—for the sexual and relationship well-being of couples coping with vulvodynia. Finally, the dyadic nature of this study illustrated that the motivation to meet a partner's sexual needs has implications for both one's own and one's partner's sexual and relationship well-being.

There are, however, limitations to the present study. The research was correlational and causal conclusions cannot be drawn. Although the theoretical grounding of predictions provided some confidence in the direction of the effects, it is possible that some of the associations are bidirectional, whereby couples affected by vulvodynia who have more positive sexual experiences or are involved in a more satisfying relationship report higher sexual communal strength. Future longitudinal work that follows up with couples several months or a year after the completion of the daily experience study could help inform the direction of the effects and test whether sexual communal motivation influences outcomes over time. In addition, although our discussion of the current results suggested some possible explanatory mechanisms for the observed associations (e.g., sexual communication), we did not test these mechanisms, and this is an important avenue for future longitudinal research.

Conclusions

The current study demonstrates that sexual communal strength may be beneficial, whereas unmitigated sexual communion could be costly in the daily lives of couples with vulvodynia. The findings contribute to an emerging body of research demonstrating the role of interpersonal factors, such as sexual motivation, in pain conditions (Keefe & Porter, 2007), and indicate novel variables that can inform interventions for couples coping with vulvodynia. Research has demonstrated that therapeutic interventions targeting motivational factors improves the pain severity, mood, and relationship satisfaction of couples when one partner reports chronic pain (Miller, Cano, & Wurm, 2013). Interventions could use cognitive–behavioral or acceptance-based strategies to assist couples in identifying motivations for meeting a partner's sexual needs and working to enhance sexual communal strength, while also ensuring partners assert their own sexual needs. Targeting the sexual need fulfillment of both partners may help to enhance the sexual function and sexual and relationship satisfaction of couples affected by vulvodynia.

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