ORIGINAL RESEARCH

Approach and Avoidance Sexual Goals in Couples with Provoked Vestibulodynia: Associations with Sexual, Relational, and Psychological Well-Being

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ABSTRACT

Introduction. Provoked vestibulodynia (PVD) is a prevalent vulvovaginal pain condition that is triggered primarily during sexual intercourse. PVD adversely impacts women's and their partners' sexual relationship and psychological well-being. Over 80% of women with PVD continue to have intercourse, possibly because of sexual goals that include wanting to pursue desirable outcomes (i.e., approach goals; such as a desire to maintain intimacy) and avoid negative outcomes (i.e., avoidance goals; such as avoiding a partner's disappointment).

Aim. The aim of this study was to investigate associations between approach and avoidance sexual goals and women's pain, as well as the sexual, relational, and psychological well-being of affected couples.

Methods. Women with PVD (N = 107) and their partners completed measures of sexual goals, sexual satisfaction, relationship satisfaction, and depression. Women also completed measures of pain during intercourse and sexual functioning.

Main Outcome Measures. (1) Global Measure of Sexual Satisfaction Scale, (2) Dyadic Adjustment Scale—Revised or the Couple Satisfaction Index, (3) Beck Depression Inventory-II, (4) numerical rating scale of pain during intercourse, and (5) Female Sexual Function Index.

Results. When women reported higher avoidance sexual goals, they reported lower sexual and relationship satisfaction, and higher levels of depressive symptoms. In addition, when partners of women reported higher avoidance sexual goals, they reported lower relationship satisfaction. When women reported higher approach sexual goals, they also reported higher sexual and relationship satisfaction.

Conclusions. Targeting approach and avoidance sexual goals could enhance the quality and efficacy of psychological couple interventions for women with PVD and their partners. **Rosen NO, Muise A, Bergeron S, Impett EA, and Boudreau GK. Approach and avoidance sexual goals in couples with provoked vestibulodynia: Associations with sexual, relational, and psychological well-being. J Sex Med 2015;12:1781–1790.**

Key Words. Depression; Pain; Provoked Vestibulodynia; Relationship Satisfaction; Sexual Function; Sexual Goals; Sexual Motivation; Sexual Satisfaction; Vulvodynia

Introduction

Provoked vestibulodynia (PVD) is the most frequent cause of unexplained vulvar pain in premenopausal women, with an estimated prevalence of 7–12% [1,2]. It is characterized by acute recurrent pain localized in the vulvar vestibule and experienced in both sexual and nonsexual contexts.

Previous research indicates that both peripheral and central mechanisms of pain processing, in addition to psychological and interpersonal factors, play a role in the development and maintenance of this condition [3,4]. Women with PVD report negative repercussions to all aspects of their sexual functioning including lower sexual desire, arousal, difficulties with orgasm, and decreased frequency of intercourse in comparison with women without PVD [5–7]. Further, both women with PVD and their partners report lower sexual satisfaction compared with pain-free controls or scale norms [8,9]. Given that sexual well-being is an integral component of overall relationship quality [10], it is not surprising that both women with PVD and their partners report negative consequences to their relationships [8,11,12]. Qualitative studies depict women's feelings of guilt and inadequacy as a partner [13], as well as fears of losing or disappointing their partner because of the pain [11,12]. Finally, controlled studies have found that both women with PVD and male partners report increased rates of psychological distress, such as depressive symptoms [14,15].

Thus, the most significant interference of PVD in couples' lives is with their sexual and intimate relationship, suggesting that interpersonal variables may be especially relevant for this condition. Interpersonal factors, such as partner support and couple verbal communications, have been found to impact the risk for developing and maintaining other chronic pain conditions and associated impairments [16,17]. In recent years, relationship variables including couple intimacy, attachment style, sexual communication, and partner responses to painful intercourse have been linked to women's pain and the adjustment of both members of the couple [18–21]. Several of these studies have shown that partner-reported variables, such as partner pain catastrophizing, acceptance, and solicitousness (i.e., expressions of sympathy and support), directly influence women's level of functioning [22–24].

Although many women with PVD avoid sexual activity to reduce the pain, over 80% continue to have penetrative sex on a regular basis [25]. A recent conceptualization of sexual pain suggested a potentially important variable—motivation [26]—in the maintenance of these disorders, although empirical data are limited (with the exception of Brauer et al. [27]). In contrast, there is strong evidence that goals—a desired end state that drives voluntary actions—figure prominently in the adaptation of individuals living with other chronic pain conditions [28–31]. In one study, strong reasons for persisting in a painful task and strong pain avoidance goals were each associated with increased pain severity and disability in individuals with chronic musculoskeletal pain [31]. In PVD, excessive persistence with painful intercourse may lead to nociceptor sensitization and abnormal nerve proliferation further exacerbating the pain [3]. The association between persisting with painful intercourse and greater pain and impairments may depend on an individual's goals for engaging in sexual activity.

Consistent with the recent emphasis on incorporating the social context of pain [16], many of the goals of individuals with pain are interpersonally driven, such as a desire for support, although such goals have not been systematically examined. According to the approach avoidance theoretical framework, individuals in relationships can be focused on pursuing a desirable (i.e., approach goal) or averting a negative (i.e., avoidance goal) outcome [32]. Applied to sexuality, approach sexual goals focus on obtaining positive outcomes such as a partner's happiness or increased intimacy in the relationship, whereas avoidance sexual goals focus on evading negative outcomes such as a partner's loss of interest in sex or conflict in the relationship. In community samples, higher approach sexual goals have been linked to greater relationship and sexual satisfaction and sexual desire, whereas higher avoidance sexual goals have been associated with lower reports of satisfaction and desire [33,34]. Further, in daily experience studies, when one person had higher approach goals, their partner experienced higher sexual and relationship satisfaction, and when one person had higher avoidance goals, their partner reported lower satisfaction [34,35]. Thus, a person's sexual goals have the potential to promote or detract from their partner's experience, above and beyond the influence of their partner's own goals.

In qualitative studies, women with PVD have reported interpersonal goals for sexual activity that include wanting to feel closer to and wanting to avoid losing their partner [11], suggesting that both approach and avoidance goals are present in this population. A recent study found that women with self-reported PVD endorsed more goals for engaging in sexual intercourse related to mate guarding (i.e., wanting to protect or keep their partner) and concerns about duty/pressure, both of which are conceptually avoidance motivated in nature, compared with controls [27]. On the one hand, those with stronger approach goals may be

better able to adapt their sex lives to the pain (e.g., expand their sexual repertoire to include more nonpainful sexual activities) and thus foster greater intimacy with their partner, leading to lower pain for women and better psychosexual and relationship outcomes for the couple. On the other hand, a constant focus on avoiding negative outcomes may direct attention toward the pain, leading to missed opportunities for positive sexual experiences, and may exacerbate the negative outcomes couples are trying to avoid, causing greater pain and sexual impairment [26].

Aims

The current study aimed to examine the associations between approach and avoidance sexual goals and women's pain during intercourse, as well as the sexual, relational, and psychological well-being of women with PVD and their partners. It was hypothesized that women's and partners' higher approach sexual goals and lower avoidance sexual goals would be associated with their own and their partner's greater sexual satisfaction and relationship satisfaction, as well as lower depressive symptoms. It was also hypothesized that women's and partners' greater approach sexual goals and lower avoidance sexual goals would be associated with women's lower pain during intercourse and greater sexual functioning.

Methods

Participants

From January 2012 to December 2014, couples were recruited in two Canadian cities (referred to as "city one" and "city two") in order to accelerate the rate of recruitment. Couples were recruited from online and print advertisements (47.7%), collaborating physicians (30.8%), participation in previous studies (12.1%), and word of mouth (2.8%). A total of 107 couples were recruited: 54 (50.5%) from city one and 53 (49.5%) from city two. Women's eligibility criteria were assessed by a structured telephone interview conducted by a trained research assistant, which we have used successfully in prior studies [19,22,23]. Self-reported symptoms of vulvodynia correlate with findings in a gynecological diagnostic examination [36], and have been found to reliably predict a diagnosis by gynecological examination [37]. Eighty-three (78%) participants were subsequently diagnosed by a gynecologist via a standardized cotton swab test, and 24 (22%) were diagnosed by self-report using the structured interview only [36]. All eligible women met the following criteria: (i) pain during intercourse lasting 6 months and occurring on at least 75% of intercourse attempts, (ii) pain limited to activities involving pressure to the vulvar vestibule, (iii) cohabitating and/or in a committed relationship for at least 6 months, (iv) currently sexually active (engaged in manual, oral, or intercourse sexual activities at least once in the previous four weeks) with a partner, and (v) age between 18 and 45 years (i.e., premenopausal, due to the hormonal influences that may affect pain in peri- or postmenopause). Exclusion criteria included presence of one of the following: active yeast infection (temporary exclusion), current pregnancy, and vaginismus (as defined by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition Text Revision*). Partners had to be over the age of 18. Eligible women were asked to confirm their partner's participation. Of the 197 interested women, 82 (42%) were ineligible at screening: 31 (37.8%) were not in a committed relationship, 19 (23.2%) partners declined participation, 14 (17%) had pain characteristics that were inconsistent with PVD, nine (11%) had pain for less than 6 months or during less than 75% of intercourse attempts, and nine (11%) were ineligible for other reasons (e.g., older than 45, undergoing PVD treatment, pregnancy). Of the 115 women who were eligible after initial screening, seven (6.1%) did not receive a diagnosis of PVD from the gynecologist, and one couple (>0.01%) dropped out during the laboratory session, resulting in the final sample size of 107 couples. One couple was same sex, and all remaining couples were in cross-sex relationships.

Procedure

The data for the present study were obtained from questionnaires completed by couples taking part in two larger cross-sectional studies that were each conducted in two cities. Data obtained from the larger studies have been published previously [20,24] but did not examine associations with approach and avoidance sexual goals. All participants in city one and some participants in city two (n = 73; 66%) completed study materials in person using separate computers in the research laboratory. The remaining participants in city two (n = 34; 32%) completed paper-and-pen study materials, which they returned by postal mail. All participants completed a consent form, a demo-

graphics questionnaire, and standardized questionnaires assessing their approach and avoidance sexual goals, sexual satisfaction, relationship satisfaction, and depression. Women with PVD also completed measures of their sexual functioning and pain during intercourse. Compensation was commensurate with the larger studies in which couples participated. The studies were approved by the research ethics boards of their respective institutions.

Measures

Demographics

Participants reported their own age. Women also reported their relationship status, relationship duration, pain duration, and the shared income of the couple.

Approach and Avoidance Sexual Goals

Sexual goals were assessed with a 15-item measure adapted from Cooper, Shapiro, and Powers [38]. Participants rated the importance of nine approach (e.g., "to feel closer to my partner") and six avoidance (e.g., "to prevent my partner from becoming upset") interpersonal goals in influencing their decision to engage in sex on seven-point scales (1 = *not at all important* to 7 = *extremely important*). A principal components factor analysis yielded a two-factor solution with avoidance and approach goals representing distinct factors [33]. Higher scores indicated higher approach and avoidance goals and are represented as mean scores. Cronbach's alphas for approach goals were 0.80 for women and 0.78 for partners, and 0.86 for women and 0.90 for partners for avoidance goals.

Sexual Satisfaction

Sexual satisfaction was assessed with the well-validated Global Measure of Sexual Satisfaction scale [39]. This measure consists of five bipolar items (e.g., good–bad, pleasant–unpleasant) to which participants respond on a seven-point scale. Higher scores indicate higher satisfaction, and total scores can range from 5 to 35. Cronbach's alpha for this sample was 0.92 for women and 0.93 for partners.

Relationship Satisfaction

Two well-validated measures of relationship satisfaction were used depending on which of the two studies couples participated in: (i) the Revised Dyadic Adjustment Scale (R-DAS [40]) was completed by 63 couples (64%), and (ii) the Couple Satisfaction Index (CSI) [41] was completed by 36 couples (36%). Eight (7%) couples did not complete the R-DAS because they were not living together (a criterion for the validity of this measure). The R-DAS consists of 14 items, and total scores can range from 0 to 70. The CSI consists of 32 items, and total scores can range from 0 to 160. For both measures, higher scores reflect greater relationship satisfaction. Cronbach's alpha for the current study was R-DAS: 0.84 for women and 0.89 for partners; CSI: 0.96 for women and 0.98 for partners.

Depression

Women and men's depressive symptoms were assessed with the Beck Depression Inventory II (BDI-II [42];). The BDI-II consists of 21 items, with total scores ranging from 0 to 63, and higher scores indicating greater depressive symptoms. This measure has excellent psychometric properties and has been validated for use in chronic pain populations [43]. Cronbach's alpha for this sample was 0.92 for women and 0.93 for partners.

Pain During Intercourse

Women's pain intensity was measured with a numerical rating scale assessing pain during intercourse in the last 6 months (0 = *no pain* to 10 = *worst pain ever*). This measure demonstrates a significant positive correlation with other pain intensity measures [44] including in PVD samples [45].

Sexual Function

Women's sexual functioning was measured with the Female Sexual Function Index (FSFI [46]). The FSFI consists of 19 items assessing overall sexual functioning: desire, arousal, lubrication, orgasm, satisfaction, and pain. Higher scores indicate better functioning, and total scores can range from 2 to 36. The FSFI has been found to have excellent psychometric properties [46], including in women with vulvodynia [47]. Cronbach's alpha for this sample was 0.92.

Data Analysis

Data were analyzed with multilevel modeling using mixed models in SPSS Version 20.0 (IBM Corp., Armonk, NY, USA) where partners were nested within couples [48]. Analyses were guided by the Actor Partner Interdependence Model, and all models included women and their partners' approach and avoidance sexual goals as the

Table 1 Descriptive statistics of sample demographics and key variables for women with PVD and their partners

Variable	Women with PVD N = 107	Partners N = 107
Age	27.83 (6.80)	29.60 (8.12)
Couples shared annual income		
$0–19,999	23 (22%)	
$20,000–39,999	17 (16%)	
$40,000–59,999	15 (14%)	
$60,000–79,999	20 (19%)	
> $80,000	29 (28%)	
Relationship status		
Married	29.2%	
Cohabitating	56.6%	
In a relationship (not cohabitating)	14.2%	
Relationship duration (in months)	68.38 (57.84)	
Pain duration (in months)	60.24 (49.64)	
Approach sexual goals	5.27 (1.00)	5.61 (.90)
Avoidance sexual goals	3.96 (1.61)	3.52 (1.73)
Sexual satisfaction (GMSEX)	22.81 (7.67)	25.09 (7.10)
Relationship satisfaction		
R-DAS (N = 63 couples)	50.34 (8.45)	51.64 (8.67)
CSI (N = 36 couples)	121.47 (25.03)	122.56 (27.79)
Depression (BDI-II)	13.74 (10.53)	8.60 (9.45)
Sexual function (FSFI)	20.53 (6.62)	
Pain intensity (NRS)	5.83 (2.25)	

Percentage values are % of total sample; other values are mean (SD)
DAS = Revised Dyadic Adjustment Scale—Revised; CSI = Couple Satisfaction Index; GMSEX = Global Measure of Sexual Satisfaction; NRS = Pain intensity during intercourse as measured on a 0–10 numerical rating scale; BDI-II = Beck Depression Inventory II; FSFI = Female Sexual Function Index

independent variables. Separate models were conducted for each outcome variable. In the analyses, we assessed the associations between women's and partners' approach and avoidance sexual goals and their own outcomes (i.e., actor effects) and the association between women's and partner's approach and avoidance goals and their partner's outcomes (i.e., partner effects). For analyses where only women reported on the outcome (i.e., sexual function and pain intensity), we conducted two linear regression analyses where both partners' approach and avoidance goals were tested as independent variables, and women's pain and sexual function were tested as the outcome variables. As two measures of relationship satisfaction were used, scores were first standardized (see adjusted scores in Table 1). Note that as a result, the mean value is close to equal for women and their partners. Finally, we examined whether our findings were influenced by demographic variables or recruitment site. We examined the correlations between demographics and our study variables and conducted a multivariate analysis of variance (MANOVA) comparing couples recruited from city one and city two on all study variables.

Results

Descriptive characteristics of the sample are reported in Table 1, and correlations between all variables are reported in Table 2.

Associations Between Sexual Goals and Primary Outcomes

As shown in Table 3 and consistent with our predictions, when women reported higher avoidance sexual goals, they reported lower sexual and relationship satisfaction, higher levels of depressive symptoms, and marginally lower sexual functioning. In addition, when the partner of women with PVD reported higher avoidance sexual goals, they reported lower relationship satisfaction. When women reported higher approach sexual goals, they also reported higher sexual and relationship satisfaction, and their partners reported marginally higher sexual and relationship satisfaction. There were no significant effects of women's approach or avoidance goals on women's pain during

Table 2 Correlations between sexual goals and outcome variables for women with PVD and their partners

	1	2	3	4	5	6	7	8	9	10	11	12
1. Approach goals (W)	—	0.61***	0.36***	0.07	0.07	0.14	0.25**	0.17	0.16	–0.08	–0.08	0.19
2. Avoidance goals (W)		—	0.23*	0.12	–0.28**	–0.03	–0.06	–0.01	0.30***	0.01	–0.22*	0.24*
3. Approach goals (P)			—	0.64***	–0.09	–0.04	–0.04	0.07	0.19	0.15	–0.20	0.28**
4. Avoidance goals (P)				—	–0.08	–0.14	–0.19†	–0.14	0.19*	0.18†	–0.08	0.24**
5. Sex satisfaction (W)					—	0.54***	0.32**	0.28**	–0.40***	–0.10	0.53***	–0.39***
6. Sex satisfaction (P)						—	0.35***	0.47***	–0.40***	–0.29**	0.34**	–0.26**
7. Rel satisfaction (W)							—	0.61***	–0.38***	–0.45***	0.22†	–0.16
8. Rel satisfaction (P)								—	–0.35***	–0.51***	0.24*	–0.22*
9. Depression (W)									—	0.36***	–0.40***	0.35***
10. Depression (P)										—	–0.19†	0.25*
11. Sexual function											—	–0.38***
12. Pain												—

†$P < 0.10$, *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$
W = women's reports, P = partner's reports

Table 3 Associations between Sexual Goals and Outcome Variables

	Women's Approach Sexual Goals		Women's Avoidance Sexual Goals		Partner's Approach Sexual Goals		Partner's Avoidance Sexual Goals	
Outcome Variable	*b* (SE)	*t*	*b* (SE)	*t*	*b* (SE)	*t*	*b* (SE)	*t*
Women's Sexual Satisfaction	2.98 (0.90)	3.33***	–2.45 (0.55)	–4.42***	0.06 (0.1.10)	0.06	–0.35 (0.53)	–0.65
Partner's Sexual Satisfaction	1.70 (0.91)	1.86†	–0.74 (0.57)	–1.30	–0.08 (1.12)	–0.07	–0.54 (0.54)	–1.01
Women's Relationship Satisfaction	0.44 (0.13)	3.52***	–0.20 (0.08)	–2.51*	0.06 (0.16)	0.40	–0.11 (0.08)	–1.47
Partner's Relationship Satisfaction	0.24 (0.13)	1.87†	–0.12 (0.08)	–1.47	0.27 (0.16)	1.69	–0.20 (0.08)	–2.51*
Women's Depression	–0.20 (1.35)	–0.15	1.85 (0.81)	2.28*	–1.35 (1.22)	–1.10	0.15 (0.75)	0.19
Partner's Depression	0.02 (1.61)	0.01	0.98 (0.78)	1.26	1.37 (1.50)	0.91	0.62 (0.73)	0.85
Women's Sexual Function	1.02 (0.92)	1.12	–1.01 (0.57)	–1.76†	–0.88 (1.11)	–0.80	–0.01 (0.58)	–0.02
Women's Pain Intensity	0.02 (0.28)	0.07	0.29 (0.17)	1.60	0.29 (0.35)	0.85	0.17 (0.17)	1.05

†$P < 0.08$, *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$
Degrees of freedom range from 97.20 to 114.06
b = unstandardized estimates; SE = standard error

intercourse or partner's approach or avoidance goals on women's sexual functioning or pain during intercourse.

Covariate Analyses

We conducted an additional set of analyses to test whether our findings were influenced by participant age, household income, relationship duration, relationship status, women's pain duration, or recruitment site. None of the correlations between these variables and all independent and outcome variables were significant (all *P*s > 0.10) (*r*s ranged from –0.11 to 0.16). Results of MANOVA comparing couples recruited from city one and city two on all key study variables revealed that couples recruited from city one ($M = 13.82$, $SD = 10.07$) reported higher scores on the depression measure compared with city two ($M = 8.47$; $SD = 9.86$), $F(1,70) = 6.68$ ($P = 0.01$) and higher avoidance sexual goals (city one: $M = 4.16$; $SD = 1.77$) than couples from city two ($M = 3.33$; $SD = 1.47$), $F(1,70) = 4.50$, $P = 0.04$. Therefore, we conducted another set of analyses with recruitment site as a covariate, and all of the previously reported effects remained significant.

Discussion

This study examined the associations between approach and avoidance sexual goals, and the sexual and relationship satisfaction and depressive symptoms of women with PVD and their partners, as well as women's pain during intercourse and sexual functioning. Women who reported higher avoidance goals also reported lower sexual satisfaction, lower relationship satisfaction, greater depressive symptoms, and marginally lower sexual functioning. Partners who reported greater avoidance goals also reported lower relationship satisfaction. Women with higher approach goals reported greater sexual and relationship satisfaction and had partners who reported marginally greater sexual and relationship satisfaction. Findings are consistent with the approach avoidance theoretical model and support the burgeoning field of research examining interpersonal factors in sexual pain (see Rosen et al. [49] for review).

In line with results from community couples [34], women who reported higher avoidance sexual goals were less sexually satisfied and less satisfied with their relationship, and partners who reported higher avoidance goals were also less relationally satisfied. Having greater avoidance goals may reduce couple intimacy and worsen the negative outcomes women are trying to avoid such as couple conflict [26], or may be consistent with a general avoidant attachment style (i.e., being uncomfortable with intimacy and emotionally distancing oneself from relationship partners), leading to lower overall sexual satisfaction for women. Indeed, studies have shown that individuals with an avoidant attachment style are more strongly motivated by avoidance sexual goals than are those who are relatively more secure [50]. Avoidant attachment has in turn been linked to poorer sexuality outcomes in women with PVD [19]. In community samples, greater avoidance sexual goals were also associated with more negative emotions and relationship conflict [33]. Thus, it is not surprising that the negative influence of avoidance sexual goals also extended to women's and partners' relationship satisfaction, potentially through similar mechanisms.

In contrast, women with PVD who endorsed higher approach sexual goals reported greater sexual and relationship satisfaction and had partners who reported marginally greater sexual

and relationship satisfaction. Holding stronger approach goals may promote better coping by encouraging women with PVD to adapt their sex lives to the pain, for example by engaging in more nonpainful sexual activities, which would presumably be more sexually satisfying. Research with nonclinical pain populations suggests that inducing a motivationally relevant, nonpain-oriented approach goal helps bolster the beneficial effects of distraction in alleviating pain [51]. Being more motivated to have sex for positive outcomes may also foster greater intimacy with one's partner, which is known to be associated with greater sexual and relationship satisfaction in PVD [20]. Finally, women who hold stronger approach goals may communicate a greater willingness and interest in sex with their partner, leading to a partner's greater sexual satisfaction. In a recent study with community couples, Muise and colleagues [34] found that higher approach goals were linked to greater sexual desire, which was in turn associated with higher sexual and relationship satisfaction in both members of the couple.

When women reported higher avoidance goals, they also experienced greater depressive symptoms. Several studies have demonstrated women's fears of losing or upsetting their partner because of the PVD-related pain, and their feelings of inadequacy as a sexual partner [11,12,52]. Avoidance sexual goals may maintain or perpetuate such fears, leading to greater depression. When women are focused on avoiding negative outcomes, they may already be attentive to the negative relational consequences associated with their PVD, and therefore may be more susceptible to the emotional toll that PVD places on their relationship, ultimately leading to more depressive symptoms. Of course, the reverse may also be true: Depressive symptoms may exacerbate women's relationship fears and lead them to attend to the negative impact of PVD on their lives, leading to greater avoidance-oriented goals. Studies with community samples have linked greater avoidance sexual goals to more negative emotions and relationship events [33]. Further, inducing greater avoidance social goals has been shown to result in enhanced recall of information that is consistent with a negatively biased perception of the interpersonal context [53], which is characteristic of depressive styles and lends some support to the temporal order of the associations documented in this study.

Women who reported higher avoidance sexual goals also reported marginally poorer sexual functioning, as assessed by the FSFI. Women with PVD typically experience greater anxiety compared with women without this condition [54], and this anxiety may be further fuelled by avoidance goals. In PVD, heightened anticipatory and experienced anxiety during sexual interactions may lead to greater pelvic floor hypertonicity and lower arousal, adversely affecting women's overall sexual function [55]. Women who report greater avoidance goals may be primed to attend to negative cognitions and emotions associated with sexual activity rather than erotic ones. Indeed, attention to pain is typically accompanied by an increased processing of pain-related information, whereas other information (e.g., positive sexual cues) becomes inhibited [56].

Contrary to our hypotheses, we did not find significant associations between approach or avoidance sexual goals and women's pain during intercourse. It is possible that other types of goals, such as pain avoidance (i.e., reasons *not* to have sex), may be more strongly linked to women's pain experience and should be examined in future research. Karsdorp and Vlaeyen [31] found that stronger pain avoidance goals were associated with increased pain severity and disability in individuals with chronic musculoskeletal pain, possibly due to greater avoidance of pain-inducing activities, which has in turn been found to lead to greater pain and disability [57–60].

This study is limited by its cross-sectional design and the correlational nature of the analyses. Recent longitudinal and experimental studies examining approach and avoidance goals in community samples [34,53,61], and experimental studies examining goals in chronic pain lend some support to the temporal order of the associations demonstrated in the present study [51]. There were also differences in depression and avoidance goals between the two recruitment sites. While the pattern of results remained the same when controlling for recruitment site, there may have been additional differences between the two groups that were not considered. The present sample consisted of primarily cross-sex couples, limiting generalizability to all couples with PVD. Finally, a portion of the participants did not undergo a gynecological examination for diagnosis of PVD.

In summary, holding stronger avoidance sexual goals may direct women and their partners to attend more to the negative aspects of the sexual experience, such as pain, interfering with their sexual, relational, and psychological functioning. In contrast, stronger approach sexual goals may enable women and their partners to attend less to

their pain and derive more enjoyment from the sexual activity and by extension their overall relationship. There is growing evidence in support of psychological interventions in PVD [62,63], and more recently for couples affected by this condition [64]. Findings may inform the development of targeted goal-based interventions for women with PVD and their partners. Clinicians should be aware that women with PVD and their partners experience more difficulties communicating about sex than do pain-free controls [8,18], and also tend to be avoidant of all kinds of sexual activities [65]. These difficulties may interfere with couples' abilities to negotiate a sexual relationship that reduces the focus on avoidance goals and penetrative sex more generally. Interventions could use cognitive behavioral or emotion-focused strategies to assist couples in identifying and focusing on approach goals for any sexual activity and reducing the salience of avoidance sexual goals, thus reducing the negative consequences to both partners' psychosexual and relationship functioning.

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