To Say or not to Say: Dyadic Ambivalence over Emotional Expression and Its Associations with Pain, Sexuality, and Distress in Couples Coping with Provoked Vestibulodynia

Nayla Awada, B.Sc.Psy.D. Candidate,* Sophie Bergeron, PhD,* Marc Steben, MD,† Victoria-Ann Hainault, BA,* and Pierre McDuff, MSc*

*Psychology, Université de Montréal, Montreal, Quebec, Canada; †Direction des risques biologiques et de la santé au travail, Institut national de santé publique du Québec, Montreal, Quebec, Canada

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ABSTRACT

Introduction. Provoked vestibulodynia (PVD) is a highly prevalent and taxing female genital pain condition. Despite the intimate nature of this pain and the fact that affective factors such as anxiety have been shown to modulate its manifestations, no study has yet explored the emotional regulation of couples in which the woman suffers from PVD. Aim. Ambivalence over emotional expression (AEE) is an emotional regulation variable that quantifies the extent to which a person is comfortable with the way she or he expresses emotions. We examined whether the dyadic AEE of couples in which the woman suffers from PVD was differentially associated with women's pain and couples' psychological, sexual, and relational functioning. Methods. Couples (N = 254), in which the woman suffered from PVD, completed the AEE questionnaire. A couple typology of dyadic AEE was created. Main Outcome Measures. Dependent measures for both members of the couple were the global measure of sexual satisfaction scale, the Beck depression inventory II, and the revised dyadic adjustment scale. The female sexual function index and the sexual history form were used to assess the sexual function of women and men, respectively. Women also completed the pain rating index of the McGill pain questionnaire. Results. Couples, in which both partners were considered low on AEE, had the highest scores on sexual satisfaction (P = 0.02) and function (P < 0.01), the lowest depression scores (P < 0.01), and the best dyadic adjustment (P = 0.02). No difference in pain intensity was found between couples. Conclusions. Findings suggest that, for couples in which the woman suffers from PVD, an emotional regulation that is low in ambivalence in both partners is associated with better psychological, sexual, and relational outcomes. Results indicate that emotional regulation may be important to consider in the assessment and treatment of couples coping with PVD. Awada N, Bergeron S, Steben M, Hainault V-A, and McDuff P. To say or not to say: Dyadic ambivalence over emotional expression and its associations with pain, sexuality, and distress in couples coping with provoked vestibulodynia. J Sex Med 2014;11:1271–1282.

Key Words. Provoked Vestibulodynia; Ambivalence Over Emotional Expression; Dyadic; Vulvodynia; Couples; Sexuality

Introduction

Provoked vestibulodynia (PVD) is the most common cause of vulvodynia [1], affecting up to 12% of premenopausal women in the community and 15% of fertile women in gynaecological clinics [2,3]. Defined by the International Society for the Study of Vulvovaginal Disease as “vulvar discomfort, occurring in the absence of relevant visible findings or a specific, clinically identifiable, neurologic disorder” [4], PVD pain is localized in the vestibule and triggered by physical contact that
can be sexual in nature, such as during intercourse, or not, such as during tampon insertion. Importantly, PVD has been associated with a number of negative sexual consequences, such as decreased sexual function, intercourse frequency, sexual satisfaction, sexual self-efficacy, and sexual self-esteem [5–9]. Women with PVD also experience psychological difficulties, reporting more depression and anxiety, as well as a reduction in self-esteem and quality of life when compared with women with no genital pain [7,10]. In spite of these consequences, important gaps concerning the psychosocial aspects of this condition remain. Although relationship factors such as partner responses appear to play a role in the experience of pain and associated psychosexual sequelae [11], no research to date has explored the emotional regulation of couples coping with PVD.

A number of studies have examined how biomedical factors may relate to PVD. Recurrent yeast infections and suboptimal pelvic floor muscle function [10,12–14], for instance, have been associated with PVD. Other studies focusing on the role of psychological factors in the experience of pain and disability reported by these women have mostly focused on cognitive variables. Consistent with the larger chronic pain literature, global and stable attributional styles (i.e., thinking of the pain as enduring and affecting one’s entire life) are associated with worse sexual, psychological, and relational outcomes for women with PVD [15]. Fear avoidance factors such as catastrophizing, fear of pain, and hypervigilance also explain part of the variance in pain and sexual functioning of these women [16]. However, research exploring the emotional regulation of women coping with PVD remains particularly scarce.

Furthermore, the pain associated with PVD often occurring in a sexually intimate context, it becomes important to consider that the partners of these women are the usual witnesses and “perpetrators” of the pain. Contrary to the afflicted women, their male partners do not seem to show increased levels of sexual dysfunction, psychological distress, or dyadic difficulties as compared with norms [17]. However, research which has mostly explored cognitive and behavioral variables points to the importance of attending to both members of couples in which the woman suffers from PVD. Global and stable attributional styles are associated with less sexual satisfaction and dyadic adjustment for the partners [18], much like what was found for their female counterparts. Recently, it was found that partners’ facilitative responses (i.e., reactions that encourage women’s coping efforts with pain) are associated with less pain and more sexual satisfaction for women with PVD [11]. However, research involving the partners has largely ignored emotional factors that are likely involved in the pain, distress, and disability experienced by these couples.

This neglect of emotional regulation factors in the study of PVD, a condition which lies at the intersection of chronic pain and impaired sexuality, is quite surprising considering that elements of affective functioning are thought to be central predisposing, maintaining, and/or consequential factors in both domains [19–23]. One of the only affective factors that has been well studied in relation to vulvodynia is anxiety, shown to be both an antecedent and a consequence of sexual pain [24], and thereby pointing to the relevance of examining emotional regulation in the PVD population.

Ambivalence over emotional expression (AEE) is an emotional regulation variable which assumes an interpersonal context of emotional expression, and which is therefore especially suited to examine in couples. It is defined as the extent to which a person is comfortable with the way he or she expresses emotions, independently of the level of expressiveness per se [25]. It thus goes one step beyond merely describing a person as expressive or inexpressive, by gauging what hides behind the style of expression. Is the inexpressive person making an effort to actively inhibit the expression of his or her emotions? Does the expressive person often express emotions that he or she wanted to keep private in the first place? Generally, a person would be qualified as ambivalent over emotional expression when the way in which he or she expresses emotions (or does not) is personally problematic and carries with it negative personal consequences such as feeling inadequate or fearing to hurt someone else.

Ambivalence over emotional expression, as measured by the AEE questionnaire (AEQ), has been shown to predict more pain, disability, and psychological distress for patients with chronically painful conditions such as chronic low back pain or gastrointestinal cancer [26,27]. Studies, in which the patients and their partners are included, show that AEE predicts their respective anxiety and decrease in life satisfaction [28], pointing again to the relevance of also attending to the partners of chronic pain sufferers. In fact, for patients diagnosed with gastrointestinal cancer, it was found that the caretaker’s AEE was predictive of an increase in the patient’s intensity of pain and pain
behaviors and of a decrease in the patient’s well-being, independently of the patient’s own level of ambivalence [27].

Recently, Ben-Ari and Lavee [29] suggested that AEE is, in fact, better conceptualized as a dyadic variable, rather than as an individual difference measure. These researchers have found that an individual’s AEE could predict his marital quality better than other measures commonly thought to be strongly associated with various interpersonal variables (e.g., neuroticism). More importantly, it was shown that dyadic AEE, or looking at the ambivalence across the couple as a single variable rather than in each individual, could predict relationship quality better than each individual’s level of AEE. Overall, couples from the community, in which both partners are high in AEE, show the worst relationship quality outcomes as compared with couples in which one or both partners are low on AEE. Similar results were found in the chronic pain population: couples in which both partners are highly ambivalent over emotional expression have the worst outcomes in terms of pain, impairment, and psychological distress [27,28].

**Aims**

The present study aimed to compare couples based on their dyadic AEE and examine whether they differ on the intensity of pain reported by the women, and levels of sexual satisfaction, sexual functioning, depressive symptoms, and dyadic adjustment reported by the couple as a whole. We expected that couples in which both partners scored highly on AEE would report worse sexual satisfaction, sexual functioning, depression scores, and dyadic adjustment than couples in which both partners were considered low on AEE. We also expected that women who were considered to be in high ambivalence couples would report more pain than women who were considered to be in low ambivalence couples. We did not have specific hypotheses concerning couples in which only one partner was considered ambivalent and gender differences within couple types.

**Methods**

**Participants**

Couples were recruited through the clinics of two gynecologists from a large metropolitan university hospital, and through references from other healthcare professionals (53% of the sample). Announcements were also posted in local newspapers and several websites (40% of the sample), and some couples were recruited because they had participated in past research projects that had taken place in the same laboratory (6% of the sample). A remaining 1% of the sample was recruited through word of mouth. About half of the women in our sample, a total of 117, had received a formal diagnosis of PVD from the gynecologists involved in the study. However, all women were screened using a telephone semistructured interview in order to ensure that their symptoms were PVD-like. For women, the inclusion criteria were as follows: (i) pain during intercourse lasting for at least 6 months, occurring at a minimum of 75% of intercourse attempts, and a source of subjective distress; (ii) pain limited to intercourse and other activities in which pressure is exerted on the entry of the vagina (i.e., vulvar vestibule); (iii) pain localized and limited to the vulvo-vaginal area; and finally (iv) being in a committed relationship for a minimum duration of 6 months. Exclusion criteria were (i) vulvar pain not limited to penetration or to an exerted pressure on the vulvo-vaginal area and (ii) the presence of any of the following conditions: serious medical or psychiatric disorder, active infection, vaginismus, vulvo-vaginal dermatological lesions, pregnancy, or being younger than 18 years old. Men were recruited by asking their female partners whether they would be interested in participating, the only exclusion criteria being an age below 18 years and/or having a serious medical or psychiatric disorder. Of the 274 couples who were eligible and participated in the study, 20 had missing data for a complete questionnaire or for more than 10% of a measure. The final sample size consisted of 254 couples. The only significant difference between couples in which the woman was formally diagnosed with PVD and those in which the woman was screened via a semistructured interview was that women were younger in the former group ($P = 0.003$).

**Measures**

**Ambivalence over Emotional Expression**

Men and women’s AEE was measured with the AEQ [25]. This self-report measure consists of 28 items, with the total score being computed on a five-point scale and higher scores indicating more AEE. The AEQ has been shown to have good psychometric properties, including good internal stability ($\alpha = 0.89$), test–retest reliability, and convergent validity [25]. While this questionnaire has not yet been validated in French, it had a very high
internal consistency in our sample ($\alpha = 0.93$) and a similar factorial structure than that of the original questionnaire.

**Main Outcome Measures**

**Pain**

Women’s pain was assessed with the pain rating index (PRI) of the McGill pain questionnaire with reference to the vulvo-vaginal pain during intercourse in the last 6 months [30]. This multidimensional scale is a widely used measure consisting of an adjective list that women rate as qualifying their pain or not. Higher scores indicate more severe pain. This measure has been shown to have very good psychometric properties, including good test–retest reliability, discriminant validity, and sensitivity to treatment [31]. The French version of this questionnaire has previously been validated [32] and the internal consistency for our sample was high ($\alpha = 0.79$).

**Sexual Satisfaction**

Men and women’s sexual satisfaction was measured with the global measure of sexual satisfaction scale (GMSEX) [33]. This scale consists of five items yielding a total score from 5 to 35 with higher scores indicating greater satisfaction. This measure has been shown to have good psychometric properties, including good internal consistency ($\alpha = 0.90$), test–retest reliability, and convergent validity [33]. The French version of the test has previously been used with French-speaking participants with an excellent internal consistency ($\alpha = 0.92$) [15], a finding which was replicated in our sample ($\alpha = 0.90$).

**Sexual Functioning**

Women’s sexual functioning was measured with the female sexual function index (FSFI). This questionnaire consists of 19 items measuring five components of sexuality: desire, lubrication, orgasm, satisfaction, and pain—and is most suitable for women who have engaged in sexual activity in the past 4 weeks (N = 224) [34]. Total scores range from 2 to 36 with higher scores indicating better functioning. This questionnaire has been shown to have good psychometric properties, including good internal consistency ($\alpha > 0.82$), test–retest reliability, divergent and discriminant validity, as well as being validated with women coping with vulvodynia [35–38]. The French version of the test has previously been used with a French-speaking population yielding a similar factorial structure as the original version and an excellent internal consistency ($\alpha = 0.92$) [15]. The internal consistency for our sample was also high ($\alpha = 0.83$). In order to separate sexual impairment from pain, we excluded the pain subscale of the questionnaire in all the analyses.

Men’s sexual functioning was measured with the global sexual functioning score of the sexual history form (SHF) [39]. This score is calculated using only 12 items of the entire test, chosen so as to evaluate different facets of male sexual functioning: frequency of sexual activities, desire, arousal, as well as orgasmic and erectile abilities. It ranges from 0 to 1, with higher scores indicating worse functioning and has been shown to have good psychometric properties, including excellent test–retest reliability, good internal consistency ($\alpha = 0.65$), as well as good discriminant and convergent validity. The French version of the test used in this study has previously been validated [40]. The internal consistency for our sample being below what is typically considered acceptable ($\alpha = 0.61$), findings should be interpreted with caution. For the sexual functioning scores of men to be on the same scale and range as the sexual functioning scores of women, we recoded this score into “newSHF = ((1 − SHF) × 34) + 2,” and it is this score which is reported in the present article, with higher scores indicating better functioning.

**Depression**

Men and women’s depressive symptoms were measured with the Beck depression inventory II (BDI-II). This questionnaire consists of 21 items, with total scores ranging from 0 to 63, and higher scores indicating more depressive symptoms. This measure has been shown to have excellent psychometric properties, including excellent internal consistency ($\alpha = 0.93$) and discriminant validity [41]. This test has also been validated with a French-speaking population [42], and had a high internal consistency in our sample ($\alpha = 0.86$).

**Dyadic Adjustment**

Men’s and women’s dyadic adjustment was measured with the revised dyadic adjustment scale (R-DAS). This questionnaire consists of 14 items applicable to cohabiting and/or married couples (N = 207), with scores ranging from 0 to 69, and higher scores indicating better dyadic adjustment. This questionnaire has been shown to have good psychometric properties, including good internal
Ambivalence over Emotional Expression in a PVD Population

1275

Measure ANOVAs were used in order to account for the repeated measures of vulvo-vaginal pain (for women, only), AEE, sexual satisfaction, sexual function, depression, and dyadic adjustment. For the couple typology comparison on women’s pain intensity, an analysis of variance (ANOVA) was conducted. For the couple typology comparison on sexual satisfaction, sexual function, depression scores, and dyadic adjustment, repeated measures ANOVAs were used in order to account for the interdependency of the couples’ data and pair scores of both members of the same couple. Least significant difference tests were used for post hoc comparisons. Sociodemographic variables with a correlation superior to 0.3 with a dependent variable were controlled for in this study [45]. Because the couple was considered the unit of analysis, gender differences were only reported if they were present in the same couple type. Gender differences between couple types were considered beyond the scope of this article, however, and were not explored.

Procedure
Upon being recruited, women and their partners each received questionnaire packages to be returned by mail. These included consent forms, a sociodemographic questionnaire, and the mentioned measures of vulvo-vaginal pain (for women, only), AEE, sexual satisfaction, sexual function, depression, and dyadic adjustment. Follow-up phone calls were conducted every 2 weeks by a research assistant in order to ensure that the couple was still interested in participating and to answer questions that they might have, to a maximum of five calls. As compensation, participating couples were offered a 30 minute telephone consultation with a sexologist who is part of the research team. This consultation consisted in explaining the diagnosis of PVD: its causes, consequences, and the available treatments. The sexologist also answered the couple’s questions and referred them to appropriate healthcare professionals, in addition to sending them educational documentation by email. These procedures were approved by the Institutional Review Boards of the university and university hospital where the research took place.

Couple Typology
Per Porter et al., 2005 [27], median breaks were applied to the AEE scores of men and women, coding “H” for high AEE and “L” for low AEE. Couples were then regrouped into a four-unit typology: 27.6% were LL couples in which both partners were coded low on AEE; 22.8% were LH couples in which the woman had “L” AEE and the partner had “H” AEE; 24% were HL couples in which the woman had “H” AEE and the partner had “L” AEE; and 25.6% were HH couples with both partners had “H” AEE.

Data Analysis
For the couple typology comparison on women’s pain intensity, an analysis of variance (ANOVA) was conducted. For the couple typology comparisons on sexual satisfaction, sexual function, depression scores, and dyadic adjustment, repeated measure ANOVAs were used in order to account for the interdependency of the couples’ data and pair scores of both members of the same couple.

Results
Sample Characteristics
Table 1 summarizes the descriptive statistics for this sample. The women had had vulvo-vaginal pain for an average of more than 5 years, accurately reflecting the chronicity of this type of pain. They also had significantly higher scores on AEE than their male counterparts (t(253) = 3.995, P < 0.01), a result which is consistent with previous research [25]. Finally, the women in our sample were significantly less sexually satisfied (t(253) = -2.646, P = 0.009), sexually functional (t(223) = -19.65, P < 0.001), and more depressed (t(253) = 8.626, P < 0.001) than their partners.

Zero-Order Correlations
Only a worse sexual function for men was highly correlated with being older (r = -0.36, P < 0.01) and having an older partner (r = -0.31, P < 0.01). Because of the very high correlation between ages of men and women in this sample (r = 0.88, P < 0.01), it was decided that only the ages of partners would be controlled for in analyses including their sexual functioning.

Table 2 presents the intercorrelations between the independent and dependent variables of the study. In accord with our hypotheses, AEE of women was associated with their reduced sexual satisfaction (r = -0.21, P < 0.01), sexual function (r = -0.26, P < 0.01), and dyadic adjustment (r = -0.29, P < 0.01), and with more pain (r = 0.20, P < 0.01), and higher depression scores for both the women (r = 0.52, P < 0.01) and the partners (r = 0.14, P < 0.05). AEE of men was associated with their reduced sexual satisfaction (-0.14, P < 0.01) and sexual function (r = -0.16, P < 0.01) and increased depression scores (r = 0.47, P < 0.01). Also, it was correlated with a reduced dyadic adjustment for both men (r = -0.15, P < 0.01) and women (r = -0.25, P < 0.01).
Sexual satisfaction and sexual function of women were highly correlated \((r = 0.54, P < 0.01)\), as were sexual satisfaction of men and women \((r = 0.41, P < 0.01)\) and sexual satisfaction of men with sexual function of women \((r = 0.35, P < 0.01)\). Adding the conceptual interdependency to the empirical association of these measures, it was decided that sexual function and satisfaction of men and women would be combined in a same MANOVA in subsequent analyses.

**Associations of Couple Typology with Sexual Satisfaction, Sexual Function, Depression, Dyadic Adjustment, and Pain**

Figure 1 and Figure 2 show the results for sexual satisfaction and sexual functioning scores. A multivariate analysis of covariance with repeated measures and controlling for the ages of partners was conducted in order to compare the four types of couples on their sexual satisfaction and sexual function. Main effects of couple type \((F(6,\ldots)\).

### Table 1  Descriptive statistics for the couple \((N = 254)\)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Women</th>
<th></th>
<th>Partners</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M or N</td>
<td>SD or %</td>
<td>M or N</td>
<td>SD or %</td>
</tr>
<tr>
<td>Age (years)</td>
<td>31</td>
<td>10.9</td>
<td>33</td>
<td>11.0</td>
</tr>
<tr>
<td>Education level (years)</td>
<td>16</td>
<td>2.9</td>
<td>16</td>
<td>3.4</td>
</tr>
<tr>
<td>Duration of pain (months)</td>
<td>65.9</td>
<td>69.4</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Length of relationship (months)</td>
<td>83.0</td>
<td>91.9</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohabiting</td>
<td>154</td>
<td>60.6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Married</td>
<td>56</td>
<td>22</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Committed but not cohabiting</td>
<td>44</td>
<td>17.3</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Couple annual income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0–39,999</td>
<td>65</td>
<td>25.6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>$40,000–79,999</td>
<td>108</td>
<td>42.5</td>
<td>—</td>
<td>—</td>
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<td>&gt;$80,000</td>
<td>81</td>
<td>31.9</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Culture</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>French Canadian</td>
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<td>87.4</td>
<td>211</td>
<td>83.1</td>
</tr>
<tr>
<td>English Canadian</td>
<td>11</td>
<td>4.3</td>
<td>21</td>
<td>8.3</td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
<td>8.3</td>
<td>22</td>
<td>8.7</td>
</tr>
</tbody>
</table>

**Independent variable**

| AEE | 2.6 (1–5) | 0.75 | 2.4 (1–5) | 0.68 |

**Dependent variables**

| Vulvo-vaginal pain (PRI) | 29.3 (3–69) | 12.7 | — | — |
| Sexual satisfaction (GMSEX) | 23.5 (3–35) | 6.5 | 24 (5–35) | 6.6 |
| Sexual function (FSFI-SHF) | 18.3 (3–29) | 5.3 | 25 (15–29) | 2.3 |
| Depression (BDI-II) | 13 (0–45) | 9.6 | 7 (0–34) | 6.6 |
| Dyadic adjustment (R-DAS) | 51 (28–67) | 7.0 | 51 (23–67) | 6.7 |

**Table 2  Zero-order correlations between ambivalence over emotional expression and pain, sexual function, and psychorelational distress of women and partners**

<table>
<thead>
<tr>
<th>AEE-P</th>
<th>GMSEX-W</th>
<th>GMSEX-P</th>
<th>FSFI-W</th>
<th>SHF-P</th>
<th>BDI-II-W</th>
<th>BDI-II-P</th>
<th>R-DAS-W</th>
<th>R-DAS-P</th>
<th>PRI-W</th>
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<tbody>
<tr>
<td>0.12</td>
<td>−0.21**</td>
<td>−0.08</td>
<td>−0.26**</td>
<td>−0.09</td>
<td>0.52**</td>
<td>0.14*</td>
<td>−0.29**</td>
<td>−0.12</td>
<td>0.20**</td>
</tr>
<tr>
<td>AEE-P</td>
<td>−0.04</td>
<td>−0.14**</td>
<td>−0.06</td>
<td>−0.16**</td>
<td>0.09</td>
<td>0.47**</td>
<td>−0.25**</td>
<td>−0.15**</td>
<td>0.07</td>
</tr>
<tr>
<td>GMSEX-W</td>
<td>—</td>
<td>0.41**</td>
<td>0.54**</td>
<td>0.12</td>
<td>−0.27**</td>
<td>−0.10</td>
<td>0.30**</td>
<td>0.19**</td>
<td>−0.09</td>
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<td>GMSEX-P</td>
<td>—</td>
<td>—</td>
<td>0.32**</td>
<td>0.16*</td>
<td>−0.21**</td>
<td>−0.24**</td>
<td>0.24**</td>
<td>0.35**</td>
<td>0.01</td>
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<tr>
<td>FSFI-W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.07</td>
<td>−0.35**</td>
<td>−0.09</td>
<td>0.25**</td>
<td>0.21**</td>
<td>−0.01</td>
</tr>
<tr>
<td>SHF-P</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.08</td>
<td>−0.12</td>
<td>0.03</td>
<td>0.04</td>
<td>−0.03</td>
</tr>
<tr>
<td>BDI-II-W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.19**</td>
<td>0.18**</td>
<td>−0.24**</td>
<td>0.22**</td>
<td>0.13</td>
</tr>
<tr>
<td>BDI-II-P</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>−0.23**</td>
<td>−0.25**</td>
<td>0.58**</td>
<td>−0.14*</td>
</tr>
<tr>
<td>R-DAS-W</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.58**</td>
<td>−0.14*</td>
<td>−0.07</td>
</tr>
</tbody>
</table>

\* P < 0.05.

\** P < 0.01.

W = women; P = partners; AEE = ambivalence over emotional expression questionnaire; PRI = pain rating index of the McGill pain questionnaire; GMSEX = global measure of sexual satisfaction; FSFI = female sexual function index; SHF = sexual history form—modified score; BDI-II = Beck Depression Inventory II; R-DAS = revised dyadic adjustment scale.
was conducted in order to compare the four types of couples on dyadic adjustment. The main effect of couple type was significant (\(F(3, 203) = 3.54, P = 0.016\)). Furthermore, there was an interaction effect between gender and couple type (\(F(3, 203) = 3.0, P = 0.032\)): Women in HH couples had a significantly lower dyadic adjustment than their partners, a result which was not replicated in any of the other three types of couples. Post hoc analyses showed that HL and HH couples had significantly reduced dyadic adjustments compared with LL couples.
A univariate ANOVA conducted in order to compare the four types of couples on pain intensity was not significant (F(3, 250) = 1.301, P = 0.275).

**Discussion**

Although an increasing number of PVD research has focused on psychosexual variables, studies pertaining to the emotional regulation and dyadic aspects of this sexual pain problem remain scarce. The purpose of this study was to examine the dyadic AEE of couples in which the woman suffers from PVD, and its associations with their sexual satisfaction, sexual function, psychological distress, dyadic adjustment, and pain. In accord with our main hypothesis, we found that couples in which both partners were lower on AEE (LL) were more sexually satisfied and functional, had reduced depression scores, and better relationship adjustment than couples in which both partners were more ambivalent over the expression of their emotions (HH). Women’s pain intensity did not differ significantly between the four groups of couples, although women’s lower AEE was associated with their reduced pain.

Couples in which both partners were considered low on AEE (LL) were more sexually satisfied than the other three couple types (LH, HL, and HH). High AEE being characterized by a style of emotional expression that is generally accompanied by negative personal consequences and inner conflict, it is likely that the highly ambivalent men and women of our sample experienced this same discomfort when communicating about their sexuality. In fact, general communication apprehension, a closely related variable which concerns the anxieties and fears that may accompany interpersonal communication, has been linked to a reduced satisfaction with sexual communication in a nonclinical sample [46]. Further, better communication about sexuality is a robust correlate of increased sexual satisfaction in both community and clinical samples of men and women [47–50]. The vulvo-vaginal pain experienced by women in our study and its consequences on the relationship may be an emotionally charged subject that both partners have to communicate about. Couples in which partners are relatively free of AEE (LL) may find it easier to manage the sexual pain condition, if only in terms of expressing their sex-related emotions and negotiating their sexual repertoire and preferences in a less internally conflicted way. This could allow these couples to experience better sexual satisfaction, as compared with couples in which one or both partners experience more AEE. To this effect, sexual intimacy, which broadly qualifies the interaction between members of a couple around sex-related disclosures [51], was positively associated with women’s sexual satisfaction in a recent study on PVD. It thus appears that regulating one’s emotions may protect against sexual dissatisfaction in couples confronted with PVD.

Women were found to report significantly more sexual dysfunction than their partners in the four types of couples, a result which is not surprising considering their pain during intercourse and the sexual impairment associated with it [6]. Similarly to the results for sexual satisfaction, LL couples were significantly more sexually functional than the other three types of couples (LH, HL, and HH). In a sample of women coping with chronic pelvic pain, it was found that those who were higher on AEE and/or catastrophizing benefited the most from an expressive writing task in terms of their sexual impairment [52]. It is possible that women with PVD who are highly ambivalent are less able to appropriately regulate or communicate their preoccupations and emotions during sex, thereby interfering with their sexual experience and function. Preoccupying thoughts during sex, which have been found to often concern the emotional consequences of engaging in the sexual activity [53], may be particularly charged for men and women dealing with PVD. It is possible that when one or both partners of these couples have relatively high AEE, they will feel more conflicted over expressing these emotional preoccupations.
Ambivalence over Emotional Expression in a PVD Population

been found to partially mediate the relationship between the caregiving partner’s AEE and the patient’s distress [27]. It is perhaps not surprising then that in our study, couples in which only the male partners were considered ambivalent (LH) were less distressed than those in which both partners were (HH). This may indicate that women in our sample who scored lower on AEE contribute, perhaps through a mechanism of reduced patient pain catastrophizing, to diminish the overall emotional distress in the relationship.

Lastly, dyadic adjustment was found to be superior in LL couples when compared with couples in which only the woman or both partners were ambivalent over the expression of their emotions (HL and HH). Inexpressive ambivalents, in particular, have been found to more often interpret facial expressions of emotion with the opposite valence of that which is conveyed [64], which may partly account for the increased relational distress in ambivalent couples. They may be providing and receiving the wrong kind of support to and from their significant others [65]. Importantly, emotional support from one’s partner is thought to be a need which is particularly central in chronic pain patients [66]. Ambivalent women have also been found to be less congruent regarding their verbal and nonverbal communications [65], a finding which may contribute to the reduced dyadic adjustment which is reported by couples in which only the woman or both partners are ambivalent (HL and HH) as compared with low ambivalence couples (LL). Little is known, however, about the nonverbal communication correlates of ambivalent men. Finally, it is noteworthy that women were significantly more relationally distressed than their partners in HH couples. This may reflect their difficulty expressing their need for emotional support for their pain from their partners, who are also ambivalent [67].

The fact that dyadic AEE was not associated with pain suggests that couples’ levels of AEE are perhaps more relevant to their psychological, sexual, and relational well-being rather than with the intensity of the pain reported by the woman, per se. However, higher AEE of women was significantly associated with their higher pain intensity, a result which is consistent with previous findings in the chronic pain literature [26]. It may be that women who are less comfortable with the way they express their emotions regarding sexual pain could develop a more catastrophic cognitive appraisal of it and also become more oriented toward expressing their physical symptoms instead of their associated emotions. Catastrophizing has,
in fact, been found to mediate the relationship between AEE and pain in a nonclinical student sample [59], and associations between increased AEE, catastrophizing, and pain have also been found in chronic pain samples [27,52].

Taken together, findings of the present study indicate that when faced with the challenge of PVD, low ambivalence couples are more sexually satisfied and functional, less psychologically distressed, and more relationally adjusted than high ambivalence couples. One important difference between our results and previous findings concerning dyadic AEE is that in our sample, low ambivalence couples were generally superior in their outcomes to the three other types of couples, whereas in other chronic pain populations, high ambivalence couples stand out as inferior to the three other types of couples in terms of outcomes. This may be due to the highly emotional and intimate nature of the pain experienced by the women in our sample. Pain in the context of sexuality may be particularly difficult to regulate and/or to communicate about for both partners, perhaps especially for those who would generally be qualified as ambivalent over the expression of emotions.

This study is not without limitations. The cross-sectional design cannot account for causal links or directions between variables. All the measures consisted of self-report questionnaires. Also, not all women in our sample had been diagnosed with PVD by a physician and they were all in stable, mostly cohabiting relationships or married, which may not be generalizable to the PVD population as a whole. Despite these limitations, this study adds to the growing body of research which explores the associations between emotional regulation and the adjustment to various chronic pain conditions, and which includes the caregivers/partners in their conceptualization of the experience of pain [20,22]. It is also the first study to explore the emotional regulation of couples coping with PVD. Clinically, results suggest that AEE could be targeted in the assessment and treatment of couples with PVD. Examining how couples regulate their emotions related to painful intercourse could represent an additional therapeutic element, which would complement cognitive-behavioral strategies commonly used in the treatment of this sexual health problem.

Conclusion

PVD couples, in which both partners were low on AEE, were more sexually satisfied and functional, less psychologically distressed, and more relationally adjusted than couples in which both partners reported higher ambivalence in the expression of their emotions. Future research should focus on better defining these associations and informing them by examining potential mediators and moderators, such as satisfaction with sexual communication, catastrophizing, and intimacy.

Corresponding Author: Nayla Awada, B.Sc.Psy.D Candidate, Psychology, University of Montreal, C.P6128, succ. Centre-Ville, Montreal, Quebec H3C 3J7, Canada. Tel: (514) 343-6111; E-mail: nayla.awada.dpsy@gmail.com

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Statement of Authorship

Category 1
(a) Conception and Design
Nayla Awada; Sophie Bergeron
(b) Acquisition of Data
Sophie Bergeron; Marc Steben
(c) Analysis and Interpretation of Data
Nayla Awada; Sophie Bergeron; Pierre McDuff; Victoria-Ann Hainault

Category 2
(a) Drafting the Article
Nayla Awada
(b) Revising It for Intellectual Content
Nayla Awada; Sophie Bergeron; Pierre McDuff

Category 3
(a) Final Approval of the Completed Article
Nayla Awada; Sophie Bergeron

References

Ambivalence over Emotional Expression in a PVD Population


