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Affect and marital adjustment in women's rating of dyspareunic pain

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Affect and Marital Adjustment in Women's Rating of Dyspareunic Pain

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Objective: *To investigate the extent to which depressive symptomatology, anxiety, and marital adjustment mediate pain ratings in women suffering from dyspareunia.*

Method: *Seventy-six women with dyspareunia were administered the depression and anxiety scales of Derogatis's Brief Symptom Inventory and the McGill Pain Questionnaire. They also underwent a manual–visual gynecological examination, an ultrasound, and a colposcopy in an attempt to identify potential evidence and type of organicity.*

Results: *Depressive symptomatology, anxiety, and marital adjustment together accounted for a significant amount of the variance in pain ratings, although only anxiety and marital adjustment were independent predictors of pain ratings in the entire group of women with dyspareunia. When multiple regression analyses were then applied to different diagnostic subgroups of dyspareunia, the independent predictors of pain rating varied depending on the findings from the gynecological examinations.*

Conclusion: *Affect and marital adjustment appear to be significant predictors of dyspareunic pain rating, although the independent contribution of psychosocial variables may vary depending on the presence and type of organic findings.*

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Key Words: *dyspareunia, pain, sexuality, marital adjustment, depression, anxiety*

The role of psychological factors in chronic or recurrent pain has been the focus of much pain research in the recent past (1). Slowly moving away from dualistic conceptualizations of pain as either organic or psychogenic, the recent empirical effort has centred on identifying psychological factors that mediate the pain experience, regardless of questions regarding primary etiology (1,2). Depression has received the most research attention, largely because of its high comorbidity with chronic pain (3). Anxiety, which in the psychiatric literature is highly correlated with depression, has not been examined as fully, although interest in its relationship to pain is growing (3–5). Finally, the impact of spouses and significant others on pain report and pain behaviour is yielding interesting results (6–8). Spouse solicitousness seems to be related to increased pain behaviours, and, paradoxically, marital adjustment correlates negatively with the latter.

The mediation of psychological factors in the pain reports of women with dyspareunia, which is an acute recurrent pain associated with vaginal intercourse, has received little attention primarily because of the persistently dualistic conceptualization of this pain disorder. Researchers concentrating on organicity have ignored psychological mediators altogether, and those who have long considered dyspareunia to be a psychogenic pain have concentrated on psychological factors primarily as etiologic triggers (9). It is only recently that dyspareunia has been investigated as a pain disorder rather than a sexual dysfunction and that the characteristics of the pain have been described (10,11).

The extent to which depression, anxiety, and marital relationships mediate the experience or report of dyspareunic pain seems to be of particular interest for a number of reasons. First, pain that interferes significantly with valued activity has been hypothesized and shown to have a strong relationship to

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depressive symtomatology (3). Considering that sexual intercourse probably ranks highly as a valued activity in the life of sexually active couples, one would expect there to be a relationship between depressive symptomatology and pain reports in dyspareunia. Second, because dyspareunia is a recurrent pain that is paired primarily with intercourse, one could hypothesize that the principles of classical conditioning might be operating to institute a conditioned anxiety response to sexual activity. Third, if there was ever a pain disorder in which the reactions of significant others were hypothesized to play a mediating role, dyspareunia must surely be a test case for this hypothesis. More than with any other pain, the experience of dyspareunia is intimately tied to the presence of a partner.

As a pilot investigation of these issues, this study examines the relationships among depression, anxiety, marital adjustment, and pain reports in a group of partnered women with dyspareunia. Our hypotheses were 1) that depressive symptomatology, anxiety, and marital adjustment together would be predictive of pain reports and 2) that they would also be independently predictive of pain reports. A second more exploratory set of hypotheses involved whether or not psychosocial predictors of dyspareunic pain would vary depending on the diagnostic subtype of dyspareunia. We hypothesized that these psychosocial predictor variables would account for more of the variance in dyspareunia with no obvious pathology than in dyspareunia attributable to organic pathology.

Method

The data used in these analyses were taken from a matched and controlled clinical study of the etiology of dyspareunia consisting of a lengthy protocol which included a psychosocial interview and self-report measures of depression, anxiety, and marital adjustment, and 3 gynecological examinations (10,11). Of the 120 women recruited for that study, 76 were married or cohabiting with their partners. To test for the ability of affective measures and marital adjustment to predict pain ratings, the data of these 76 women were used in the current analyses. Although all 76 women suffered from dyspareunia, gynecological tests yielded 4 different diagnostic groups. Of these 76 participants, 19 were found to have no pain-related organic findings, 33 were diagnosed with vulvar vestibulitis, 10 were diagnosed with vaginal atrophy, and 14 had organic findings of different varieties that were neither atrophy or vulvar vestibulitis. Vulvar vestibulitis is diagnosed on the basis of 3 criteria: 1) severe pain on vestibular touch or attempted entry, 2) tenderness to pressure localized within the vulvar vestibule, and 3) physical findings confined to erythema of various degrees (12). Vaginal atrophy was determined by visually detectable impoverishment of skin elasticity, turgor, and labial fullness, as well as a visible thinning of the vaginal mucosa. Only measures and procedures relevant to this analysis are described in the following section. For details about the entire protocol and procedure, see Meana and others (10).

Subjects

Participants were recruited through the publication of 2 articles on the topic of dyspareunia that appeared in 2 Montreal daily newspapers (one English and one French). Inclusion criteria for participation in the study were 1) the experience of genital or pelvic pain with penile–vaginal intercourse and 2) fluency in English or French. Exclusion criteria were 1) chronic genital or pelvic pain at times other than during sexual intercourse, 2) pregnancy, and 3) dementia. Participants who were deemed eligible after a brief telephone screening interview were given an appointment at the Department of Obstetrics and Gynecology of the Royal Victoria Hospital.

The 76 married or cohabiting women had a mean age of 40.18 years (SD = 12.5). Forty of them were interviewed in English, and 37 of them were interviewed in French. Twenty-eight women (37%) were cohabiting with partners, and 48 women (63%) were married. Sixty women (79%) were North American born, and 53 women (70%) were raised Roman Catholic. The mean number of children was 0.89 (SD = 1.20). The mean number of years of formal schooling was 14.38 (SD = 2.95), the equivalent of 1 year of undergraduate university.

Measures

McGill–Melzack Pain Questionnaire (MPQ) (13). The MPQ is both a qualitative and quantitative measure of pain that comprises 78 adjectives, 3 scales (sensory, affective, evaluative), and 3 indices of pain (pain rating index, number of words chosen, present pain index). The pain rating index is considered the global multidimensional measure of pain.

Brief Symptom Inventory (BSI) (14). The BSI is a 53-item measure of state psychopathology that comprises 9 symptom dimensions (somatization, obsession–compulsion, interpersonal sensitivity, depression, anxiety, paranoid ideation, psychoticism, phobia, hostility) and a global severity index. Subject scores were computed in reference to female nonpatient norms (a score of 50 on any scale being the norm and a score of 70 representing the clinical cutoff).

Locke–Wallace Marital Adjustment Scale (15). This is a widely used 15-item general measure of marital adjustment that surveys satisfaction with issues such as "dealing with in-laws," leisure time, and sexual relations. Responses were scored as per the system described by Locke and Wallace in which the norm for the total score is 100 (15). For the purposes of this study, we modified the language of the scale to apply to both married and cohabiting couples.

Procedure

Upon arrival at the clinic, women were interviewed individually by a clinically trained interviewer for approximately 45 to 60 minutes, and they completed questionnaires. They then underwent a standard gynecological examination, an

Table 1. Means and standard deviations of depression, anxiety, marital adjustment, and pain rating

	Mean	SD
Depression scale (BSI)	50.93	23.07
Anxiety scale (BSI)	54.30	18.74
Marital adjustment (Locke–Wallace)	96.25	33.46
Pain rating index total (MPQ)	23.23	14.24

BSI = Brief Symptom Inventory; Locke–Wallace = Locke–Wallace Marital Adjustment Scale; MPQ = McGill–Melzack Pain Questionnaire.

endovaginal ultrasound, and a colposcopy. The entire protocol required approximately 3 hours to complete, including waiting time between examinations.

Results

Descriptive Statistics of Predictor Variables and Pain Rating

As shown in Table 1, marital adjustment scores and scores on the depression and anxiety scales were relatively close to the norms for the measures outlined in the Method section. The pain rating index score compares to scores found for a number of other recognized pain disorders (16).

Correlations Among Predictor Variables and Pain Rating

As shown in Table 2, although correlations exist among all variables, the strongest relationships seem to be between anxiety and pain rating and between marital adjustment and pain rating. As expected, anxiety was positively related to pain rating. Contrary to what is commonly found in the pain literature, however, marital adjustment was negatively related to pain rating. Depression and marital adjustment also show a strong negative relationship.

Predictors of Pain Rating

To investigate the relative strength of affective and marital adjustment variables in predicting pain rating in women with dyspareunia, a simultaneous regression analysis was conducted in which depression, anxiety, and marital adjustment served as predictors (F [3.73] = 6.52; $P < 0.001$). As Table 3 illustrates, only anxiety and marital adjustment were significant independent predictors of pain rating in women with dyspareunia. Depression was not a significant predictor of pain rating. Together, these 3 predictors accounted for 21% of the variance in pain rating.

To investigate the relative strength of these 3 psychosocial variables in predicting pain rating in diagnostic subgroups of dyspareunia, simultaneous regression analyses identical to the one described above were then conducted on the 2 diagnostic groups of dyspareunia large enough to fulfill the predictor variable-to-subject ratio requirement for this statistical procedure: no organic findings (F [3.16] = 4.89; $P < 0.02$) and vulvar vestibulitis (F [3.30] = 3.96; $P < 0.02$). As shown in Table 4, only depression was a significant independent predictor of pain rating in women with no organic findings associated with dyspareunia. Depression, anxiety, and marital adjustment together accounted for 48% of the variance in pain rating.

In women with dyspareunia attributable to vulvar vestibulitis, only marital adjustment was a significant independent predictor of pain rating (Table 5). Depression, anxiety, and marital adjustment together accounted for 28% of the variance.

Discussion

Depressive symptomatology, anxiety, and marital adjustment together accounted for 21% of the variance in pain reports in this sample of women with dyspareunia. Thus our first hypothesis was confirmed because these combined psychosocial variables accounted for a statistically significant proportion of the variance in pain rating. Our second hypothesis, however, was only partly confirmed because only anxiety and marital adjustment were independently predictive of pain rating. Depression, the most common psychological variable associated with pain in the literature, did not independently predict quantitative pain reports of dyspareunia in general.

Interestingly, these relationships varied depending on the diagnostic subtype of dyspareunia being investigated. In women with dyspareunia with no obvious organic pathology, the 3 psychosocial predictors together accounted for 48% of the variance in pain rating, which contrasts with the 28% of the variance in the pain ratings of women with vulvar vestibulitis. In dyspareunia with no organic pathology, however, only depression was independently predictive of pain rating. In dyspareunia attributable to vulvar vestibulitis, only marital adjustment was independently predictive of pain ratings. These findings confirmed our hypothesis that the relationship of psychosocial variables to pain rating would vary depending

Table 2. Correlations among predictor variables and pain rating

	Depression scale (BSI)	Anxiety scale (BSI)	Marital adjustment (Locke–Wallace)	Pain rating index total (MPQ)
Depression scale (BSI)	—	0.226[a]	–0.314[b]	0.251[a]
Anxiety scale (BSI)	—	—	–0.265[a]	0.360[b]
Marital adjustment (Locke–Wallace)	—	—	—	–0.351[b]
Pain rating index total (MPQ)	—	—	—	—

[a] $P < 0.05$; [b] $P < 0.01$.
BSI = Brief Symptom Inventory; Locke–Wallace = Locke–Wallace Marital Adjustment Scale; MPQ = McGill–Melzack Pain Questionnaire.

Table 3. Simultaneous prediction of pain rating in women with dyspareunia

	β	*P*
Depression scale (BSI)	0.07	ns
Anxiety scale (BSI)	0.21	< 0.01
Marital adjustment (Locke–Wallace)	–0.10	< 0.05

$N = 76$; $R^2 = 0.21$.

Table 4. Simultaneous prediction of pain rating in women with dyspareunia without obvious pathology

	β	*P*
Depression scale (BSI)	0.26	0.03
Anxiety scale (BSI)	0.19	ns
Marital adjustment (Locke–Wallace)	–0.11	ns

$N = 19$; $R^2 = 0.48$.

Table 5. Simultaneous prediction of pain rating in women with dyspareunia attributed to vulvar vestibulitis

	β	*P*
Depression scale (BSI)	–0.02	ns
Anxiety scale (BSI)	0.20	ns
Marital adjustment (Locke–Wallace)	–0.24	<0.02

$N = 33$; $R^2 = 0.28$.

on diagnostic subtype. Unfortunately, cell sizes impeded our ability to run similar analyses on the vaginal atrophy and mixed diagnostic groups.

Although this study provides general support for the commonly reported relationship between affect and pain rating in a number of clinical pain disorders, it raises the possibility that the nature of this relationship may vary depending on the hypothesized primary etiology of the pain. In this study, depression was predictive of pain ratings only in cases where organicity was *not* evident. One could argue that the organic findings in vulvar vestibulitis are vague (generally limited to nonspecific inflammation and erythema); however, the localization is very specifically in the vulvar vestibule, in contrast to the multiple-site and diffuse pain of dyspareunia with no obvious pathology (10).

Could affect be a stronger mediator of pain experience in idiopathic pain disorders than in pain disorders with a clearer pathogenesis or at least a definite pain location? Research on pain and depression cannot currently answer this question because it has centred on chronic pain, which is primarily idiopathic. We do know, however, that depression is strongly associated with diffuse pain and pain in multiple locations and that depressed individuals actually report lower pain ratings than nondepressed individuals in response to peripherally induced experimental pain (3). Perhaps the role of depression in pain experience can be further elucidated by investigating the differential impact of depression on pain in idiopathic chronic pain and in peripherally maintained chronic pain.

There is an alternative potential explanation for the increased mediation of affective variables in the pain of dyspareunia with no obvious pathology compared with the pain of vulvar vestibulitis. Perhaps women who can attach a name and diagnosis to their pain fare better emotionally than women who have an undiagnosed problem. Although this is a theoretically plausible explanation, none of the women who participated in this study reported knowing the cause of their dyspareunia. None of the women who received a diagnosis of vulvar vestibulitis had ever heard of the term prior to their participation in the study. Thus this explanation cannot account for the findings in this particular sample.

The other interesting finding in this study is the way in which marital adjustment predicted pain ratings in the entire dyspareunia sample prior to subcategorization by diagnosis. The more adjusted the couple, the lower the pain rating. Most of the chronic pain literature reports the opposite (17). Marital adjustment is positively associated with higher pain ratings and higher frequencies of pain behaviours. It seems that spouses in well-adjusted relationships tend to engage in solicitous behaviours that purportedly increase pain report and pain behaviour in the partner with pain. In the case of dyspareunia, spousal solicitousness would indicate either a willingness to avoid sexual intercourse or a general sensitivity to the partner's pain during sexual activity. This sensitivity may result in love-making techniques that reduce pain. Conversely, lack of solicitousness could constitute a hostile act, such as insisting on sexual intercourse despite the woman's pain. Thus dyspareunia appears to be a special case of recurrent pain in which spousal solicitousness may decrease pain reports rather than increase them.

In summary, this study suggests that the impact of both affect and marital adjustment on clinical pain ratings may vary depending on the nature of the pain disorder. In the investigation of psychosocial factors that mediate the pain experience, differentiating between pain disorders may help to clarify some of these relationships.

Clinical Implications

- Assessment of depression, anxiety, and marital adjustment is important in treatment planning.
- Treatment should target both physical pathology and psychosocial correlates.

Limitations

- Sample sizes for diagnostic subgroups were small.
- Measures of affect could be more comprehensive.
- Measures of pain could be more comprehensive.

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Résumé

L'étude visait, en partie, à examiner à quel point la symptomatologie de la dépression, l'angoisse et l'adaptation conjugale modifient la mesure de la douleur des femmes souffrant de dyspareunie. Soixante-seize femmes souffrant de dyspareunie ont été évaluées à l'aide du répertoire des symptômes de Derogatis et du questionnaire de McGill sur la douleur, qui servent à mesurer l'état dépressif et l'angoisse. Ces femmes ont également subi un examen gynécologique manuel-visuel, une échographie et une colposcopie en vue de cerner la preuve éventuelle et le type d'organicité. La symptomatologie de la dépression, l'angoisse et l'adaptation conjugale étaient responsables en bloc d'une bonne partie des écarts observés dans les échelles de la douleur, quoique seules l'angoisse et l'adaptation conjugale soient des prédicteurs indépendants chez toutes les femmes souffrant de dyspareunie. En appliquant ensuite les analyses de régression multiple à différents sous-groupes diagnostiques de dyspareunie, on a remarqué que les prédicteurs indépendants de la douleur variaient selon les constatations des examens gynécologiques. Il semble que l'affect et l'adaptation conjugale soient les principaux prédicteurs de l'évaluation de la douleur dyspareunique, bien que l'apport indépendant de variables psychologiques puisse varier selon la présence et le type de constatations organiques.