Vulvodynia: A Common and Under-Recognized Pain Disorder

Adopting a biopsychosocial approach to understand women’s pain

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Vulvodynia - vulvar pain of at least 3 months duration, without clear identifiable cause (1)

Often referred to “knife-life”, burning pain (2)

Magnitude of the problem

- Lifetime estimates ranging from **10% to 28%** in reproductive-aged women (3,4)
- Up to 60% of women may see **three or more doctors before receiving a diagnosis** (5).
The current study

A Biopsychosocial approach to understanding vulvodynia has not been widely considered.

OBJECTIVE

To evaluate a biopsychosocial approach in women with vulvodynia, examining factors associated with the variability of pain severity and interference

HYPOTHESES

1) Psychological distress and fatigue would be associated with greater pain severity and interference.

2) Negative illness perceptions, + catastrophizing, fear-avoidance, damage beliefs, symptoms-focusing, embarrassment-avoidance and

3) greater use of all-or-nothing behaviour and avoidance/ resting behaviours would all be associated with greater levels of pain severity and inference.
**METHOD**

**DESIGN:** Cross-sectional study

**MATERIALS:** self-report questionnaires (including demographic questionnaire)

**PROCEDURE:** completion of questionnaires via Bristol Online Survey

**PARTICIPANTS:** Recruited through Vulvodynia Charity Association
- Currently suffering from Vulvodynia
- Older than 18
- Fluency in Italian
- Lack of Vulvodynia diagnosis
- Cognitive impairment
- Pregnancy

<table>
<thead>
<tr>
<th>Primary outcomes</th>
<th>Explanatory variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pain severity:</strong> Numerical Pain rating (6)</td>
<td><strong>Fatigue:</strong> Chalder fatigue questionnaire (8)</td>
</tr>
<tr>
<td><strong>Pain interference:</strong> Brief Pain inventory (7)</td>
<td><strong>Psychological distress:</strong> Hospital Anxiety and Depression Scale (9)</td>
</tr>
</tbody>
</table>
| **Illness perceptions:** Illness perception questionnaire- Revised (10)  
Illness identity, consequences, emotional representation, timeline, cyclical timeline, personal control, treatment control, illness coherence | **Cognitive-behavioural response to pain:** CBSQ (11)  
Fear-avoidance, embarrassment-avoidance, catastrophising, Damage, symptom focusing, resting/avoidance, all-or-nothing behaviour |

Table 1. Variables and questionnaires used in the study
RESULTS

- **Participants** (n = 335), mean = 34.8 years (SD = 9.6)

**Multivariate analysis**

### Table 2
Hierarchical regression model for pain severity

<table>
<thead>
<tr>
<th>Variable</th>
<th>B (s.e.)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-3.89 (1.31)**</td>
<td>-0.25, -0.01</td>
</tr>
<tr>
<td><strong>Block 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.12 (0.06)*</td>
<td>-.25, -0.01</td>
</tr>
<tr>
<td>Distress</td>
<td>.46 (0.10)**</td>
<td>.26, 0.66</td>
</tr>
<tr>
<td>Illness Identity</td>
<td>.47 (0.21)*</td>
<td>.06, 0.91</td>
</tr>
<tr>
<td>Personal control</td>
<td>-.32 (0.14)*</td>
<td>-.56, 0.01</td>
</tr>
<tr>
<td>Treatment control</td>
<td>-.47 (0.18)*</td>
<td>-.88, -0.16</td>
</tr>
</tbody>
</table>

Notes. *p<.05; **p<.01; CI = confidence intervals; s.e. = standard error; B = unstandardized beta coefficient

- **Univariate analysis:** All psychosocial variables significantly correlated with outcome variables

### Table 3
Hierarchical regression model for pain interference

<table>
<thead>
<tr>
<th>Variable</th>
<th>B (s.e.)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>6.89 (2.19)**</td>
<td>-11.21, -2.58</td>
</tr>
<tr>
<td><strong>Block 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distress</td>
<td>.91 (0.15)**</td>
<td>.60, 1.21</td>
</tr>
<tr>
<td>Fatigue</td>
<td>.59 (0.26)*</td>
<td>.09, 1.09</td>
</tr>
<tr>
<td>All-or-nothing behaviour</td>
<td>.43 (0.17)*</td>
<td>.09, 0.77</td>
</tr>
<tr>
<td>Treatment control</td>
<td>-.65 (0.27)*</td>
<td>-1.18, -0.13</td>
</tr>
</tbody>
</table>

Notes. *p<.05; **p<.01; CI = confidence intervals; s.e. = standard error; B = unstandardized beta coefficient

- **Factors associated with pain severity**

  Demographic characteristics explained 6.3% of the variance (F = 3.76, p < 0.01).

  Full model explained 36% variance in pain severity
  \[ R^2 = .36**, F = 12.03**. \]

- **Factors associated with pain interference**

  Demographic characteristics explained 8.4% of variance in pain interference (F = 7.56, p < 0.01).

  Full model explained 48% variance in pain interference
  \[ R^2 = .48**, F = 17.49**. \]
DISCUSSION

First study to explore and find an association between, distress, fatigue, and cognitive-behavioural factors in chronic vulvar pain.

**Important considerations**

**Psychological distress**
60% of women reported anxiety and 38% depression.

**Fatigue as a symptom**
72% of women reported clinically significant levels of fatigue.

*But*....
- Use of self-report
- Cross-sectional design

**The Future**
To examine these associations longitudinally.
To develop tailored interventions to help women better manage Vulvodynia.
Thanks for your attention
References


