



Relationship between Pain with Intercourse and Psychological Distress Among Women with Vulvar Vestibulitis Syndrome

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BACKGROUND

Vulvar Vestibulitis (VVS) is the most common cause of vulvo-vaginal pain in reproductive age women, affecting up to 15% of the general female population. Women with VVS have pain with intercourse, and sensitivity to touch on genital contact. Psychological characteristics such as anxiety and somatization are also common in the population. In this study, we sought to assess the relationship between self reported intercourse-related pain and psychological distress among women with VVS.

We hypothesized that women who reported higher levels of intercourse related pain were more likely to have a higher level of psychological distress 1 year after their initial visit to the UNC Vulvar Pain Clinic..

OBJECTIVE

- To examine the correlation of intercourse related pain with depression, anxiety, somatization, and distress one year after initial visit to the UNC Vulvar Pain Clinic.
- To compare the psychological characteristics between participants with < 30% vs ≥ 30% improvement in pain

METHODS

The study was approved by the University of North Carolina IRB and conducted between July 20, 2006 and January 2, 2007 at the Vulvar Pain Clinic.

Consecutive women diagnosed with VVS with at least one year since initial evaluation were invited to participate. Participants were mailed a battery of questionnaires to assess their self-reported pain with intercourse in the 2 weeks prior, improvement since treatment initiation, and psychological characteristics using the following validated measures:

- *Gracely Pain Scale* assessing pain using a *Likert* scale of 0-100
- *Pennebaker Inventory of Limbic Languidness (PILL)* assessing somatization
- *Spielberger State-Trait Anxiety Inventory*
- *Brief Symptom Inventory (BSI)* assessing depression and distress
- *Perceived Stress Scale (PSS)*

Questionnaires were mailed to a total of 108 eligible women.

Sixty percent (n=76) returned the completed questionnaires.

Student's t test and partial correlations adjusting for age/education were analyzed using Stata 9.0.

RESULTS

• On average, women were 32 (SD=7.4), married (92%), white (91%), and nulliparous (66%); Ninety-six percent (n=73) had at least a college education.

• On the Gracely scale of 0 'no pain' to 100 'worst imaginable pain,' a mere 7% (n= 5) reported no pain with intercourse. The *mean* average, lowest and highest intercourse-related pain ratings were 39.0 (SD=28.9), 19.4 (SD=24.7), and 58 (SD=30.3), respectively.

• On average, our cohort had higher levels of somatization (114), anxiety (42), global distress (0.78) and perceived stress (19) than women in the general population 103, 36.3, 0.35, and 13.6, respectively.

• There was not a significant correlation between most psychological characteristics and intercourse-related pain. However, there was a tendency for higher levels of intercourse-related pain to correlate with higher levels of somatization (r= 0.21, p=0.08) and perceived stress (r=0.21, p=0.08). A statistically significant correlation was found between low levels of intercourse-related pain and depression (r=0.25, p=0.03).

• While 32% (n=24) reported <30% improvement in intercourse related pain, 68% (n=52) noted ≥ 30% improvement and 46% (n=35) noted >60% improvement over a 1-2 year period.

• Women with higher levels of perceived stress were more likely to report lower levels of improvement in intercourse-related pain, p=0.003.

Table 1: Psychological characteristics and pain report between participants with < 30% vs. ≥ 30% subjective improvement in intercourse-related pain

	< 30% (n=24) Mean (SD)	≥ 30% (n=52) Mean (SD)	P-Value
Intercourse related pain (Gracely)			
Average	64.3 (5.3)	27.8 (3.3)	<0.0001
Low	33.5 (6.3)	13.2 (2.8)	0.001
High	74.0 (6.0)	51.0 (4.1)	0.002
Somatization (PILL)	116.8 (5.6)	113.4 (3.2)	0.57
Anxiety (STAI-T)	43.3 (2.2)	41.8 (1.5)	0.58
Global Distress (BSI-GSI)	0.78 (0.14)	0.78 (0.07)	0.97
Perceived Stress (PSS)	21.6 (0.99)	17.4 (0.81)	0.003

CONCLUSION

Among women who had been evaluated for VVS at least 1 year prior to entry into the study, we did not observe a significant correlation between intercourse-related pain and psychological characteristics. However, subgroups of women differed with respect to improvement in intercourse related pain. Those with higher levels of perceived stress (PSS) were more likely to report < 30% interval improvement in pain. Further studies on the association between stress and improvement in intercourse-related pain are needed.