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The Representation of Female Pain in Medical Academic Discourse

The Case of Vulvar Pain and Vulvodynia

Giorgia Riboni[1] and Angela Zottola[2]
University of Turin[1] [2]
ORCID: https://orcid.org/0000-0003-3161-4374[1], https://orcid.org/0000-0003-2356-5023[2]
Email: giorgia.riboni@unito.it[1], angela.zottola@unito.it[2]

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Abstract

Health care professionals within the scientific community have long ignored or minimized vulvar pain, a condition estimated to affect one in ten people with a vulva. In recent years, this issue has received increased attention and is currently undergoing a process of pathologization, i.e., it is being officially recognized as a disease by medical institutions. The term “vulvodynia” has been introduced to label and confer pathological status to this chronic pain condition, although adequate categorization is still lacking.

Drawing on theories of the collective understanding of illness, which view discursive constructions as tools for shaping societal perceptions of legitimacy and credibility in relation to health conditions, this paper argues that the invisibilization of vulvar pain and vulvodynia stems from the broader issue of devaluing women and their experiences.

This study investigates the linguistic and discursive resources employed within scientific discourse to construct, frame, and (de)legitimize vulvodynia and vulvodynia patients in scholarly literature. A corpus-assisted approach is adopted to explore the evolving representations of vulvar pain and vulvodynia in medical discourse. An ad hoc dataset of scientific articles published in English over the past 25 years has been compiled and analyzed both qualitatively and quantitatively, aiming to contribute to a deeper understanding of how language shapes the reality of invisible pathologies and may ultimately lead to discriminatory practices.

This research takes its cue from participation in the public engagement project “V-Days: Vulvar Dialogues about youth and Sexuality,”[1] funded by the University of Turin, which aims to develop an interdisciplinary plan to raise awareness about vulvar pain and vulvodynia, a neglected female health condition, in high schools and in the general public (Bonfanti, et al. 2025).[2] According to its current official definition, provided by the International Society for the Study of Vulvovaginal Disease (ISSVD), vulvodynia is “vulvar pain of at least three months’ duration,

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[1] www.e-vulviamo.unito.it. Last visited 27/04/2026.

[2] While both authors are jointly responsible for the general design of this study, Giorgia Riboni has authored the introductory part, sections 1, 3.1, 3.2 and Angela Zottola has authored sections 2, 3.3,3.4 and 4.

without a clear, identifiable cause, which may have potential associated factors" (Bornstein, et al. 2016, 128).

Although women have long reported experiencing unexplained vulvar pain, vulvodynia has traditionally been either ignored or understudied (see § 1). At present, research is still in its infancy, although significant progress has been made over the past few years. However, we were unable to identify any studies within applied linguistics. This paper aims to address this gap in the literature by focusing on the discursive and linguistic resources used to describe vulvodynia, its patients, and possible treatments within the scientific community. Using a corpus-assisted approach, the paper explores the discursive constructions of vulvar pain and vulvodynia within a data set of academic articles published between 2002 and 2024. The adoption of a linguistic perspective on the topic can represent a meaningful integration into the scholarly exploration of this sickness and of its representation in society. It provides insights into how the latter is conceptualized – i.e., as a natural, albeit hurtful, condition to be accepted, or as a pathology to be cured (§1) – in scientific literature, assessing if it emphasizes etiology or clinical trials or incorporates patients' narratives and, if so, how. Moreover, combining discursive and corpus analytical tools can help uncover the possible presence of forms of gendered marginalization – which might elude qualitative analysis alone – within scientific literature.

The article begins by presenting background on the issue and a survey of relevant literature (§ 1), followed by an illustration of the criteria for corpus construction and the discourse-analytical framework applied in the study (§ 2). A quantitative analysis is carried out on the corpus to isolate the most common linguistic and rhetorical strategies employed to depict the sickness, patients and possible treatments (§ 3). Finally, results are discussed and conclusions are drawn (§ 4).

1. Literature Review

This study builds on a constructivist perspective on reality and draws on the assumption that language plays a central role in our understanding of it (Berger and Luckmann 1966). It aligns with research that considers the way in which subjects interpret and interact with the world around them as mediated by social interactions, i.e., practices which heavily rely on linguistic means. Through these interactions individuals negotiate and shape meanings, which then become shared and institutionalized within society. Starting from this perspective, it can be argued that notions such as health and sickness are not objective and fixed, but rather the result of a process of construction (Conrad and Schneider 1980) involving linguistic as well as other semiotic resources. Contrary to common belief (and parlance), illnesses are not simply 'out there' to be 'discovered' but rather represent the outcome of a collective agreement that determines what is 'unhealthful.' Against this backdrop, the viability of a definition of sickness in a given society depends on the power structures it is built upon (Freund, et al. 2003). The term 'pathologization' refers to the ways in which certain conditions come to be labeled as pathological – by medical institutions through definitions and in the clinic via diagnoses.

The related concept of 'medicalization' also sheds light on the linguistic constructivist nature of illnesses; according to Conrad and Potter, medicalization is "a process whereby non-medical problems become defined and treated as medical problems, usually in terms of illnesses or disorders" (2000, 210). Medicalization – including its under- and over-medicalized forms – is profoundly influenced by power dynamics within societies, too. Historically marginalized groups, such as women, have been either excessively or insufficiently pathologized and medicalized (Lorber and Moore 2002). For example, female sexual ailments have been consistently pathologized as the consequence of 'deviant' behavior seen as diverging from their 'natural' societal roles – marriage and motherhood. Hysteria is a case in point: before the rise of Freudian psychology, the treatment for women diagnosed as hysteric included regular marital sex, pregnancy, and childbirth (Tasca, et al. 2012, 115). The situation remains much the same today: a 2023 study conducted on endometriosis patients revealed that, despite the lack of scientific evidence that pregnancy reduces endometriotic lesions or symptoms, more than half of the respondents were advised to become pregnant to cure their ailment (Sirohi, et al. 2023).

In contrast to conditions that have been excessively pathologized, some women's health problems have been neglected altogether. Female biology, unlike male biology, has often been discursively portrayed as being better equipped to cope with pain. This supposed 'naturalness' of women's pain has often resulted in disregard and negligence, as well as disbelief and misdiagnosis (Jaworska and Ryan 2018, 108-109).

Throughout history, women's bodies and their experiences of pain have received limited medical attention; until very recently, the focus was on men, as many issues (e.g., heart disease) were typically considered male (Folkmarson Käll 2013, 4). The andronormative approach to health care (inter alia, Rickman 2025) may produce the effect that women-dominated conditions that do not fit the masculine norm become invisibilized (Samulowitz, et al. 2018, 9). When scientific research did concentrate on females, they were mainly treated as objects of study, not as individuals endowed with agency (Folkmarson Käll 2013, 4), with approaches oscillating between biological determinism – which reduces women to their anatomical reproductive functions – and the psychologizing of their issues. A possible example of the first attitude is that, in the eighteenth century, any female complaint (from headache to sore throat) was attributed to uterine and "ovarian disorders" (Annandale 2014, 158). By contrast, in the 19th century, especially with the advent of Freudian psychology, women's unexplained sexual ailments were regarded as "psychosomatic" and generally labeled as hysterias (Farrell and Cacchioni 2012, 329). This meant they were under-differentiated (i.e., a 'one-size-fits-all' diagnosis) and, more dramatically, undertreated.

Studies have shown that, in handling painful cases involving male and female patients, a paradox emerges (Hoffmann and Tarzian 2001): although women generally experience more pain and it is socially more acceptable for them to speak about it, their "reports are taken less seriously, their pain is discounted as being psychic or nonexistent, and their medication is less adequate than treatment given to men" (Samulowitz, et al. 2018, 10; see also Katz, et al. 2008; Werner, et al. 2004; Werner and Malterud 2003).

While this situation still mainly persists, some changes have been taking place since the 1970s. During the first waves of feminism, women drew general attention, for the first time, to the fact that their biology and health were socially constructed, and to how an ideology of biological determinism could be turned into a tool of female oppression (Riska 2010, 152). A decade later, in the 1980s, a shift occurred in the perception of women's ability to participate in pathologization and medicalization processes: an empowered model – one "which pointed to women's own capacity to 'medicalize' symptoms previously not recognized as medical [...] and gain control over their diagnosis and treatment" (Riska 2010, 152) – slowly emerged. This trend has acquired further momentum thanks to the spread of Internet technologies, which make information about sickness and treatment easily available as well as foster a proactive and participatory approach to healthcare (Riska 2010, 153). Recent studies have taken a more cautious approach to consumers' independence, as websites appear to be increasingly controlled by influential commercial interests (Riska 2010, 153).

The history of research into vulvar pain and vulvodynia closely follows the trajectory just described. Since these conditions affect only women, they have been either invisibilized or psychologized – and often still are. The existence of vulvar pain has been documented for over a hundred years, but this illness received scant medical attention until the second half of the 1970s, with the introduction of the International Society for the Study of Vulvovaginal Disease in 1975 (Farrell and Cacchioni 2012, 329). In the last few decades, medicine has progressively focused on this kind of ailment but has often relegated it to the psychological domain, with vulvodynia listed as a sexual dysfunction in the widely adopted *Diagnostic and Statistical Manual of Mental Disorders*, even in its 2022 updated version (see also §3.3).

Research on this illness has encountered significant definitional challenges; an official definition was not introduced until 2016 (Bornstein, et al. 2016) and the current one is not without its issues. In particular, it describes pain in the absence of clinical evidence and relies on a diagnosis of exclusion. Similar to many other definitions of women's health conditions, vulvodynia and vulvar pain are not defined on their own terms but "in terms of what they lack – in relation to the predominant medical norm" (Samulowitz, et al. 2018, 9).

Although women affected by vulvar pain and vulvodynia are now organizing in online communities and using websites and social media platforms to exchange knowledge, compare experiences and share information about treatments (Grutman, et al. 2025; Young and Miller 2019), generally demonstrating a proactive and engaged attitude, this engagement does not necessarily translate into a comparable role or representation within scientific literature. It might be possible to hypothesize that, despite growing medical attention to this condition and patient-led knowledge sharing, affected women's voices remain underrepresented in scholarly work. By exploring their discursive constructions, this paper aims to investigate the conceptualizations of vulvodynia and its patients that have emerged in the last two decades in academic texts; it examines whether they solely focus on etiology or clinical trials or whether they incorporate patients' narratives – and if so, how these narratives are portrayed. This kind of analysis can reveal representational biases and highlight the need to bridge community knowledge with evidence-based care.

The following section describes the data set built for this study and provides details about the scholarly articles collected for the analysis.

2. The Vulvar Pain Academic Corpus: data collection and methodological approach

To carry out our investigation we collected a corpus of academic papers, the Vulvar Pain Academic Corpus (from now VPAC). The corpus comprises 123 academic papers from a variety of disciplines. The table below illustrates how the different fields are represented within the corpus.

Field	Number of articles
Obstetrics & Gynecology	54 (44%)
Other medical subfields	28 (22,8%)
Psychology/Psychiatry	25 (20,3%)
Biology	3 (2,4%)
Humanities and Social Sciences	13 (10,6%)

Tab. 1: Journal articles' field

The category 'Other medical subfields' includes numerous other medical areas that span from dermatology to epidemiology. Three main criteria were established for corpus collection: i) the language of the papers was limited to English, ii) the articles were open access and available through *Eureka*[3], iii) the time span investigated was 25 years (1999-2024).

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[3] The library database of our institution, available at unito.on.worldcat.org/discovery. Last visited 15/01/2026.

We relied on Eureka's search engine to obtain a dataset of papers whose titles contained the terms "vulvar pain" and "vulvodynia." Although our plan was to investigate 25 years of academic publications on the topic, the first article that we could find mentioning one of the search terms is from 2002. Our search thus highlights a lack of publications between 1999 and 2001, which indicates limited interest in the topic at the time. The VPAC resulted in a bit more than a million words (1,063,371 tokens).

We acknowledge the fact that with the current technologies available for data collection and processing the VPAC can be considered quite a small dataset: nonetheless it is not small enough to analyze it completely and solely in a qualitative manner, which is why we relied on Corpus-assisted Discourse Analysis (CADS) (Gillings, et al. 2023). This is a methodological approach that combines techniques from Corpus Linguistics (see, among others, McEnery and Hardie 2012) with Critical Discourse Analysis (see, among others, Fairclough 1995) to investigate patterns of language use in large collections of texts. It involves the systematic and quantitative examination of linguistic features (such as keywords, collocations, and concordances) to identify recurrent discursive practices, which are then interpreted qualitatively in relation to their social, ideological, or political implications. The use of CADS allows researchers to uncover both explicit and implicit discursive structures, offering empirical grounding to claims about discourse while also allowing for the triangulation of quantitative data with qualitative insights.

To analyze the data, we began with a frequency analysis using the software SketchEngine (Kilgariff, et al. 2014).[4] Having considered the output of this preliminary perusal of the data, we proceeded with the selection and close examination of the first 20 most frequent content words. These do not perfectly overlap with the 20 most frequent items in the list, but, like much CADS research, we excluded punctuation and function words for the purpose of this analysis. Table 2 below shows the tokens taken into consideration.

	Word	Frequency		Word	Frequency
1	pain	12,476	11	10 (ten)	1,465
2	vulvodynia	6,072	12	pelvic	1,412
3	women	5,736	13	sex	1,396
4	vulvar	4,663	14	other	1,353
5	sexual	3,197	15	research	1,352
6	treatment	3,005	16	7 (seven)	1,334
7	study	2,680	17	symptoms	1,245
8	patients	2,123	18	8 (eight)	1,213
9	chronic	1,966	19	reported	1,147
10	health	1,743	20	studies	1,117

Tab. 2: Frequency List

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[4] This is the process of counting how often each token occurs in the corpus.

We then carried out a collocation analysis[5] of these terms. We set the minimum frequency to 5 occurrences, with a word span of 3 to the left and right, following the default settings of SketchEngine. In terms of statistical measurement, considering the size and type of corpus, we relied on LogDice – a frequency-balanced variant of MI – which provides a more stable and corpus-size independent score. LogDice is well suited to small corpora because it avoids the bias of MI toward extremely low-frequency items, while still foregrounding lexical exclusivity (Brezina 2018, 74).

The remainder of the paper illustrates the results of the detailed collocation analysis of the 4 top content words (with the exclusion of the search terms *vulvodynia* and *vulvar*), namely *pain*, *women*, *sexual*, and *treatment*. As will be noted, the other top content words also appear frequently in the collocate analysis, demonstrating their significance alongside the four main terms discussed. This examination provides deeper insights into the linguistic patterns and discursive representations of vulvodynia and its patients.

3. From vagueness to uncertainty: the case of vulvodynia

In this analysis section we examine each selected token in more detail, applying the methodology described above.

3.1 Pain[6]

The first most occurring content word of the VPAC is *pain*. The collocation analysis of pain reveals the presence of two converging discourses; on the one hand, some of the strongest collocates of this word are related to the characterization of the illness: pre-modifiers such as *vulvar* (co-occurs 48% of times, LogDice 12.12), *chronic* (co-occurs 70% of times, LogDice 11.62), *associated* (co-occurs 26% of times, LogDice 9.33), and *neuropathic* (co-occurs 67% of times, LogDice 9.15) also appear in the definition of vulvodynia (i.e. "vulvar pain of at least three months' duration, without a clear, identifiable cause, which may have potential associated factors").

On the other hand, collocates such as *intensity* (co-occurs 1,98% of times, LogDice 9.31), *provoked* (co-occurs 1,28% of times, LogDice 8.62), *persistent* (co-occurs 1,14% of times, LogDice 8.52), *threshold* (co-occurs 0,51% of times, LogDice 7.38) occur less frequently but encompass a wider variety of word types, all of which relate directly to describing the nature of pain. Of these,

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[5] This involves identifying words that frequently co-occur with a given search term, revealing typical patterns of association.

[6] A detailed analysis of the lemma *pain* can be found in Riboni and Zottola (2025); in this work we explore the metaphorical configurations where this word occurs and its ideological repercussions. In this paper we present a partial examination of the term which only focuses on concordances.

'provoked' is particularly interesting: although in specialist medical discourse the term's meaning is to induce a physical reaction,[7] this collocate could mislead lay readers into interpreting the condition as something women do to themselves, thus implying responsibility or blame. The main collocates of *pain* collectively indicate that, despite its potentially invalidating effects, this vulvar ailment cannot be measured objectively and remains invisible (both literally and metaphorically). Examples 1 to 3 below illustrate this concept through characterizations of pain in the semantic fields of (in)visibility, normalcy and reality:

(1) If there is nothing found, the results are 'normal' (no pathology); equally, to have pain is not to have anything wrong and the pain is **somehow 'normal' pain**.

(2) My doctor acted in line with the call put forward by the PSA when he affirmed the presence of my **pain as real** and validated **my reported distress**.

(3) It must be tempting for doctors to characterise V women as modern hysterics: with their frustrated and hopeless weeping, their often stubborn passivity in response to attempts at active intervention, their angry outbursts and their **invisible**, **intractable pain**, V women peer anxiously over their shoulders at their nineteenth century forebears.

Example 1 presents an instance of 'normalization' and de-pathologization of pain: since lab results disclose no pathology, then the patient has to accept it as 'normal.' This kind of approach can be deeply invalidating, leaving women feeling unseen, a dynamic absent from the narrative reported in example 2 and in the remark in example 3.

All in all, the concept of *pain* holds a central place in the corpus and in our current understanding of vulvodynia (Riboni and Zottola 2025). The contexts of occurrences of this term in the dataset demonstrate that research on this topic has either primarily focused on pain[8] itself or on women's emphasis of its role in their experiences to this day.

3.2 Women

Since this study focuses on a health issue, the high incidence of words referring to those affected is rather unsurprising. However, among the available lexical options, scholars show a strong preference for the term *women*, which is the third most frequent content word in the corpus.

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[7] This is clarified, for example, by the Merriam-Webster dictionary online at https://www.merriam-webster.com/dictionary/provoke#medicalDictionary. Last visited 05/01/2026.

[8] 15,3% of the academic papers included in our corpus were published by specialists of different fields in journals dedicated to pain research.

This choice could be considered non-inclusive, as it excludes people who, despite having an anatomically female apparatus, do not identify as women. Expressions such as 'assigned female at birth' and 'person with vulva' never appear in the dataset, possibly revealing limited awareness or interest in these issues.

The gender-neutral term *patients* only occurs about one third as often as *women* and ranks eighth in the frequency wordlist. The overwhelming prevalence of *women* might be related to the fact that *patients* activates a clear pathologizing framework, whereas its hyperonym does not. As mentioned before (see §1), vulvodynia is still undergoing a process of pathologization where the status of the condition has not yet been ultimately determined, and people suffering from it are still preferably referred to as *women* rather than as *patients.*

The most frequent collocational pattern – which makes up for almost 40% of occurrences of this lemma – is *women with* (co-occurs 25% of times, LogDice 12.30) + *condition/pathology* (see examples 4 and 5).[9] The collocation *women with 'vulvodynia'* (co-occurs 16% of times, LogDice 11.25) alone accounts for almost 11% of the occurrences of the word *women,* indicating that they are represented in the VPAC primarily as sufferers (see examples 6 and 7).

(4) For example, Brotto et al. reported that **women with secondary provoked vestibulodynia** reported more clitoral hood and intercourse pain compared to women with primary provoked vulvodynia.

(5) This can be applied as often as required for symptomatic relief, and 30 minutes before sexual activity for those **women with dyspareunia**.

(6) Pukall et al developed five vulvalgesiometers to assess pressure pain threshold of the external genital region in **women with provoked vulvodynia** and control women.

(7) **Women with both localized and generalized vulvodynia** have the highest prevalence of this cluster pattern compared with the other types, indicating that more severe vulvar pain is significantly associated with multiple comorbidities.

Patients shares the same collocational patterns as *women*: it is typically followed by an indication of a pathology or condition. Its most frequently occurring collocates, *with* (co-occurs

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[9] The clear preference for the collocational pattern *'women with'* might also stem from the growing use of the "patient-first formula," which provides more visibility to the person (syntactically encoded as a head noun) than to the illness (relegated to the post-modifier role; see Granello and Gibbs 2016).

6% of times) and *vulvodynia* (co-occurs 5% of times), have LogDice scores (10.72 and 10.22, respectively) comparable to those for *women* (see examples 8-10).

(8) **Patients with chronic whiplash** can be subgrouped on the basis of symptoms of sensory hypersensitivity and posttraumatic stress.

(9) The investigated qualities appear to be more common in **patients with localized provoked vulvodynia** than in comparable groups.

(10) Anxiety has earlier been presented as a common feature in **patients with LPV**, as reported by Wylie et al. [33,34]

When *women* or *patients* perform the syntactic role of subjects, their agency appears rather limited: they are almost never followed by verbs indicating material processes.[10] Instead, their main collocates tend to be reporting verbs such as *report* (LogDice 9.71) and *describe* (LogDice 7.81), mostly in the simple past tense. This result highlights a distinctive feature of the VPAC, which privileges women's narratives over the typical impersonal style of scientific discourse, where animate agents are hardly mentioned (Myers 1994; 1990). This is all the more noteworthy given that the dataset mostly comprises papers from medical and hard science disciplines, which have been historically reluctant to include patients' reports in their studies. This tendency might stem from the impossibility of objectively measuring and quantifying pain, issues that have forced vulvodynia research to rely on women' s narratives. At the same time, it could signal a partial shift towards the incorporation of patients' lived experiences in these fields.

Three main patterns emerged from the analysis of the right context of these verbs, particularly that of 'to report;' the first has to do with the reporting of painful past experiences connected with vulvar pain and vulvodynia (see examples 11 and 12):

(11) **All women reported** *having vulvodynia symptoms* for longer than 12 months, a medical diagnosis of vulvodynia for longer than 6 months, and a current or recent hetero-sexual relationship for longer than nine months.

(12) When **women reported** *that they awoke with pain in the mornin*g, they also reported significantly higher vulvar pain compared to the reports from other days in which they

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[10] The only exception is the verb 'to use,' which, however, occurs in expressions indicating routine behavior (especially prescribed drug use).

did not wake with pain, and women who reported waking with pain more frequently had higher average vulvar pain score.

Women's accounts also play a paramount role in evaluating treatments and therapies, as their efficacy can only be truly assessed by those with first-hand experience (see examples 13 and 14):

(13) Intriguing is that **a majority of women reported** *a decrease* in their pain with intercourse (73%) and an increase in their enjoyment of sex (74%).

(14) According to McCormack et al., 155 80% of women with preoperative discomfort reported an improvement or absence of discomfort postoperatively, and **85% of women reported** *an improvement of dyspareunia***.**

Finally, the data show that women express frustration over a lack of diagnosis and neglect by doctors, families, and friends (see examples 15 and 16):

(15) Indeed, **many women reported** *how hard it was for them to open up* about their vaginismus, not only to their partners, as discussed earlier, but also to other people that are parts of their lives.

(16) The **women reported** *hardship getting help*. They searched for help for a long time before being diagnosed with vulvodynia [...]

This last pattern differs from the previous ones in that it does not have to do with strictly medical aspects such as symptoms and cures but rather addresses the psychological discomfort or even suffering experienced by women as a consequence of their condition. The inclusion of this contextual factor within academic papers about vulvodynia arguably represents an unexpected result, suggesting that scholars wish to give prominence to this issue, possibly to underscore the importance and urgency of research in this area.

3.3 Sexual

Sexual is the 5th most frequently occurring content word found in the VPAC. The collocational patterns of the node word *sexual* refer to the practice of sexual intercourse and how it can be affected by vulvar pain. The most recurring collocates are, in fact, *function* (co-occurs 77% of times, LogDice 11.71), *dysfunction* (co-occurs 58% of times, LogDice 11.03), *functioning* (co-occurs 70% of times, LogDice 10.94), *satisfaction* (co-occurs 61% of times, LogDice 10.90), *activity* (co-occurs 49% of times, LogDice 10.73), *intercourse* (co-occurs 20% of times, LogDice 10.53), *pain* (co-occurs 4% of times, LogDice 10.01), *distress* (co-occurs 24% of times, LogDice 9.70), *desire* (co-occurs 49% of times, LogDice 9.48). These terms were found in contexts such as the one described in examples 17 and 18 below.

(17) This was especially relevant to the patient, because of an important **impairment** in her **sexual life**, and it affected our clinical practice because of difficulties during clinical examination.

(18) Vulvodynia is associated with depression, anxiety, negative impact on quality of life, and **limitations in sexual activity**.

These examples suggest that challenges in the sexual sphere are a significant aspect of the vulvodynia experience. It might be hypothesized that women are keener on seeking help when the condition impacts their intimate (see example 17 "this was especially relevant to the patient") life. The emphasis on the impact of this sickness on women's sexual activity also raises the question of whether scholars and physicians primarily frame, diagnose, and treat vulvodynia as a sexual dysfunction because sufferers often report it as such. In other words, this condition might be undergoing a process of sexualization in scientific literature. This question remains open, and, as research advances, it is taking different routes.

Examples 17 and 18 bring an additional actor to the conversation, i.e., sex partners who can be negatively impacted by the pathology. This aspect is heavily taken into account in the academic literature under investigation, as highlighted by the examples below:

(19) Dargie et al. developed a vulvar pain questionnaire aimed at evaluating pain severity, emotional and cognitive factors, sexual function, and life and **romantic relationship interference**.

(20) Additionally, referral to sex therapy may be appropriate to address the **negative impact** of vulvodynia-related **sexual dysfunction** on intimate relationships.

The analysis of the concordances of the lemma *sexual* has also shown that the possible sexualization of vulvodynia is often accompanied by a psychologization/psychiatriazation (*psychological* co-occurs 8% of times, LogDice 8,46) of this condition, as evidenced by examples 21 and 22:

(21) Additionally, while women with vulvodynia report higher **psychological distress** and **sexual dysfunction** compared to healthy women, it is still unclear how the presence of psychological distress influences the pain experience, that is, does underlying psychological distress make vulvodynia worse or can the presence of vulvodynia cause psychological distress?

(22) An abundance of evidence suggests that pain-related **psychological distress** and **sexual dysfunction** are higher in women with vulvodynia compared to healthy women.

The sexualization and psychologization of vulvodynia can also be identified in examples which underscore how this sickness can have an impact on relationships (see example 23).

(23) Given the multifaceted nature of the etiology and impact of PVD, a treatment that can target pain and also **psychological**, **sexual**, and **relationship** consequences would have a presumed advantage over one targeting only biomedical aspects of PVD.

The psychological interpretation of vulvodynia found in the academic papers examined in this study is in line with the categorization of genito-pelvic pain provided in the fourth and fifth editions of the *Diagnostic and Statistical Manual of Mental Disorders* published by the *American Psychiatric Association.* In fact, although the term vulvodynia does not appear in these publications, the definition of genito-pelvic pain in the DSM-5 (the latest version of this manual) displays remarkable affinities with the description of this condition. This, on the one hand, suggests intertextual connections between medical literature on vulvar pain and the widely-adopted psychology manual; on the other hand, it supports the idea that this ailment is often depicted as a psychological issue, even within the scientific academic community.

3.4 Treatment

Treatment is the last term from the chosen group of most occurring terms in VPAC selected for the purposes of this paper. It is the 6th most occurring lemma of the dataset. While the analysis of the term *sexual* revealed a psychologization of this condition, a deeper examination of *treatment* not only confirms this finding but also offers further insights into the representation and definition of vulvar pain in academic literature. The examination of collocates shows that the ways in which vulvodynia can be medicalized are, to this day, extremely tentative. *Options* (co-occurs 64% of times, LogDice 9.45), for example, which is pre-modified by *treatment* suggests exactly that there is no established route for this condition, everything is tentative. Protocols usually entail multiple step processes, encompassing less invasive ones and progressing to more invasive procedures.

(24) At least **26 treatment options** have been developed aimed at reducing the pain associated with vulvodynia, despite the **absence of any large clinical trials** evaluating their benefit.

(25) Any **treatment approach should begin** with a discussion including an explanation of the diagnosis and realistic treatment goals. A general guiding principle is to begin with those **treatment options with the fewest side effects** or potential complications. The patient should be counseled that follow-up is needed to evaluate treatment responses and adjust the therapeutic plan as needed to maximize pain reduction.

Example 24 (and example 26 below) also suggests that these treatment options lack a solid scientific foundation, meaning patients suffering from vulvar pain are treated based on assumptions and speculative approaches. This confirms our hypothesis that the medical community is far from defining a standard treatment or in general a formal procedure for the diagnosis of vulvodynia.

(26) Despite the wide variety of treatment options, there is a **dearth** of prospective, controlled studies assessing their efficacy. Localized interventions include topical lidocaine, biofeedback, pelvic floor physical therapy, topical use of estradiol and testosterone compound and vestibulectomy (surgery).

This uncertainty can also be observed in example 26, which contains a list of varied treatment options which span from psychological therapy to surgery, should all other methods fail and the pain become unbearable. This is confirmed also by the use of nouns such as *dearth*. The wide range of treatments in the same corpus addressing the same condition, from no intervention to the option of a vestibulectomy, clearly highlights how ambiguous and uncertain this condition remains, even among experts in the field.

As mentioned earlier, these terms and their associated discursive patterns are closely interconnected (see §2). The inclusion of psychological treatments, indicating a psychologization of vulvodynia, within the set of preferred therapeutic options is a case in point (see example 27).

(27) **[P]sychological therapies** are recommended as first-line **treatment options.** Surgery is usually reserved for women who have not responded to other treatments.

Another aspect which emerged thanks to the collocation analysis of *treatment* is that vulvodynia patients are often recommended the wrong cure due to a very common experience among them, misdiagnosis:

(28) Unlike community participants, though, many women with vulvodynia report experiences of **misdiagnosis** and stigmatization, and may thus be highly motivated to contribute to improving **treatment** options and efficacy.

Statements like the one in example 29 emphasize that the medical community acknowledges the additional hardships associated with this condition, going so far as to suggest that women must self-advocate to receive the attention they need (see example 30).

(29) Our participants also reported instances of **doctors disregarding their complaints**, sending them away with no further **treatment** options, or making them feel like they were crazy.

(30) Connor's research team points out that women are **required to be strong self-advocates when seeking diagnosis and treatment** because most providers lack knowledge of effective treatments for vulvar pain disorders.

Misdiagnosis (see example 28) – which generally leads to stigmatization – or an altogether lack of a diagnosis (see examples 29 and 30), is particularly problematic because it lies at the basis of the core problem related to vulvodynia, that is to say whether the condition is medicalized or not, thus whether it deserves to be treated and how (wrong or tentative treatment).

In addition to the discursive patterns described so far, the collocation analysis of *treatment* also confirms the paramount relevance attributed to *sexual* within the VPAC. The examples below show that, for instance, diagnosis of vulvar pain/vulvodynia can be also framed in terms of a couples' diagnosis / a couples' treatment.

(31) The results will provide PVD **couples** with scientifically based treatment options.

(32) However, to direct **women and/or couples to appropriate treatment**, it will be important to attend not only to the array of biomedical factors but also the psychosocial factors that are affecting their well-being and pain coping.

(33) **Women and their partners** in our treatment program appreciate getting information directly from the physician, as they have found other sources of information (eg, Internet) very confusing.

(34) As one of the few controlled studies to investigate **partner functioning** in the context of provoked vulvar pain, this study has future research implications and supports the involvement of partners in treatment.

The frequent mention of the partner in the dataset or the representation of the condition as a couples' condition is a double edge sword. In fact, on the one hand, it is particularly problematic as it takes agency away from the person who is really suffering, i.e., the woman, and reinforces the idea that this sickness is strictly related to the sexual life. On the other hand, attaching importance to partners' behaviors demonstrate that they too can play a role, as women can experience either improvements or worsening of the symptoms depending on how accepted and welcomed they feel. Studies on women affected by vulvar pain found that those in a supportive environment – where they were believed and not pressured to engage in activities that could worsen their pain – generally felt more comfortable overall.

4. Conclusions

This study has explored the ways in which vulvar pain and vulvodynia have been discursively constructed in medical academic literature over the last two decades. The corpus-assisted analysis has revealed that, despite the growing medical attention devoted to this ailment, discursive representations and linguistic choices in scientific literature continue to reproduce forms of gendered marginalization through the delegitimization of their medical experiences. More specifically, the tendency to describe vulvodynia as an illness without cause, psychological in nature, or sexual in manifestation echoes a broader historical pattern in which women's pain is minimized, rendered invisible in most cases, or explained in ways that steer away from the biomedical context, as suggested also in reference to other illnesses associated to the female body (see § 1).

We focused specifically on four terms that were found to be particularly relevant in terms of occurrences within the VPAC, *pain*, *women*, *sexual* and *treatment*. The data indicate that pain occupies a central yet conflicting role: it is foregrounded as the defining feature of the illness, but at the same time described as elusive, invisible, and difficult to measure. To some extent, this uncertainty has led, as our analysis highlighted, to a partial shift towards more patient-centered narratives, where women's voices and lived experiences are incorporated into scholarly discussions of treatment and diagnosis. This is visible through the use of syntactic structures that foreground women as grammatical subjects – albeit with limited agency – and might suggest an emerging awareness of the epistemic value of patients' perspectives (see, among others, Bissell, Ryan and Morecroft 2006; Bury 2001; Frank 1993). Yet, these instances coexist with discursive patterns that continue to strip women of their agency, either by psychologizing their pain or by defining vulvodynia in relational terms that prioritizes the role of partners and sexual relationships. In line with this last result, the study also revealed a marked emphasis on the sexual implications of vulvodynia, which contributes to the condition's ongoing sexualization in medical discourse. While we must acknowledge the relevance of sexuality in the lived experience of pain, this framing risks reinforcing the idea that vulvodynia primarily belongs to the domain of sexual dysfunction rather than to that of chronic pain. Such discursive tendencies have significant implications for both diagnosis and treatment, as they may shape medical practitioners' perceptions of what constitutes legitimate pain and which therapeutic approaches are deemed appropriate.

All in all, our findings illustrate that the language used to describe vulvodynia and vulvar pain in academic medical literature is at the basis of those power structures that determine the acceptability and validity of its definition (Freund, et al. 2003), thus operating not merely in a descriptive but rather in a constitutive way: it participates in shaping how the illness is understood, who is granted epistemic authority, and which forms of knowledge are legitimized. As a consequence, as we reiterate in this paper, vulvodynia continues to be in a definitory and diagnostic limbo, where a process of pathologization is still ongoing. This transition toward more patient-centered narratives would ultimately grant vulvodynia the recognition and diagnostic status it has long been denied. By drawing attention to the linguistic patterns within the medical academic literature which could either contribute to or hinder these shifts, this study adds to a growing body of work that examines how gendered power relations are reproduced through medical and scientific discourse (see, among others, Hammarström, et al. 2016; Werner and Malterud 2003; Arslanian-Engoren 2000).

In the future, we intend to expand this analysis diachronically, and by further employing a CADS approach, determine whether the process of pathologization or medicalization has begun, changed, or evolved over time within the scientific literature. It would also be particularly relevant to extend this investigation by comparing academic and non-academic discourses on vulvar pain – particularly those emerging from patient communities, advocacy groups, and online spaces – in order to trace how experiential knowledge challenges or complements biomedical framings.

Bionotes

Giorgia Riboni is Associate Professor of English Language and Linguistics at the University of Turin. Her research interests lie mainly in the field of discourse analysis, with a particular focus on new media communication, parenthood, and medicalization discourse. She is a member of interuniversity research centers and serves on the editorial board of the international journal *Iperstoria*. Her publications include the articles "Shedding Light on the 'Invisible Load': An Analysis of Sight Metaphors in Parenthood Podcasts" (*Critical Discourse Studies*, 2026) and "Unhinged Consumerism or Aspirational Organisation? A Critical Discourse Analysis of Restock Videos" (with Helen Ringrow, *Discourse & Society*, 2026).

Angela Zottola is a Tenure-Track Researcher in English Language and Linguistics at the University of Turin (Italy). Her research interests include (Critical) Discourse Analysis, Corpus Linguistics, and Queer Linguistics, exploring how language constructs, negotiates, and challenges identities, norms, and power relations across diverse social and institutional contexts. She sits on the board of the International Gender and Language Association (IGALA). Her recent publications include *LGBTQ+ and Feminist Digital Activism* (Cambridge University Press, 2024) and "Gender-based violence against women in the European Court of Human Rights" (with Ilaria Giordano, *Comparative Legilinguistics*, 2025).

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