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Full length article

Assessing the impact of Vulvodynia on quality of life: translation and validation of the Vulvodynia Experience Questionnaire in Italian women

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ABSTRACT

Objective: The aim of this study is to conduct a cross-cultural validation and adaptation of the Vulvodynia Experience Questionnaire (VEQ) within the Italian context.
Design: This study used a cross-sectional design to culturally adapt and validate the VEQ instrument. The study is reported following the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist for cross-sectional studies.
Methods: The questionnaire was translated using the forward–backward translation method. Face and content validity were assessed through the calculation of the impact score and the Item-level Content Validity Index (I-CVI) and Scale-level Content Validity Index, Average (S-CVI/Ave). The comprehensibility of the items in Italian was evaluated. The final questionnaire was administered to women with vulvodynia through snowball sampling, and descriptive statistics and Cronbach's alpha coefficient were calculated to assess its reliability and internal consistency.
Results: The content and face validity demonstrate good relevance, appropriateness, and comprehensibility. The internal consistency was measured using Cronbach's alpha, which yielded a value of 0.875, indicating good reliability of the instrument.
Conclusions: The VEQ-IT demonstrated good reliability and validity in assessing the quality of life of Italian women affected by vulvodynia. Its clinical use could improve patient management and support the personalization of care pathway by systematically capturing the broader impact of symptoms on daily life, sexuality, and psychological well-being.

Introduction

Vulvodynia is identified as chronic vulvar pain persisting for at least three months without a clear, organic, identifiable cause, which may be provoked by specific triggers [1]. Its prevalence in the general population is estimated to range from 8 to 12% [2,3] with an even distribution among women aged 20 –49 years [4]. Pain in vulvodynia may be present as generalized, affecting the entire vulvar region, or as localized, typically involving specific areas such as the clitoris or the vulvar vestibule. The latter presentation is referred to as vestibulodynia and accounts for approximately 70% of cases [4]. Pain may be spontaneous or provoked [5]. The etiology of vulvodynia remains incompletely understood, but current evidence supports a multifactorial pathophysiology involving several interacting factors. Inflammatory mechanisms, including persistent local inflammatory responses, altered fibroblast activity, and mast-cell accumulation and activation in vestibular tissue, have been implicated in the development and maintenance of vulvar pain [6,7]. Infectious and microbial factors, particularly recurrent vulvovaginal candidiasis, have been associated with vulvodynia, while alterations in the vaginal and vestibular microbiota may also contribute; however, the causal relationship between infection, dysbiosis, and vulvodynia remains uncertain [6,8]. Neurologic mechanisms include peripheral neuroproliferation, characterized by increased vestibular nerve fiber density, as well as central sensitization and amplification of pain

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processing [6]. Allergic and atopic factors have also been associated with vulvodynia, with mast-cell-mediated immune responses potentially providing a link between allergic, inflammatory, and pain mechanisms [7]. Myofascial factors, particularly pelvic floor muscle dysfunction and hypertonicity, are frequently observed in affected women and may contribute to pain persistence, representing an important target for physical therapy [6]. Finally, psychological factors, including anxiety, depression, and adverse life experiences, may interact bidirectionally with pain, acting both as consequences of chronic vulvar pain and as potential amplifiers of symptom severity [5].

This complex interplay of inflammatory, infectious, neurologic, allergic, myofascial, and psychological mechanisms supports a bio-psychosocial understanding of vulvodynia. Such multifactorial mechanisms may contribute to the profound negative impact of vulvodynia on women's quality of life [9]. Restrictions in performing activities of daily living and engaging in sexual activity are among the most commonly reported difficulties, both of which represent fundamental components of overall well-being [10] . In addition to impairing physical functioning, vulvodynia significantly affects psychological health[11] ; underscoring the importance of exploring the lived experiences of affected women.

Several Patient Reported Outcome (PRO) instruments have been developed to measure the symptoms and/or impacts of vulvodynia [12–14]. One such tool is the Vulvar Pain Assessment Questionnaire (VPAQ) [14], a 55-items multidimensional instrument that assesses cognitive and emotional reactions to pain, pain intensity, unpleasantness and discomfort, interference with daily life, sexual functioning, and self-penetration. The VPAQ is supported by robust validity evidence derived from a large sample. However, its development relied primarily on literature reviews, existing pain measures, and research team expertise, with input from only a single patient with lived experience of vulvodynia.

Another tool, the Vulvodynia Experience Questionnaire (VEQ)[13], as specifically developed to capture patients' perspectives and to meet the principles outlined in the U.S. Food and Drug Administration (FDA) guidance on PRO measures. Structured into three sections – pain intensity, associated symptoms, and impact on daily and sexual life – the VEQ includes 13 items and 5 sub-items that assess both the severity and frequency of symptoms, as well as their consequences for physical, emotional, relational, and sexual well-being. Its development was grounded in thematic analyses of concept elicitation interviews with women diagnosed with localized vulvodynia (vestibulodynia), followed by structured cognitive interviews to refine the measure. The VEQ was chosen for its conciseness, speed of administration, and suitability for integration into clinical practice, particularly during patient intake. Its content was derived directly from patients' experiences through concept-elicitation and cognitive interviews, providing evidence that the symptoms and impacts assessed are relevant and meaningful to the target population.

To date, no validated Italian-language instruments are available for assessing the quality of life of women with vulvodynia. This study therefore aims to provide the first translation and cultural adaptation of the VEQ for use among Italian patients.

Methods

Study design and population

This study used a cross-sectional design to culturally adapt and validate the VEQ instrument [15]. The study was reported following the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist for cross-sectional studies [16]. We recruited a convenience sample of women with vulvodynia through a snowball sampling method. Participants were invited via posters distributed in gynaecological clinics and through dissemination on social media platforms. No formal inclusion or exclusion criteria were applied at recruitment: any woman self-identifying with vulvodynia-related symptoms who accessed the recruitment poster or social media post was eligible to participate, regardless of whether a formal clinical diagnosis had previously been established. Diagnostic status was therefore based on participants' self-report rather than on clinician-confirmed diagnosis, and no exclusion criteria were applied for other vulvar conditions or comorbidities.

Vulvodynia Experience Questionnaire (VEQ)

The VEQ instrument consists of 3 dimensions, focusing on pain, associated symptoms, and their impact on sexuality, daily activities, psychological well-being, and romantic relationships [13].

The first domain consists of a single item assessing maximum pain intensity experienced over the previous 24 h using a numerical rating scale from 0 (no pain) to 10 (worst imaginable pain). The second domain assesses the presence and severity of specific symptoms associated with vulvodynia. Participants were asked to indicate whether they have experienced one or more of the following symptoms: burning sensation (rawness), irritation, itching, tenderness, hypersensitivity to touch, throbbing pain, and swelling. For each present symptom, participants rate its severity on a 0 –10 scale. Finally, the third domain explores the impact of vulvodynia on sexual activity, daily functioning, and emotional well-being. Participants report on their sexual activity over the past 4 weeks, including whether they had sexual intercourse, voluntarily avoided it, or discontinued it due to painful symptoms. Responses are categorized on a 5-point frequency scale. Additionally, participants indicate how often vulvodynia interfered with daily activities, such as sitting, wearing specific clothing, performing personal hygiene, walking, or engaging in physical activity, as well as the extent of its impact on social interactions.

The instrument assesses emotional well-being and the influence of vulvodynia on romantic relationships by asking participants how frequently they felt frustrated, worried, anxious, stressed, sad, depressed, or experienced low self-esteem in the past week due to their condition.

Translation procedures and cross-cultural procedure

Permission to translate and adapt the VEQ was obtained from the original author (email, February 11, 2025); the translation and cultural adaptation process followed the internationally recognized forward–backward methodology described by Beaton et al. [15] This procedure consists of six steps: forward translation, synthesis, backward translation, expert committee review, pre-testing, and development of the final version.

The VEQ was initially translated from English into Italian by two independent professional translators. Discrepancies were resolved through consensus with a third researcher, and a reconciled version was created. This version was then back-translated into English by two bilingual native English speakers with no prior knowledge of the instrument, to ensure semantic and conceptual equivalence with the original version [13,14]. Only minor syntactic inconsistencies emerged during this phase, confirming the adequacy of the translation.

The pre-final version was tested in a pilot phase involving five patients diagnosed with vulvodynia, confirming its comprehensibility and relevance. This pilot phase corresponded to the cognitive debriefing step recommended by the ISPOR Task Force for Translation and Cultural Adaptation, which suggests testing the pre-final version on a small group of 5–8 respondents to check alternative wording, understandability, and cultural relevance before proceeding to the larger-scale evaluation of content and face validity and internal consistency [18].

Psychometric properties evaluation

After pilot phase, an initial psychometric properties evaluation was

conducted focusing on content and face validity. Subsequently, the final version of the Italian scale (Vulvodynia Experience Questionnaire – Italy, VEQ-IT) was administered to a larger sample to assess its internal consistency, as measured by Cronbach's alpha coefficient [18]. Given that the VEQ-IT is a patient-reported outcome (PROM) instrument, its primary aim is to reflect the subjective perception of symptoms and their impact as reported directly by the patient. In line with recommendations for the development and evaluation of PROMs [19] the emphasis is placed on content and face validity, as well as internal consistency, rather than on latent construct modelling. Factor analysis was not performed, as the VEQ-IT is a multidimensional PRO instrument designed to capture distinct item-level domains. Content validity was evaluated based on the degree to which the items adequately reflect the construct being measured [20]. Participants were asked to rate the relevance of each item using a 4-point Likert scale (1 = not relevant, 4 = highly relevant). The Item-level Content Validity Index (I-CVI) was calculated for each item: items with an I-CVI above 0.79 were considered acceptable; those between 0.70 and 0.79 required revision; and items scoring below 0.70 were deemed unacceptable [21]. The Scale-level Content Validity Index, Average (S-CVI/Ave) was also calculated by averaging the I-CVI values across all items. According to Polit et al. [21], an S-CVI/Ave between 0.80 and 0.90 is considered good content validity, while scores above 0.90 indicate excellent content validity.

The comprehensibility of each item was evaluated by patients with vulvodynia and by health professionals with expertise in vulvar pain, using a 5-point Likert scale (1 = not understandable, 5 = completely understandable). An item was considered adequately comprehensible if ≥85% of participants rated it 3 or higher [22]. Face validity was assessed to determine whether the items appeared appropriate and representative of the construct of interest [21,23,24]. Participants rated the clarity and appropriateness of each item using a 5-point Likert scale (1 = not appropriate, 5 = absolutely appropriate). Only items with an Impact Score (IS) ≥1.5 were retained [25]. Participants were also asked to evaluate the clarity of the questionnaire instructions and the accompanying anatomical illustration of the vulva using a 5-point Likert scale (1 = not clear, 5 = completely clear). In line with cross-cultural adaptation guidelines, a minimum sample size for evaluating content and face validity is between 30 and 40 participants [15,26]. This sample size used for the formal evaluation of content and face validity was considered separately from the larger sample subsequently recruited for the assessment of internal consistency. Following this phase, the final VEQ-IT was administered to an independent sample of women for assessing the internal consistency.

Data collection

The final version of the VEQ-IT survey was uploaded to REDCap® (Research Electronic Data Capture) electronic data capture tools [27,28]. REDCap is a secure, web-based software platform designed to support data capture for research studies, it is specifically geared to support online and offline data capture for research studies and operations.

The survey began with a digital informed consent form, which clearly explained the study's purpose, the voluntary nature of participation, and assurances of confidentiality. Only participants who provided informed consent were granted access to the questionnaire.

The survey was completely anonymous, and no researcher was present during its completion, ensuring that participants' identities could not be traced in any way.

To facilitate participation, a poster displaying a QR code was created and distributed in obstetric and gynaecological clinics in northern Italy. Additionally, the study was disseminated through social media platforms (e.g., Facebook, Instagram, and LinkedIn) between May and July 2025. By scanning the QR code with a smartphone, participants were redirected directly to the online questionnaire. Participants were also encouraged to share the study with others to support broader dissemination through word of mouth.

Statistical analysis

The dataset was analysed using IBM® SPSS Statistics version 29.0 (SPSS Inc., Chicago, IL, USA) for descriptive analyses. A descriptive analysis was performed for each study variable. For categorical variables, frequencies were calculated, while for continuous variables, the mean, standard deviation (SD), median, minimum, and maximum values were determined. Internal consistency was assessed using Cronbach's alpha for the symptoms and impact domains separately, as well as for the overall VEQ-IT scale. The pain domain, composed of a single item, was excluded from reliability analysis, as Cronbach's alpha is not applicable to single-item measures [29].

Cronbach's alpha coefficient was interpreted as follows: excellent (≥0.90), good (0.80–0.89), acceptable (0.70–0.79), questionable (0.60–0.69), poor (0.50–0.59), and unacceptable (<0.50) [30]. Although the VEQ-IT was designed as a multidimensional instrument, the overall alpha was computed to provide a general estimate of internal reliability.

Details of ethics approval

Data were analysed anonymously and handled according to standards ensuring the highest level of confidentiality and were used solely for research purposes. Prior to completing the questionnaire, all participants provided informed consent for the use of their data in the study. The research protocol was approved by the Territorial Ethics Committee Area Centro-Est Veneto on 18 September 2025 (ID 0067477).

Results

Content and face validity

A total of 36 individuals participated in the evaluation of face and content validity of the pre-final version of VEQ-IT. Of these, 13.5% (N = 4) were patients diagnosed with vulvodynia and 86.5% (N = 32) were healthcare professionals. Among the professionals, 21.6% (N = 7) were obstetricians, 15.6% (N = 5) physicians, and 62.5% (N = 20) nurses. Participant ages ranged from 23 to 56 years (Table 1). All questionnaire items, except for item D13 ("Are you currently in a romantic relationship?"), achieved I-CVI scores between 0.89 and 1.00, and were considered relevant. Item D13, which scored an I-CVI of 0.58, was excluded from the final version of the questionnaire. In addition, based on participants' suggestions, the response option "I am not currently in a romantic relationship" was added to item D13a ("Over the past 7 days, how often were your romantic relationships negatively impacted due to your vulvodynia?"), to accommodate individual variability in participants' relationship status.

The pre-final version of VEQ-IT obtained a S-CVI/Ave of 0.99, reflecting excellent overall content validity. The comprehensibility of

Table 1
Characteristics of participants involved in content and face validity assessment (N = 36).

Characteristics	
***Age**, Mean (SD) [min-max]*	33.2 (7.3) [23–56]
***Participants**, N (%)*	
Healthcare Professionals	32 (86.5%)
Nurses	20 (62.5%)
Obstetricians	7 (21.6%)
Physicians	5 (15.6%)
Patients diagnosed by vulvodynia	4 (13.5%)

the questionnaire also exceeded the acceptable threshold, with more than 85% of participants rating each item as understandable (≥3 on a 5-point Likert scale).

Participants were also asked, using an open-ended response field, to comment on the relevance, clarity, and comprehensibility of the listed vulvodynia symptoms: Burning, Irritation, Itching, Soreness, Hypersensitivity, Throbbing Pain, and Swelling. Overall, 58.3% (N = 21) considered the symptom list adequate. However, 27.8% (N = 10) suggested including Dyspareunia, and 13.9% (N = 5) reported that Burning and Irritation were too similar in Italian to be perceived as distinct. Although responses were collected in an open-ended format, participants reported only one of these issues, and no overlapping responses were observed.

In Italian, the term Irritation, when referring to a physical symptom, describes an alteration of a part of the body resulting from chemical, physical, or bacterial stimuli and is considered synonymous with inflammation. Inflammation is characterized by local manifestations including swelling, increased temperature, pain, and, potentially, functional impairment [31]. Therefore, to avoid conceptual redundancy, the term Irritation was replaced with Dyspareunia in the final version of the VEQ-IT. Dyspareunia was defined as recurrent or persistent pain associated with sexual intercourse, occurring during or immediately after vaginal penetration. It may be classified as superficial, when pain occurs with attempted vaginal insertion, or deep, when pain is experienced with deeper penetration [32,33]. The definition was displayed alongside the term in the questionnaire to ensure that participants were aware of its specific meaning.

Face validity was assessed through relevance and appropriateness ratings, with all items achieving IS ranging from 3.56 to 4.91. Although item D13 had a lower score (1.86), it was still deemed acceptable for inclusion at this stage. Additionally, 86% of participants rated the questionnaire's instructions and the anatomical illustration of the vulva as clear (≥3), confirming adequate visual and textual comprehensibility.

Vulvodynia Experience Questionnaire – Italy (VEQ-IT)

The final version of the VEQ-IT was completed by 90 women, with a mean age was 32.3 years. Among these, 78 participants reported having received a clinical diagnosis of vulvodynia, while 12 were undiagnosed at the time of survey completion. The average pain intensity reported in the previous 24 h was 5 out of 10 (SD = 2.9), as measured using a numeric rating scale (Table 2).

As shown in Table 3, burning sensation was the most frequently reported symptom, experienced by 93.3% (N = 84) of participants, followed by dyspareunia (90%, N = 81), hypersensitivity to touch (87.6%, N = 78), soreness (64%, N = 57), itching (57.3%, N = 51), swelling (46.1%, N = 41), and throbbing pain (39.3%, N = 35). In terms of perceived intensity, the highest average scores were attributed to hypersensitivity (mean = 6.1; SD = 2.8), followed by dyspareunia (mean = 5.4; SD = 3.7), swelling (mean = 5.1; SD = 3.3) and burning (mean = 4.9; SD = 3).

As illustrated in Table 4, vulvodynia had a substantial impact on multiple aspects of participants' daily lives, particularly in relation to sexual functioning, daily functioning, and emotional well-being. In the four weeks preceding the survey, 47.8% of participants (N = 43) reported having had sexual intercourse, while 52.2% (N = 47) did not.

Table 2
Characteristics of participants (N = 90).

Characteristics	
***Age**, Mean (SD) [min-max]*	32.3 (9.7) [20–70]
Diagnosis N (%)	
Yes	78 (86.7%)
No	12 (13.3%)

Table 3
Descriptive analysis of the Part 1 – Pain and Part 2 – Symptoms of the VEQ-IT (N = 90).

Item	N (%)	Mean* (SD)
Part 1 -Pain		
Pain Evaluation	90 (100)	5 (2.9)
Part 2- Symptoms		
Burning		
Yes	84 (93.3)	4.9 (3)
No	6 (6.7)	
Dyspareunia		
Yes	81 (90)	5.4 (3.7)
No	9 (10)	
Itching		
Yes	51 (57.3)	4.2 (3.4)
No	38 (42.7)	
Soreness		
Yes	57 (64)	4.7 (2.9)
No	32 (36)	
Hypersensitivity		
Yes	78 (87.6)	6.1 (2.8)
No	11 (12.4)	
Throbbing Pain		
Yes	35 (39.3)	4.6 (3.4)
No	54 (60.7)	
Swelling		
Yes	41 (46.1)	5.1 (3.3)
No	48 (53.9)	

* The mean represents the average intensity of symptom perception

Among those who had abstained from sexual activity, 73% (N = 34) attributed this to vulvodynia-related pain, while 27% (N = 13) cited other reasons.

Among sexually active participants, vulvodynia significantly interfered with the experience of intimacy. Over 70% reported having interrupted sexual intercourse prematurely due to discomfort, including 16.3% (N = 7) who reported doing so always. Nearly all participants (97.7%, N = 42) indicated a reduction in sexual pleasure, with 39.5% experiencing this frequently and 16.3% (N = 7) constantly. Additionally, 83.7% (N = 36) reported feeling unwilling to engage in sexual activity at least occasionally, with 39.5% (N = 17) stating this occurred often and 14.0% (N = 6) always.

Vulvodynia was also reported to affect participants' ability to carry out everyday activities. Over the seven days preceding the survey, 44.9% (N = 40) experienced difficulties with sitting at least sometimes, and 19.1% (N = 17) reported such discomfort frequently or constantly. Limitations related to clothing were particularly prevalent: 58.9% (N = 53) of participants stated they were unable to wear certain types of clothing due to pain, and nearly one-third (28.9%, N = 26) reported this was a constant limitation. Difficulties in performing personal care activities, such as hygiene or grooming, were noted by more than half of the sample (52.3%, N = 47), with 20.0% (N = 18) experiencing these frequently and 6.7% (N = 6) constantly. Overall, vulvodynia was perceived to interfere with daily activities by 55.6% (N = 50) of women, including 16.7% (N = 15) who experienced consistent disruption.

Psychological and social impacts were also evident. In the week prior to the survey, 36.7% (N = 33) of participants reported avoiding social interactions at least occasionally, with 16.7% (N = 15) doing so frequently and 4.4% (N = 4) always. Emotional distress was widely

Table 4
Descriptive analysis of the Part 3- Impact of the VEQ-IT (N = 90).

Sexual Intercourse, N (%)						
Yes	43 (47.8)					
No	47 (52.2)					
Due to vulvodynia	34 (73)					
Due other reasons	13 (27)					
Sexual impact, N (%)		***Never***	***Rarely***	***Sometimes***	***Often***	***Very often***
Avoid sex		2 (4.7)	3 (7)	16 (37.2)	12 (27.9)	10 (23.3)
		Never	***Rarely***	***Sometimes***	***Often***	***Always***
Stop sex prematurely		12 (27.9)	10 (23.3)	9 (20.9)	5 (11.6)	7 (16.3)
Enjoy sex less		1 (2.3)	7 (16.3)	11 (25.6)	17 (39.5)	7 (16.3%)
Not want to have sex		1 (2.3)	6 (14%)	13 (30.2)	17 (39.5)	6 (14)
Impact on daily living activities, N (%)		***Never***	***Rarely***	***Sometimes***	***Often***	***Always***
Difficulty sitting		29 (32.6)	20 (22.5)	23 (25.8)	11 (12.4)	6 (6.7)
Unable to wear certain clothing		11 (12.2)	7 (7.8)	12 (13.3)	34 (37.8)	26 (28.9)
Difficult to do personal care		28 (31.1)	15 (16.7)	23 (25.6)	18 (20)	6 (6.7)
Interfere with daily activities		20 (22.2)	20 (22.2)	18 (20)	17 (18.9)	15 (16.7)
Avoid social activities		38 (42.2)	19 (21.1)	14 (15.6)	15 (16.7)	4 (4.4)
Feel frustrated or annoyed		4 (4.4)	6 (6.7)	17 (18.9)	30 (33.3)	33 (36.7)
Feel worried, anxious, or stressed		2 (2.2)	6 (6.7)	14 (15.6)	30 (33.3)	38 (42.2)
Feel sad or depressed		5 (5.6)	10 (11.1)	17 (18.9)	29 (32.2)	29 (32.2)
Have low self-esteem		6 (6.7)	10 (11.1)	19 (21.1)	30 (33.3)	25 (27.8)
Impact on romantic relationship, N (%)						
	I am not currently in a romantic relationship	*Never*	*Rarely*	*Sometimes*	*Often*	*Always*
	11 (12.2)	8 (8.9)	13 (14.4)	22 (24.4)	23 (25.6)	13 (14.4)

reported: 70.0% (N = 63) of women described feeling frustrated or psychologically burdened either frequently or constantly. Similarly, 75.5% (N = 68) reported high levels of anxiety, worry, or stress; 64.4% (N = 58) experienced feelings of sadness or depression; and 61.1% (N = 55) reported low self-esteem with similar levels of frequency.

Finally, when asked about the perceived impact of vulvodynia on romantic relationships, 78.9% (N = 71) of those currently in a relationship reported at least some degree of negative influence. Specifically, 25.6% (N = 23) indicated a frequent impact, and 14.4% (N = 13) reported that their condition always interfered with their relationship. Only 8.9% (N = 8) reported no impact, and 12.2% (N = 11) stated they were not in a relationship at the time of the survey.

The internal consistency of the VEQ-IT was assessed using Cronbach's alpha, yielding a coefficient of 0.875, which indicates good overall reliability of the instrument.

Discussion

Main findings

This study provides the first Italian translation and cultural adaptation of the VEQ. The psychometric validation of the VEQ-IT showed excellent content and face validity and demonstrated good internal consistency (Cronbach's α = 0.875), supporting its use among Italian women. Regarding the symptoms section, the term Irritation was found to overlap with terms such as Burning, Swelling, and Hypersensitivity. In the Italian adaptation, Irritation was therefore replaced with Dyspareunia, following feedback from participants during the content and face validity assessment. In the final VEQ-IT, dyspareunia, was defined as genito-pelvic pain during or immediately after vaginal penetration [33]. This terminology was adopted to distinguish spontaneous vulvar pain, captured by Pain item, from pain provoked by vaginal penetration, captured by Dyspareunia item. This distinction is clinically relevant because vulvodynia may present with either spontaneous or provoked pain [5] and pain associated with sexual penetration is frequently reported among women with vulvodynia [34,35].

In our sample, dyspareunia was reported by 90% of participants, indicating that pain associated with vaginal penetration was a highly prevalent symptom when assessed according to the definition provided in the questionnaire. This finding should be interpreted independently from current sexual activity, as 52% of participants reported no sexual intercourse during the four weeks preceding the survey; among these women, approximately 70% of participants prematurely interrupt sexual intercourse due to pain, and overall, a significant reduction in sexual pleasure. Pain during penetration contributes to decreased libido, reduced concentration, and inability to enjoy sexual experiences, ultimately leading to reduced frequency of intercourse or complete abstinence [36].

Not all participants had received an official diagnosis of vulvodynia: 78 reported having a diagnosis, while 12 did not. In the Italian context, vulvodynia remains poorly recognized and frequently misdiagnosed [36]. Graziottin et al. [4], reported that 48.3% of women with vulvodynia experienced prolonged pain before an appropriate diagnosis. Two main reasons contribute to this delay: first, limited awareness among women that their discomfort has a medical explanation and potential treatment; and second, insufficient training among healthcare professionals, who often mistake vulvodynia for vaginitis [4,34]. Moreover, women with vulvodynia or chronic pelvic pain frequently encounter gaslighting from healthcare professionals [37]. Despite undergoing multiple diagnostic investigations, such as vaginal swabs or transvaginal pelvic ultrasounds, which typically yield negative results, patients are often told that their symptoms are "psychological" or "imaginary"[38]. Such experiences contribute to a sense of trauma and stigmatization, discouraging women from openly discussing their condition. Feelings of isolation, frustration, and sadness may develop as a result [38]. Consequently, many patients disengage from care, reporting their experiences as a form of obstetric and gynaecological mistreatment, with long-lasting effects on both their relationship with healthcare providers and their self-perception.

Our results showed that vulvodynia substantially interferes with multiple areas of women's lives, extending beyond physical discomfort to affect psychological and relational well-being. More than half of participants reported difficulties in daily activities such as sitting, wearing specific clothing, or performing personal care, while a large proportion described significant limitations in sexual functioning, including premature interruption of intercourse and reduced sexual

pleasure. According to Gattamelata [39], vulvodynia not only affects romantic relationships and sexual intimacy, but may also hinder the formation of stable romantic partnerships due to fear and anxiety related to pain, low self-esteem, and perceived inadequacy during sexual activity. Moreover, the same study highlights that women suffering from vulvodynia exhibit elevated levels of anxiety, depressive symptoms, and reduced coping strategies. However, psychological distress and vulvodynia appear to be a bidirectional phenomenon: chronic pain can exacerbate anxiety, while, at the same time, chronic stress, fear, and anxiety may lead to increased pelvic floor muscle tension, potentially contributing to the onset of vulvodynia [39,40]. These findings suggest that while pharmacological treatment and pelvic floor rehabilitation are important; however, psychological support is equally essential. Evidence from a recent systematic reviews indicates that Cognitive-Behavioural Therapy (CBT) and Acceptance and Commitment Therapy (ACT) can reduce pain and improve the quality of life in women with vulvodynia [41,42]. For this reason, it is crucial to employ tools that assess not only symptom intensity but also the broader impact of the condition on quality of life. The VEQ-IT can be used both during initial consultations and follow-up visits to monitor changes over time and to support individualized care pathways. Such use fosters a safer and more supportive clinical environment, where patients feel validated and understood. Acknowledging the pain reported by women is essential, as it strengthens the therapeutic alliance and helps reduce stigma [43].

Limitations and strengths

The VEQ-IT is a patient-reported outcome measure specifically designed to capture subjective experiences related to vulvodynia. For this reason, certain psychometric analyses, such as confirmatory factor analysis or construct validation through comparison with gold-standard instruments, were not applicable. Another limitation is that this instrument does not provide detailed assessment of the anatomical distribution of symptoms (localized vs. generalized), which may limit its clinical specificity. Finally, the use of a convenience sample recruited through snowball sampling may reduce generalizability. In addition, no formal inclusion or exclusion criteria were applied at recruitment, and diagnostic status was based on participants' self-report rather than on clinician-confirmed diagnosis; this may have introduced heterogeneity into the sample, including women with vulvar pain of non-vulvodynia origin. While the VEQ-IT alone cannot replace a comprehensive clinical history, it nonetheless offers a valuable multidimensional evaluation of quality of life in women with vulvodynia.

Conclusions

The VEQ-IT demonstrated good reliability and validity in assessing the quality of life of Italian women affected by vulvodynia. Its clinical use could improve patient management and support the personalization of care pathway by systematically capturing the broader impact of symptoms on daily life, sexuality, and psychological well-being. The questionnaire is easy to administer, suitable for both clinical and research settings, and can be effectively used at initial consultation and follow-up to support personalized care pathways. By systematically capturing patient experiences, the VEQ-IT has the potential to improve communication between women and healthcare providers, enhance clinical management, and promote a more supportive and patient-centred approach to vulvodynia care.

CRediT authorship contribution statement

Sabrina Romeo: Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Davide Coldebella:** Writing – original draft, Investigation, Formal analysis, Data curation. **Jessica Longhini:** Writing – original draft, Methodology, Investigation, Data curation. **Andrew T. Goldstein:** Writing – review & editing, Supervision, Formal analysis, Data curation. **Matteo Danielis:** Writing – review & editing, Validation, Formal analysis, Conceptualization. **Mayra Veronese:** Writing – review & editing, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ejogrb.2026.115439.

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