

**SESSION 22 - FEMALE PELVIC FLOOR DISORDERS**

Abstracts 227-238

09:00 - 10:30, N102

Chairs: Mrs Frankie Bates (Canada), Carlos Müller Arteaga (Spain)

**227** | [www.ics.org/2024/abstract/227](http://www.ics.org/2024/abstract/227)**THE EFFECTS OF PHYSIOTHERAPY INTERVENTIONS IN THE TREATMENT OF GENITO-PELVIC PAIN OR PENETRATION DISORDER: A SYSTEMATIC REVIEW**Silva P<sup>1</sup>, Amaral A<sup>1</sup>, Coutinho M<sup>2</sup>*1. ESTeSL - Escola Superior de Tecnologia da Saúde, Instituto Politécnico de Lisboa, Lisbon, Portugal, 2. H&TRC - Health & Technology Research Centre, ESTeSL, Escola Superior de Tecnologia da Saúde, Instituto Politécnico de Lisboa, Lisbon, Portugal.***HYPOTHESIS / AIMS OF STUDY**

The Diagnostic and Statistical Manual of Mental Disorders (1) identifies four specific types of female sexual dysfunction: female sexual interest/arousal disorder, orgasm disorder, genito-pelvic pain/penetration disorder, and substance or medication-induced sexual dysfunction. Physiotherapy seems to have a crucial role in the management of these dysfunctions, particularly in sexual pain disorders, offering a range of interventions customized to specific patient needs.

The aim of this study was to investigate the physiotherapy interventions performed in women with genito-pelvic pain/penetration disorders and their effects on symptoms and quality of life.

**STUDY DESIGN, MATERIALS AND METHODS**

This systematic review was performed according to the PRISMA protocol, and included randomized controlled trials (RCTs) indexed on PubMed, Scielo, Science Direct, LILACS, Web of Science and PEDro Database. The data was collected until March 2023 with the keywords: sexual dysfunctions, dyspareunia, vaginismus, female sexual dysfunction, physical therapy and physiotherapy. There was no restriction regarding the publication dates of the articles, so that all the articles available were included.

RCTs with a sample consisting of women with sexual dysfunction included in genito-pelvic pain/ penetration disorders, written in English, Portuguese or Spanish, were included and studies without physiotherapeutic intervention, description of results or treatment efficacy and with a value on the PEDro scale below 4 were excluded.

The PEDro rating scale was used to grade the methodological quality of the RCTs. Total PEDro scores of 0-3 are considered 'poor', 4-5 'fair', 6-8 'good', and 9-10 'excellent'. For trials evaluating complex interventions (e.g., manual therapy or exercise), a total PEDro score of 8/10 is optimal as it is considered impossible to blind the therapist and the participants. The PEDro scale is a reliable and valid tool to evaluate the risk of bias in clinical trials (2).

Data extraction was performed using a predefined form and analyzed qualitatively due to the heterogeneity in subjects, interventions, and outcome measures among the included studies.

**RESULTS**

Fourteen published articles were selected from a total of 1289 studies in the initial search, with a total of 878 participants (Figure 1)

The methodological quality of the articles is between PEDro scores 5 and 9 (Figure 2).

Treatments were divided into the following categories: multimodal physiotherapy, electromyographic biofeedback, shock waves, low-level laser therapy (LLLT), and transcutaneous electrical stimulation (TENS).

**Multimodal physiotherapy**

Four studies explored the effects of multimodal physiotherapy in the treatment of dyspareunia. This intervention showed better results, when compared to control group and low back treatment, in improving pain, sexual

function, quality of life, strength, and resistance of the pelvic floor muscles when assessed by vaginal palpation.

Two separate studies compared the treatment of vulvodynia and vestibulodynia using multimodal physiotherapy versus the topical application of lidocaine or amitriptyline alone. The study that used lidocaine found that physiotherapy was more effective in reducing pain, improving sexual function, and qualitative pain characteristics both at the time of post-treatment assessment and at the 6-month follow-up. The other study, showed that women who underwent physical therapy, achieved significant improvements in the anatomical condition and function of the pelvic floor muscles, pain intensity during the swab test, frequency of vaginal penetration, sexual pain intensity, and Friedrich criteria score, when compared to the control group that did not experience significant changes.

In another study, multimodal physiotherapy was compared with surgery for the treatment of women with sexual dysfunction and pelvic organ prolapse of less than grade 3. Beneficial results were found in the reduction of female orgasm disturbance and dyspareunia, with significant differences between groups. Additionally, in the group that underwent physical therapy, significant differences were also found in libido and arousal.

In additional study, conducted in women with vaginismus, the intervention group received botulinum toxin injection whereas the control group underwent physiotherapeutic treatment. The results were similar to the other studies, in which the physiotherapeutic intervention was more effective in improving sexual function and in the ability to have penetrative sexual intercourse.

**Electromyographic Biofeedback**

One RCT studied the use of electromyographic biofeedback, in comparison with the topical application of lidocaine in women with moderate to severe pain in the vaginal introitus. The results of the study were that electromyographic biofeedback and topical application of lidocaine have similar effects in increasing the pain threshold, improving quality of life, pain not related to penetration and sexual function.

**Ultrasound**

One study, studied the effects of ultrasound in women with dyspareunia after delivery with an episiotomy or laceration for at least 2 months, in a placebo-controlled trial. The results did not demonstrate significant differences between the two groups.

**Shock waves**

Two studies were found in which shock wave therapy was used. The results were similar in both studies, with shock wave therapy demonstrating significant improvements in pain intensity, pain threshold, and sexual function.

**LLLT**

The effects of laser therapy on provoked vestibulodynia were studied in a placebo-controlled trial. The results obtained through the clinical assessment did not show significant differences between the two groups.

**TENS**

The effects of TENS were studied as an isolated therapy in the treatment of vestibulodynia. The experimental group improved significantly in all parameters: pain intensity, sexual function, and qualitative pain characteristics, and maintained these improvements at the 3-months follow-up.

**INTERPRETATION OF RESULTS**

The studies included in this review addressed multimodal physiotherapy, electromyographic biofeedback, shockwave therapy, LLLT, and TENS. The protocols used in different multimodal physiotherapy studies vary widely;

however, intravaginal manual therapy, pelvic floor muscle training and bio-feedback were the most prevalent interventions. The aim of these modalities is to increase muscle awareness, proprioception, tissue elasticity, normalize muscle tone, improve muscle relaxation, desensitize painful areas, improve local blood circulation, reduce painful symptoms and fear of vaginal penetration (3).

Multimodal physiotherapy, TENS, and shockwave therapy have shown good results in improving symptomatology and quality of life.

The limitations of these studies are mostly related to small sample, with the fact that subjects and physiotherapists are not blind and the widely variability of the protocols.

High-quality RCTs with larger sample sizes should be conducted for both multimodal physiotherapy and isolated modalities, incorporating more specific protocols. This is important to determine their long-term effects in the integrated treatment plan of women with genito-pelvic pain/penetration disorders.

**CONCLUDING MESSAGE**

The results of this systematic review support the effectiveness of physiotherapy modalities as the first line of treatment of genito-pelvic pain/ penetration disorders, with multimodal physiotherapy being the one that appears to have the best results in improving symptoms and quality of life.

**FIGURE 1**

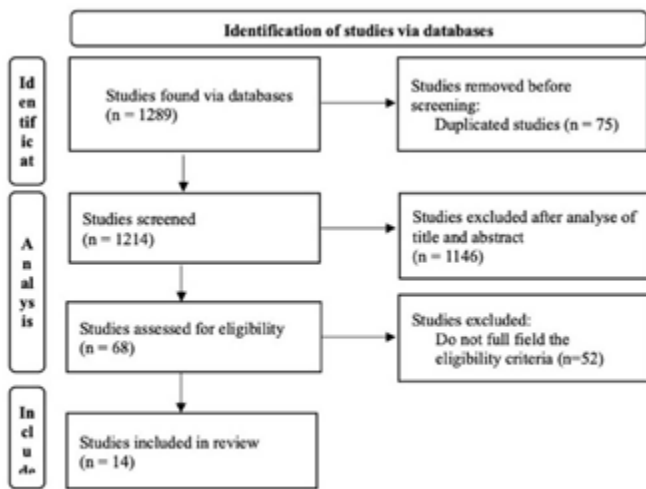


Figure 1 – PRISMA Flow diagram 2020

**PRISMA Flow diagram**

**FIGURE 2**

Article	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Q 11	Total	Site PEDro
Bardin et al.	1	1	1	1	0	0	1	0	0	1	1	6	S
Danielsson et al.	1	1	1	1	0	0	0	0	0	1	1	5	N
Eftekhar et al.	0	1	0	1	0	0	0	1	1	1	1	6	S
Everett et al.	1	1	1	1	1	1	1	1	0	1	1	9	S
Del Feeno et al.	1	1	1	1	0	0	1	1	1	1	1	8	S
Ghadery et al.	1	1	1	1	0	0	1	1	1	1	1	8	S
Gruenwald et al.	1	1	1	1	0	0	1	1	1	1	0	7	S
Hurt et al.	1	1	1	1	1	0	1	1	1	1	0	8	N
Lev-Sagie et al.	1	1	1	1	1	0	1	1	1	1	1	9	N
Morin et al.	1	1	1	1	0	0	1	1	1	1	1	8	S
Murina et al.	1	1	0	1	1	0	1	1	1	0	1	7	S
Percira et al.	1	1	1	1	0	0	0	1	1	1	1	7	N
Schwartzman et al.	1	1	0	1	0	0	0	1	1	1	1	6	S
Yaraghi et al.	1	1	1	1	0	0	0	0	0	1	1	5	S

Q1\*: eligibility criteria; Q2: random allocation; Q3: concealed allocation; Q4: similar groups at baseline; Q5: blinding of subjects; Q6: blinding of therapists; Q7: blinding of assessors; Q8: follow-up to more than 85% of the subjects; Q9: intertio-to-treat analyses; Q10: between group statistical comparison; Q11: point and variability measures. 1: criterion is clearly satisfied; 0: criterion isn't clearly satisfied; S: classification found on PEDro site; N: classification wasn't on PEDro site. \* The eligibility criteria item doesn't contribute to total score.

**Methodological quality assessment using the PEDro scale**

**REFERENCES**

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