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Appraisal

Critically appraised paper: Online graded motor imagery is effective in women diagnosed with pelvic pain

Synopsis

Summary of: Lopez-Brull A, Perez-Dominguez B, Plaza-Carrasco M, Blasco-Ortiz C, Navarro-Ribera B, Casaña J, et al. Online graded motor imagery is effective in women diagnosed with pelvic pain: a randomized controlled trial. *Phys Ther*. 2025:105:pzae164.

Question: Does an online graded motor imagery (GMI) program reduce pain intensity and improve sexual function in women diagnosed with genito-pelvic pain/penetration disorder compared with no treatment? ***Design***: Parallel-group, randomised, controlled trial with concealed allocation and blinded assessors. ***Setting***: Physiotherapy clinics specialised in pelvic floor disorders in Valencia, Spain. ***Participants***: Eligible participants were women aged >18 years who experienced pain with vaginal penetration during sexual intercourse for ≥ 6 months and who scored > 6 points on the Chronic Pelvic Pain questionnaire (0 to 27 scale). Key exclusion criteria were other medical conditions that could explain pain with vaginal penetration during sexual intercourse. One-to-one randomisation of 87 participants allocated 43 to the GMI group and 44 to a control group. ***Interventions***: Participants in the GMI group received a tailored online program for pelvic pain, aligning with principles of neuroplasticity. It consisted of three 2-week phases over 6 weeks. In phase 1 (implicit motor imagery exercise), participants viewed pain-related images of the abdominoperineal area and judged left/right perspectives via an app. In phase 2 (explicit motor imagery exercise), participants listened to six audio recordings and imagined several exercises, with the recordings representing a gradual progression of potential painful activities. In phase 3, participants followed a graded exposure exercise program, starting with genital exploration and ending in intercourse. Researchers contacted participants over the 6 weeks to ensure adherence and address queries. The control group received no intervention during the study period. ***Outcome measures***: The primary outcomes were pain intensity assessed using a visual analogue scale (0 to 10 cm) and sexual function assessed using the short form Female Sexual Function Index (FSFI-6, 2 to 30) at 6 weeks. ***Results***: Eighty-three participants (96%) completed the 6-week follow-up. The GMI program resulted in a small but significant reduction in pain intensity (between-group MD −2.0, 95% CI −2.6 to −1.4) but did not result in improved sexual function (between-group MD in FSFI scores 1.1, 95% CI −0.7 to 2.9) when compared with no treatment. ***Conclusion***: In adult women with genito-pelvic pain/penetration disorder, a 6-week online GMI program improved pain intensity but not sexual function compared with no treatment. [95% CIs calculated by the CAP Editor.]

Provenance: Invited. Not peer reviewed.

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Commentary

Genito-pelvic pain/penetration disorder is a prevalent condition that can impact the mental and emotional health of women, affecting their quality of life.

The trial by Lopez-Bull et al evaluated a 6-week online graded motor imagery (GMI) program aimed at reducing pain and improving sexual function in women with genito-pelvic pain/penetration disorder. The intervention was structured in three phases based on neuroplasticity principles, which allows the brain to adapt to therapeutic interventions.[1] They used a graded sequence of strategies, including left/right judgements (implicit motor imagery) and imagined movements (explicit motor imagery). These strategies have shown positive effects in reducing pain in other chronic pain conditions, although with limited evidence.[2,3]

With a solid theoretical framework for pain management, the use of GMI led to significantly reduced genito-pelvic pain. However, there were no improvements in sexual function, possibly due to the multiple factors involved, such as physical, psychological, relational and contextual aspects. This suggests the need for combining therapies and/or developing multidisciplinary and comprehensive care models.[4]

This trial expanded the available evidence and emphasised the importance of considering motor imagery ability and beliefs related to pain in the implementation of rehabilitation programs. Furthermore, it proposed an accessible, non-invasive online model, which is highly relevant for women facing barriers, such as shame, stigmatisation, transportation or access issues, and those who prefer treatment in a more private setting.

Further exploration is needed to determine whether this promising approach is more effective than conventional pelvic floor therapy or an in-person GMI program. In addition, it would be of interest to assess this intervention's replicability in other contexts because local culture and idiosyncrasy are key in shaping social practices and, consequently, sexual practices.

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References

1. Cramer SC, et al. *Brain*. 2011;134:1591–1609.
2. Bowering KJ, et al. *J Pain*. 2013;14:3–13.
3. Limakatso K, et al. *Can J Pain*. 2023;7, 2188899.
4. Van Lankveld JJDM, et al. *J Consult Clin Psychol*. 2006;74:168–178.