



A literature review investigating the reliability of digital vaginal palpation scales in the assessment of pelvic floor myalgia in females

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Background

- The comprehensive assessment of chronic pelvic pain presents a complex clinical challenge.
- Palpation for **pelvic floor myalgia (PFM)** is recommended in the assessment of chronic pelvic pain syndromes.
- However, further clarity is required regarding the reliability and recommended method of digital palpation of PFM to inform evidence based best practice in clinical examination, documentation and research.

Aims

- 1) To perform a systematic literature search investigating the reliability of proposed pain scales for digital vaginal palpation of PFM.
- 2) Interpret findings to establish implications for clinical practice and standardise local practice.

Method

- A systematic literature search was performed (May 2018), according to the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA), to identify and review studies investigating intra and inter-rater reliability of validated PFM scales in females with chronic pelvic pain.

Search Strategy	
Databases:	CINAHL, Cochrane Library, MEDLINE and PEDro.
Search terms:	<u>Population:</u> “Pelvic floor muscle”; “pelvic floor muscle disorders”; “pelvic floor muscle tenderness”; “levator ani syndrome”; “pelvic floor myalgia”; “chronic pain” or “pelvic pain”. <u>Intervention:</u> “Physical examination”; “palpation”; “digital examination”; “pain scale”; “pain measurement”; “reliability”; or “assessment”.
Limits:	Female population, English language and available in full text.
Additional search strategies:	<ul style="list-style-type: none">• A hand search of reference lists for additional relevant articles.• A search of available grey literature.

Results

- Five studies met the inclusion and exclusion criteria and were evaluated for methodological quality and risk of bias using the Critical Appraisal Skills Programme's Diagnostic Test Study Checklist and the “QAREL” checklist.
- Study characteristics and results are summarised below:

	Tu et al. 2008 ¹	Slieker-ten Hove et al. 2009 ²	Montenegro et al. 2010 ³	Kavvadias et al. 2013 ⁴	Bhide et al. 2015 ⁵
Population size:	N = 39.	N = 41.	N = 156.	N = 17.	N = 111.
Population characteristics:	19 x chronic pelvic pain & 20 x asymptomatic.	41 x mixed cohort with/without pelvic floor dysfunction.	108 x chronic pelvic pain & 48 x asymptomatic.	17 x asymptomatic.	44 x pelvic floor hyperalgesia & 67 asymptomatic.
Pain score tested:	0 = no pain. 1 = verbal report of pain. 2 = verbal report and grimace. 3 = grimace and attempt to withdraw.	Dichotomous pain score: Yes = any pain reported. No = no pain reported.	0 = no pain. 1 = painful discomfort. 2 = intense pain.	Visual Analogue Scale (VAS): 0-10/10.	Grade 0 = no pain. Grade 1 = mild pain. Grade 2 = moderate pain. Grade 3 = severe pain. (modified VAS)
Results:	<u>Inter-rater reliability:</u> Original score: K = 0.02-0.35 = “poor to moderate”. // When collapsed to a 2 point dichotomous pains scale: K = 0.04-0.63 = “poor to fair”.	<u>Inter-rater reliability:</u> K _w = 0.85 (95% CI, 0.76-0.91) = “almost perfect”. <u>Intra-rater reliability:</u> K _w = 0.79 (95% CI, 0.60-0.87) = “substantial”.	<u>Inter-rater reliability</u> K = 0.91 = “moderate or better”.	<u>Inter-rater reliability:</u> Levator ani sites: ICC = 0.28-0.87. <u>Intra-rater reliability:</u> Levator ani sites: ICC = 0.22-0.87.	<u>Inter-rater reliability:</u> ICC = 0.73-0.92 = “good to excellent”. <u>Intra-rater reliability:</u> ICC = 0.43-0.84 = “moderate to excellent”.

Interpretation of results

- The significant heterogeneity across studies limited collective data analysis.
- However, it was demonstrated that digital vaginal assessment of PFM provided valid and reliable clinical information.
- A dichotomous scale was shown to provide the greatest intra and inter-rater reliability.
- However, narrow numerical scales were also demonstrated to be valid and reliable tools that may additionally offer a greater breadth of information for clinical decision making.
- The author proposes that in the absence of larger bodies of evidence such scales show promise and may provide a pragmatic tool for clinicians to assess and interpret the presence and clinical implications of PFM.
- These findings have informed local multidisciplinary team practice and have implications for upcoming research protocols within the unit.
- Further research investigating and evaluating the proposed 3-4 point scales in larger chronic pelvic pain study populations is warranted.

Concluding message

- No gold standard currently exists for the assessment or documentation of PFM.
- The current review concludes that existing pain scales for the digital vaginal assessment of PFM can provide valid and reliable clinical information.
- Selection of the most appropriate PFM palpation scale may include consideration of clinical relevance and breadth of clinical information provided, in addition to demonstrated validity and reliability.
- Further research is required to develop a standardised, clinically meaningful, reliable and reproducible examination process for PFM.

References:

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