Literature review

Applicability of the PERFECT scheme in the evaluation of the pelvic floor muscles: scope review

Aplicabilidade do esquema PERFECT na avaliação da musculatura do assoalho pélvico: revisão de escopo

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ABSTRACT | INTRODUCTION: The PERFECT scheme is a validated tool for assessing the pelvic floor muscles (PFM), widely used in the literature and considered a simple, reliable and reproducible method. However, there are gaps in its application, resulting in divergences in scientific research and clinical practice. **OBJECTIVE:** To map the literature on the applicability of the PERFECT Scheme. **METHODS:** A scoping review produced in accordance with PRISMA-ScR, the articles were collected from the following databases: Pubmed, PEDro and BVS. Studies that used the PERFECT scheme as an evaluation method, intervention and observational study design were included, and studies that evaluated rectally were unavailable and duplicated were excluded. Variables analyzed were: total number of participants assessed, country and year of publication, version used, professional used and study design. The PEDro and Joanna Briggs scales were used to assess the methodological quality of the studies. **RESULTS:** The sample evaluated included 24 articles, and the majority of the studies were conducted by physiotherapists, with 18 articles. The PERF components together obtained a percentage of 63%, with this combination of acronyms appearing the most in the articles. In the analysis of methodological quality, the clinical trials had limitations due to the lack of blinding and intention to treat, while the observational trials had limitations in relation to the lack of confounding factors and the strategies to control them. **CONCLUSION:** The use of the PERFECT Scheme in scientific research is incomplete, often limited to the use of just a few acronyms. In addition, most of the studies analyzed had methodological limitations.

KEYWORDS: Pelvic Floor. Muscle Strength. Women's Health.

RESUMO | INTRODUÇÃO: O esquema PERFECT é uma ferramenta validada de avaliação dos músculos do assoalho pélvico (MAP), amplamente utilizado na literatura, considerado um método simples, confiável e reprodutível, contudo, sua aplicação em pesquisas científicas nem sempre é padronizada ou bem descrita, o que pode resultar em divergências na prática clínica. **OBJETIVO:** Mapear a literatura sobre a aplicabilidade do esquema PERFECT. **MÉTODOS:** Revisão de escopo produzida de acordo com o PRISMA-ScR. Os artigos foram coletados nas bases de dados: Pubmed, PEDro e BVS. Foram incluídos ensaios clínicos e observacionais que utilizaram o esquema PERFECT como método de avaliação. Foram excluídos os que foram avaliados por via retal, indisponíveis e duplicados. As variáveis analisadas foram: número de participantes avaliados, país de realização e ano de publicação, versão utilizada, profissional que utilizou e desenho de estudo. Para avaliar a qualidade metodológica dos estudos foram utilizadas as escalas PEDro e Joanna Briggs. **RESULTADOS:** A amostra avaliada incluiu 24 artigos sendo a maioria realizada por fisioterapeutas com 18 estudos. A combinação de acrônimos PERF apareceu em 63% dos estudos sendo a combinação de acrônimos mais utilizada. Na análise da qualidade metodológica, os ensaios clínicos apresentaram limitações devido à falta de cegamento e intenção de tratar. Os estudos observacionais apresentaram falha nos fatores de confusão e as estratégias para controlá-los. **CONCLUSÃO:** A utilização do esquema PERFECT nas pesquisas científicas ocorre de maneira incompleta, muitas vezes limitada ao uso de apenas alguns acrônimos. Além disso, foi identificado que a maioria dos estudos analisados apresentaram limitações metodológicas.

PALAVRAS-CHAVE: Assoalho Pélvico. Força Muscular. Saúde da Mulher.

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1. Introduction

The pelvic floor is a complex structure composed of muscles, fascia, and ligaments responsible for providing support and maintaining the positioning of the pelvic and abdominal organs. It plays a fundamental role in the proper functioning of urination, defecation, sexual activity, pregnancy and childbirth[1]. The evaluation of the pelvic floor in the daily physiotherapists' routine of is important for identifying existing dysfunctions that may impact the pelvic conditions treatment, as well as social and psychological aspects, allowing therapeutic techniques to promote an improvement in the individual's quality of life[2-4].

Laycock and Jerwood developed, in 2001, a validated tool for pelvic floor muscles (PFM) assessment. The PERFECT scheme is an acronym considered a simple, reliable, and reproducible method that contains four components: P (power) corresponding to muscle strength; E corresponding to endurance; R corresponding to repetitions; F corresponding to fast contractions; and ECT corresponding to each contraction timed, which completes the acronym and reminds examiners to time the sequence of events[5]. A new version of the instrument, called the New PERFECT, was later developed and introduced. This new version modified the ECT acronym, which now corresponds to: E = elevation of the posterior vaginal wall; C = co-contraction of accessory muscles; and T = involuntary contraction during coughing[2].

In clinical practice, there are several methods to assess the PFM. The joint report by the International Urogynecological Association (IUGA) and the International Continence Society (ICS) recognizes digital palpation as an acceptable technique for evaluating muscle contraction[6], especially due to its low cost and good patient adherence[5]. Among the digital palpation assessment tools, the PERFECT scheme stands out as one of the most widely referenced in the literature[7-30].

However, its application in scientific research is not always standardized or well described. A better understanding of its applicability would help readers better interpret the variations in the use of the PERFECT[5] scheme in clinical practice. Furthermore, few studies have investigated the applicability of this instrument. This study aims to map the literature on the applicability of the PERFECT scheme.

2. Methods

This is a scoping review conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-ScR)[31] criteria.

2.1 Eligibility criteria

This review included clinical trials or observational studies that used the PERFECT scheme as an instrument for assessing pelvic floor muscle strength. Studies that applied the PERFECT[5] scheme via the rectal route for pelvic floor muscle strength assessment and duplicate studies were excluded.

2.2 Search strategy

Articles were collected from the following electronic databases: National Library of Medicine (PubMed), Physiotherapy Evidence Database (PEDro), and Virtual Health Library (BVS), between December 2023 and April 2024, with no language restrictions to avoid the loss of eligible studies.

For data collection in the databases, combinations of Boolean operators "AND" and "OR" were used with the following descriptors: "pelvic floor," "PERFECT scheme," "muscle assessment," "pelvic muscles," and "muscle strength." Descriptors in Health Sciences (DeCS)[32] and Medical Subject Headings (MeSH)[33] were applied.

Search strategy in PubMed: (((Pelvic Floor) AND (PERFECT scheme)) OR (muscle assessment)) AND (pelvic muscles)) OR (muscle strength).

Search strategy in BVS: ("Pelvic floor") AND ("muscle strength") OR ("strength muscle") AND ("muscle assessment").

Search strategy in PEDro: ("Pelvic Floor") AND ("muscle assessment") AND ("muscle strength").

2.3 Selection of sources of evidence

The search was conducted by a team consisting of two researchers and one senior researcher who resolved any disagreements regarding the included articles. Study selection occurred in three phases: first, defining the most appropriate keywords to conduct the final search; second, selecting studies based on title and abstract screening; and third, full-text reading to verify compliance with the eligibility criteria.

2.4 Data extraction

A pre-designed database was created in Microsoft Excel, subdivided by study type. For each study, the following variables were extracted: total number of participants evaluated using the PERFECT scheme, country of study, year of publication, version of the scheme used (PERFECT or New PERFECT), healthcare professional who applied the PERFECT[5] scheme, and study design.

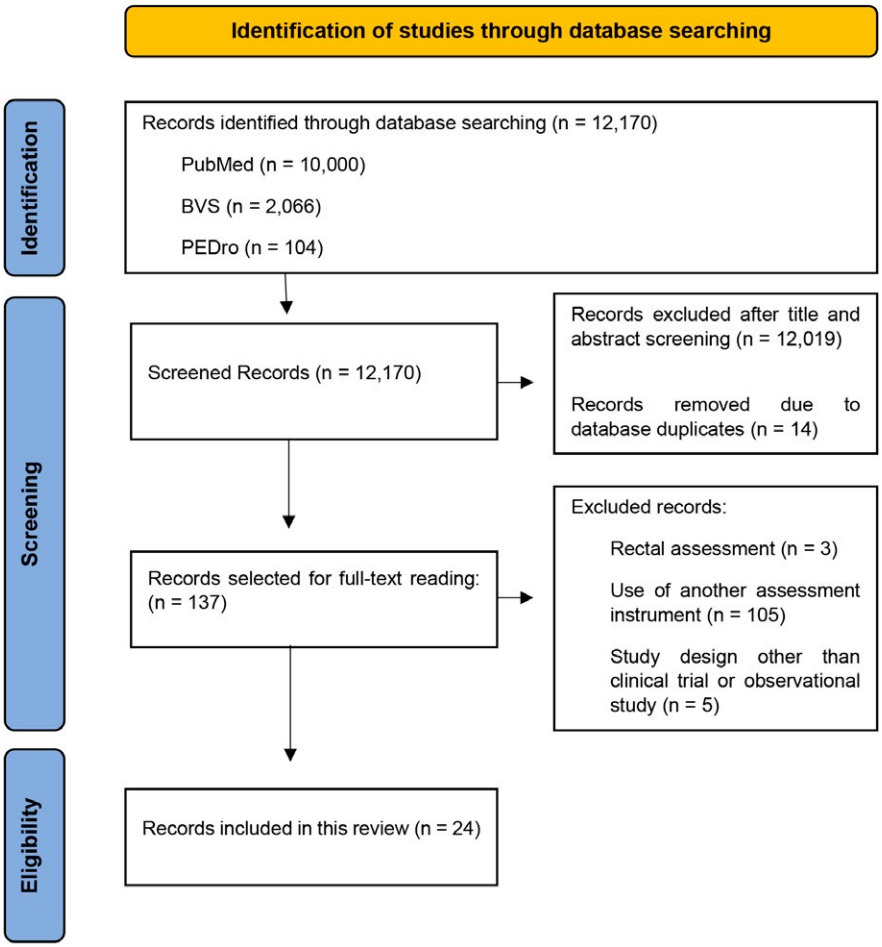
2.5 Methodological quality assessment

The retrieved articles were assessed using specific instruments to evaluate methodological quality. For intervention studies, the PEDro scale was applied to assess the internal validity of clinical trials and their statistical reporting. The PEDro scale consists of 11 criteria, with the first item ("eligibility criteria") not included in the final score, which ranges from 0 to 10 points. Higher scores indicate better methodological quality[34], scores <4 considered "poor," 4–5 "fair," 6–8 "good," and 9–10 "excellent"[35]. For observational studies, the Joanna Briggs Institute (JBI) Critical Appraisal Tool was used. The JBI tool consists of an eight-item checklist designed to assess potential bias related to study design, conduct, and analysis[36].

3. Results

The studies included in this review underwent a selection process, as shown in the flowchart in Figure 1. The sample of studies included and analyzed in this scoping review was published between 2004 and 2023, with the highest concentration in 2020 (*n*=7). A total of 24 studies were identified: 15 observational studies and 9 clinical trials, comprising 2,374 female participants assessed using the PERFECT[5] scheme, with sample sizes ranging from 14 to 300 participants.

Figure 1. PRISMA flowchart: selection of articles included according to the eligibility criteria, 2024



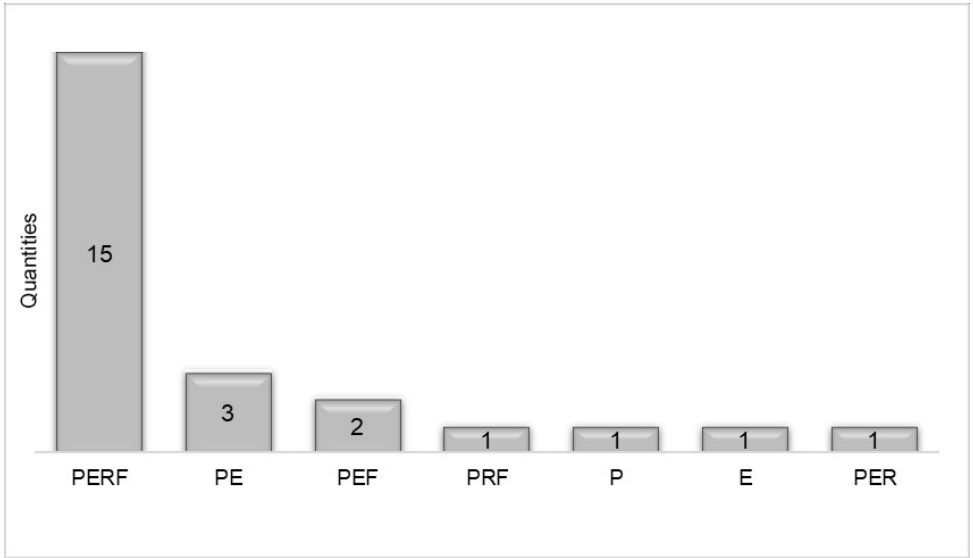
Source: the authors (2025).

Regarding the research teams countries of origin, Brazil led with 15 published articles[7-21], followed by South Africa and Turkey, each with two articles[22-25], and finally Taiwan[26], Canada[27], Oman[28], India[29], and Poland[30] with one article each.

In most studies[7,9-11,13-20,23-26,28,30] (*n*=18), the physiotherapist was the professional who applied the PERFECT scheme, in one study[22] it was the urogynecologist, and five studies did not explicitly state the professional who assessed the participants' pelvic floor[8,12,21,27,29].

Regarding the acronyms of the PERFECT scheme, figure 2 shows that the acronym PERF[8-10,12-15,20-22,24-27,29] was the most used by the articles in this review to assess the pelvic floor, obtaining a percentage of 63%, followed by PE[23,28,30] with 13%; PEF[11,16] with 8%; PRF[17]; P[18]; E[7]; and PER[19] with 4%.

Figure 2. Different acronyms of the PERFECT scheme in the analyzed studies



Source: the authors (2025).

Table 1. Observational studies and clinical trials that used the PERFECT scheme for pelvic floor assessment (to be continued)

Title	Study Design	Author/Year	Country	(*n*)	Used Version	Used Components	Professional
Single-blind, randomized trial of pelvic floor Muscle training, biofeedback-assisted pelvic Floor muscle training, and electrical Stimulation in the management of Overactive bladder	Clinical trial	Wang et al., 2004[26]	Taiwan	(*n*=103)	PERFECT scheme	Power Endurance Repetition Fast	Physiotherapist
Assessment of the effect of pelvic floor exercises on pelvic floor muscle strength using ultrasonography in patients with urinary incontinence: a prospective randomized controlled trial	Clinical trial	Tosun et al., 2015[24]	Turkey	(*n*=116)	PERFECT scheme	Power Endurance Repetition Fast	Physiotherapist
Correlation between maximum voluntary contraction and endurance measured by digital palpation and manometry: An observational study	Observational study	Fitz et al., 2016[7]	Brazil	(*n*=42)	PERFECT scheme	Endurance	Physiotherapist
An International Classification of Function, Disability and Health (ICF)-based investigation of movement impairment in women with pelvic organ prolapse	Observational study	Brandt et al., 2019[22]	South Africa	(*n*=100)	PERFECT scheme	Power Endurance Repetition Fast	Urogynecologist
Exploring the Impact of a Mobile Health Solution for Postpartum Pelvic Floor Muscle Training: Pilot Randomized Controlled Feasibility Study	Clinical trial	Dufour et al., 2019[27]	Canada	(*n*=23)	PERFECT scheme	Power Endurance Repetition Fast	Not specified
Pelvic floor muscle function and symptoms of dysfunctions in midwifes and nurses of reproductive age with and without pelvic floor dysfunction	Observational study	Tosun et al., 2019[25]	Turkey	(*n*=82)	PERFECT scheme	Power Endurance Repetition Fast	Physiotherapist
Pelvic floor muscle functionality of physically active elderly women	Observational study	Vey et al., 2019[8]	Brazil	(*n*=51)	PERFECT scheme	Power Endurance Repetition Fast	Researcher

Table 1. Observational studies and clinical trials that used the PERFECT scheme for pelvic floor assessment (conclusion)

Title	Study Design	Author/Year	Country	(*n*)	Used Version	Used Components	Professional
Effects of home-based pelvic floor muscle training on decreasing symptoms of stress urinary incontinence and improving the quality of life of urban adult Omani women	Clinical trial	Al Belushi et al.,2020[28]	Oman	(*n*= 73)	PERFECT scheme	Power Endurance	Physiotherapist
The effect of parity on the function of pelvic floor musculature in the long term	Observational study	Bertacini et al., 2020[9]	Brazil	(*n*=143)	PERFECT scheme	Power Endurance Repetition Fast	Physiotherapist
Pelvic floor disorders in women with premature ovarian insufficiency	Observational study	Fante et al., 2020[10]	Brazil	(*n*=300)	PERFECT scheme	Power Endurance Repetition Fast	Physiotherapist
Ability to contract the pelvic floor muscles and association with muscle function in incontinent women	Observational study	Fitz et al., 2020[11]	Brazil	(*n*=139)	PERFECT scheme	Power Endurance Fast	Physiotherapist
Pelvic floor dysfunction distress is correlated with quality of life, but not with muscle function	Observational study	Fontenele et al., 2020[12]	Brazil	(*n*=72)	PERFECT scheme	Power Endurance Repetition Fast	Not specified
Sexual performance and pelvic floor muscle strength in patients with fibromyalgia	Observational study	Fusco et al., 2020[13]	Brazill	(*n*=109)	PERFECT scheme	Power Endurance Repetition Fast	Physiotherapist
Effect of Pelvic Floor and Hip Muscle Strengthening in the Treatment of Stress Urinary Incontinence	Clinical trial	Marques et al., 2020[14]	Brazil	(*n*=43)	PERFECT scheme	Power Endurance RepetitionFast	Physiotherapist
Pelvic floor muscle dysfunctions in women with deep infiltrative endometriosis	Observational study	Fraga et al., 2021[15]	Brazil	(*n*=160)	PERFECT scheme	Power Endurance Repetition Fast	Physiotherapist
Pelvic floor muscle function differs between supine and standing positions in women with stress urinary incontinence	Observational study	Gimenez et al., 2021[16]	Brazil	(*n*= 101)	PERFECT scheme	Power Endurance Fast	Physiotherapist
Can Supervised Pelvic Floor Muscle Training Through Gametherapy Relieve Urinary Incontinence Symptoms in Climacteric Women? A Feasibility Study	Clinical trial	Nagib et al., 2021[17]	Brazil	(*n*=36)	PERFECT scheme	Power Repetition Fast	Physiotherapist
Assessment of the effect of Mulabandha yoga therapy in healthy women, stigmatized for pelvic floor dysfunctions	Clinical trial	Sweta et al., 2021[29]	India	(*n*=50)	PERFECT scheme	Power Endurance Repetition Fast	Not specified
Postoperative Physiotherapy in Women Undergoing Pelvic Floor Reconstructive Surgery	Clinical trial	Brandt et al., 2022[23]	South Africa	(*n*=81)	PERFECT scheme	Power Endurance	Physiotherapist
Sexual Function, Physical Activity, Mean Amplitudes and Maximal Voluntary Contraction of Pelvic Floor Muscles Are Related to Handgrip Strength	Observational study	Duarte et al., 2022[18]	Brazil	(*n*=44)	PERFECT scheme	Power	Physiotherapist
Relaxin-2 during pregnancy according to glycemia, continence status, and pelvic floor muscle function	Observational study	Prudencio et al., 2022[19]	Brazil	(*n*=282)	PERFECT scheme	Power Endurance Repetition	Physiotherapist
Fecal Incontinence or Pelvic Organ Prolapse Among Women with Premature Ovarian Insufficiency	Observational study	Fante et al., 2023[20]	Brazil	(*n*=150)	PERFECT scheme	Power Endurance Repetition Fast	Physiotherapist
Posture Correction Therapy and Pelvic Floor Muscle Function Assessed by sEMG with Intravaginal Electrode and Manometry in Female with Urinary Incontinence	Clinical trial	Jórasz et al., 2023[30]	Polond	(*n*= 60)	PERFECT scheme	Power Endurance	Physiotherapist
Acute Effect of a Half-Marathon over the Muscular Function and Electromyographic Activity of the Pelvic Floor in Female Runners with or without Urinary Incontinence	Observational study	Mendonça et al., 2023[21]	Brazil	(*n*=14)	PERFECT scheme	Power Endurance Repetition Fast	Researcher

Source: the authors (2025).

After analyzing the clinical trial articles methodological quality, it was observed that the lack of blinding and the absence of intention-to-treat analysis were the main factors limiting the total score, resulting in classifications considered "good" and "fair." Regarding the observational studies methodological quality, it was noted that confounding factors and the strategies to address them were not presented, highlighting methodological quality gaps that are detailed in the discussion section.

Table 2. Methodological quality assessment and risk of bias of the clinical trials, according to the PEDro scale, 2024

Article	1	2	3	4	5	6	7	8	9	10	11	Score
Wang *et al*., 2004 [26]	●	●	●	●	○	○	○	●	○	●	●	6
Tosun *et al*., 2015 [24]	●	●	●	●	○	○	○	●	○	●	●	6
Dufour *et al*., 2019 [27]	●	●	●	●	○	○	●	●	○	●	●	7
Marques *et al*., 2020 [14]	●	●	●	○	○	○	●	●	○	●	●	6
Belushi *et al*.,2020 [28]	●	●	●	●	○	○	●	●	●	●	●	8
Sweta *et al*., 2021 [29]	●	●	○	●	○	○	○	●	○	●	●	5
Nagib *et al*., 2021 [17]	●	●	●	●	○	○	○	●	●	●	●	7
Brandt *et al*., 2022 [23]	●	●	●	●	○	○	●	●	●	●	○	7
Jórasz *et al*., 2023 [30]	●	●	●	●	○	○	○	●	○	●	●	6

1: Eligibility criteria (Not included in the sum of points); 2: Random allocation; 3: Concealed allocation; 4: Baseline comparison; 5: Patient blinding; 6: Therapist blinding; 7: Evaluator blinding; 8: Measurement of outcomes; 9: Intention-to-treat analysis; 10: Statistical comparisons between groups; 11: Point measures and measures of variability.

Source: the authors (2025).

Table 3. Methodological quality assessment of observational studies, according to the Joanna Briggs Institute, 2024

Article	1	2	3	4	5	6	7	8	GERAL
Fitz *et al*., 2016 [7]	Y	Y	Y	Y	NA	NA	Y	Y	MODERATE
Tosun *et al*., 2019 [25]	Y	Y	Y	Y	Y	N	Y	Y	HIGHT
Brandt *et al*., 2019 [22]	Y	Y	Y	Y	NA	NA	Y	Y	MODERATE
Vey *et al*., 2019 [8]	Y	Y	Y	Y	NA	NA	Y	Y	MODERATE
Fusco *et al*., 2020 [13]	Y	Y	Y	Y	Y	Y	Y	Y	HIGHT
Fontenele *et al*., 2020 [12]	Y	Y	Y	Y	NA	NA	Y	Y	MODERATE
Bertacini *et al*., 2020 [9]	Y	Y	Y	Y	Y	I	Y	Y	HIGHT
Fante *et al*., 2020 [10]	Y	Y	Y	Y	Y	Y	Y	Y	HIGHT
Fitz *et al*., 2020 [11]	Y	Y	Y	Y	Y	N	Y	Y	HIGHT
Gimenez *et al*., 2021 [16]	Y	Y	Y	Y	Y	I	Y	Y	HIGHT
Fraga *et al*., 2021 [15]	Y	Y	Y	Y	Y	Y	Y	Y	HIGHT
Prudêncio *et al*., 2022 [19]	Y	Y	Y	Y	Y	N	Y	Y	HIGHT
Duarte *et al*., 2022 [18]	Y	Y	Y	Y	Y	Y	Y	Y	HIGHT
Mendonça *et al*., 2023 [21]	Y	Y	Y	Y	N	N	Y	Y	MODERATE
Fante *et al*., 2023 [20]	Y	Y	Y	Y	N	N	Y	Y	MODERATE

Note: In this example, methodological quality was categorized as "Low" when the study obtained up to four "Yes" responses for the items evaluated; "Moderate" when the study obtained five or six "Yes" responses; and "High" when the study reached seven or more "Yes" responses.

(Y) YES (I) INEXPLICIT
(N) NO (NA) NOT APPLICABLE

1. Were the inclusion criteria for the sample clearly defined?; 2. Were the study subjects and setting described in detail?; 3. Was the exposure measured validly and reliably?; 4. Were objective and standardized criteria used to measure the condition?; 5. Were confounding factors identified?; 6. Were strategies for dealing with confounding factors stated?; 7. Were the outcomes measured validly and reliably?; 8. Was appropriate statistical analysis used?

Source: the authors (2025).

4. Discussion

In the present study, the results revealed the presence of measurement bias arising from the applicability of the PERFECT[5] scheme instrument, as identified through the analysis of the methodology and results sections of the reviewed articles. Regarding the complete use of the validated acronym, it was expected that all studies would apply all components of the instrument, especially considering that physiotherapists constituted the majority of pelvic floor assessors. However, it is important to highlight that, although these professionals are recognized for their expertise in functional assessment, in other countries, other healthcare specialists also participate in the pelvic floor muscles (PFM) evaluation.

Regarding the ECT acronym, it is important to note that it was not used in any of the reviewed studies, except in the study by Dufour et al.[27], which mentions it but does not apply it as recommended by Laycock and Jerwood[5]. The ECT was not considered relevant in scientific research, since the PERF acronyms appear to better outline the muscular profile of the pelvic floor muscles (PFM), contributing to their satisfactory use in clinical practice. It is worth emphasizing that, in the original validation article of the PERFECT[5] scheme, the author dedicates only limited space to explaining the ECT acronym, which may lead readers to misinterpretation or to its omission in clinical and scientific practice. Therefore, it is recommended that researchers use the complete PERFECT[5] scheme or clearly report and justify the reasons for not applying certain acronyms.

Considering this, researchers reformulated the PERFECT[5] scheme in 2007, presenting a new version named New PERFECT, which maintains the explanation for the acronyms PERF and modifies the definition of the acronym ECT[2]. However, in the searches conducted, no articles were found that mentioned the New PERFECT version for pelvic floor assessment, suggesting a preference for the 2001 version, possibly due to the similarity between the two versions.

Moreover, the limited access to references describing the New PERFECT may be a restricting factor for the dissemination and use of this new version, as it is described only in textbooks[2].

Despite the lack of studies that apply the pelvic floor muscle (PFM) assessment tool in its entirety, it is capable of guiding a detailed evaluation. However, the main limitations of this instrument, even when performed by an experienced assessor, lie in the subjectivity of its interpretation[18,28]. Regarding the inter-rater reliability of the PERFECT[5] scheme, there is positive agreement in the use of its components; nevertheless, a greater discrepancy was observed in the repetitions component, attributed to the level of familiarity between the assessor and the patient, which may introduce unconscious bias by influencing the patient's effort according to the assessor's proximity[5,37]. Nonetheless, although it may appear to be a subjective method, it remains one of the most widely used tools in clinical practice and scientific research, mainly because it is low-cost and relatively easy to administer[5,7,8].

Another relevant finding concerns the concentration of the countries of origin of the research teams, highlighting Brazil, which contributed the largest number of studies included in this review. This outcome may be attributed to the growing influence of specific methodologies adopted in the country, particularly in the field of urogynecological physiotherapy. During the first two decades of the 2000s, pelvic floor assessment strategies, such as the PERFECT[5] scheme, gained significant recognition in specialized courses and academic publications within the field. The book *Fisioterapia em Uroginecologia*[38], published in 2004, only three years after the first publication on the instrument, played a key role in this context by presenting the PERFECT[5] scheme in detail and facilitating its dissemination among professionals. The release of the second edition of the same book in 2009 reaffirmed its relevance[39].

Regarding the assessment of the methodological quality of the articles, it was found that patient and therapist blinding was not implemented in any of the clinical trials, which reduced their overall scores. In addition, some studies also failed to employ assessor blinding[17,24,26,29,30] and intention-to-treat analysis[14,24,26,27,29,30]. However, blinding can be difficult to implement in most cases. Nevertheless, with respect to study assessors, blinding is of utmost importance to reduce the risk of bias, and ideally, scientific studies should be fully blinded. According to Day and Altman[40], the main methodological error in

published articles occurs when assessor masking is not performed. Regarding intention-to-treat analysis, it is essential that authors include participants in the final analysis as if they had completed the study protocol, thereby preserving randomization.

In the observational studies analysis, the presence of confounding factors was observed[9-11,13,15,16,18,19,25], and only a few studies presented strategies to address them[10,13,15,18]. This variation may be explained by examining the baseline characteristics of the participants, specifically regarding age, where differences between comparison groups were identified. Furthermore, most studies did not clearly explain which strategies were used to manage the confounding factors[9,11,16,19,25], such as regression analysis, which could have been described in the data analysis section[41].

A limitation of this study lies in focusing on the PERFECT[5] scheme application within the collected articles, which restricts the understanding of how the instrument is used in the physiotherapist's clinical routine. In this context, it is necessary to understand the real needs of healthcare professionals when applying the PERFECT[5] scheme.

5. Conclusion

It was observed that the use of the PERFECT[5] scheme is incomplete in scientific research, often limited to the application of only a few acronyms, without justification for the absence of the full implementation as recommended by the instrument's authors. Furthermore, most of the analyzed studies presented methodological limitations, such as lack of blinding, absence of intention-to-treat analysis, presence of confounding factors, and insufficient strategies to address them, which may introduce bias. Therefore, further studies are needed to ensure the standardized use of the instrument and the inclusion of all its acronyms.

Authors' contributions

The authors declared that they have made substantial contributions to the work in terms of the conception or design of the research; the acquisition, analysis or interpretation of data for the work; and the writing or critical review for relevant intellectual content. All authors approved the final version to be published and agreed to take public responsibility for all aspects of the study.

Competing interests

No financial, legal, or political conflicts involving third parties (government, private companies, and foundations, etc.) were declared for any aspect of the submitted work (including but not limited to grants and funding, advisory board participation, study design, manuscript preparation, statistical analysis, etc.).

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