PEDro Newsletter 14 October 2024

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Physiotherapy Evidence Database

Welcome to the PEDro Newsletter for October 2024

Thank you to our Bronze Partners, Physiotherapy New Zealand and Félag Sjúkraþjálfara, and our Association Partners, Suomen Fysioterapeutit, Krajowa Izba Fizjoterapeutów, Irish Society of Chartered Physiotherapists, Lietuvos Kineziterapeutų Draugija, Physiotherapeuten-Verband Liechtenstein, Panhellenic Physiotherapists' Association and Koninklijk Nederlands Genootschap voor Fysiotherapie, who have renewed their partnership with PEDro.

In this issue:

PEDro's new online course: *Evidence-Based Healthcare: Searching and Appraising the Evidence*

Evidence-based healthcare begins with asking the 'right' clinical question then acquiring high-quality clinical research that answers the question. These steps are difficult if there is a lack of understanding of study design features for high-quality research or an inability to navigate the large volume of published articles. Perhaps this is why only half of PEDro searches specify sufficient key elements of a clinical question, only 4% use features that improve the efficiency of searching (e.g. truncation), and 13% contain errors (e.g. Boolean operators). Many health professionals and clinical researchers report trouble identifying high-quality research due to difficulty understanding research methodology.

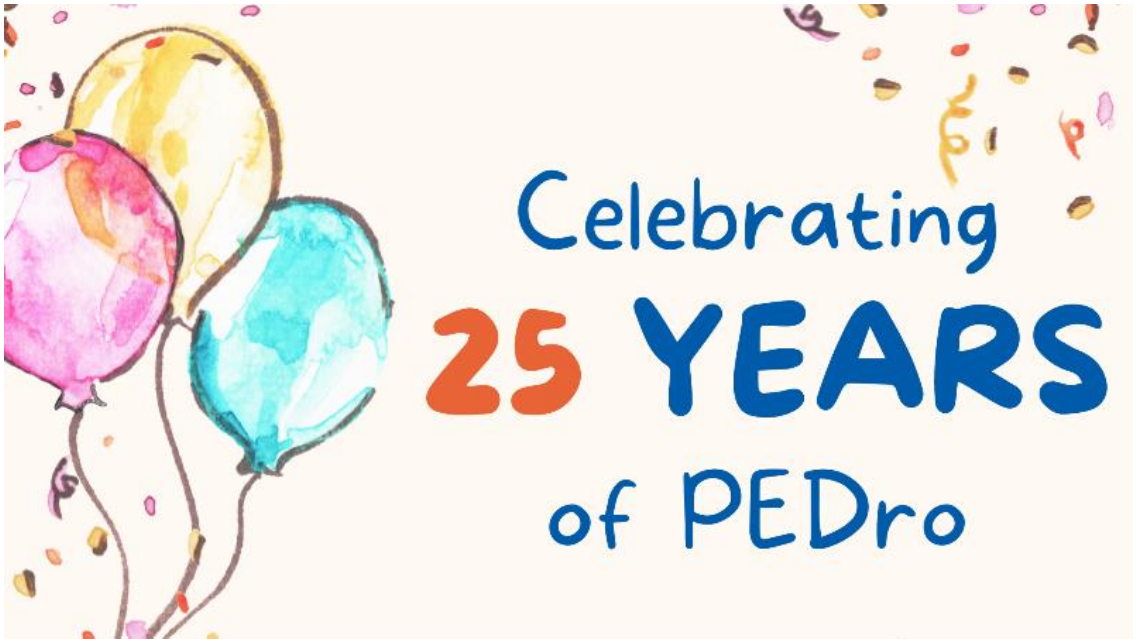
To address these issues, our 4-part webinar series aims to facilitate evidence-based practice by:

1. Developing participants' knowledge and skills in asking clinical questions and acquiring evidence using PEDro (Webinar #1, Joshua Zadro, complete online in your own time);
2. Developing skills in the appraisal of a simple randomised trial, including using the PEDro Scale (Webinar #2, Mark Elkins, complete online in your own time);
3. Helping you to understand more complex variations in the design of randomised trials (Webinar #3, Mark Elkins, complete online in your own time); and
4. Offering a question and answer session (Webinar #4, Mark Elkins, attend live at 7:00am Sydney time or 4:00pm Sydney time on Tuesday 12 November 2024)

Overall, this series will contribute to health professionals and clinical researchers' ability to apply strategies to systematically access and assess high-quality clinical research.

The course is convened through the Sydney Health Executive Education unit at The University of Sydney.

Register now



#PEDroTurns25

This month, PEDro is celebrating its 25th anniversary. For 25 years, PEDro has been informing physiotherapy practice. It is a free database of over 62,000 trials, reviews and guidelines evaluating physiotherapy interventions.

As part of the celebrations, we have been sharing PEDro resources, PEDro's history and celebrating our PEDro volunteers.

In November, we will also be announcing the 5 trials that will be added to PEDro's Top 25 Trials, as nominated by PEDro users. PEDro's Top 25 Trials are ground-breaking trials that changed the way people are treated for a variety of conditions seen by physiotherapists and other healthcare professionals. Some of these trials set the stage for breakthroughs, some represent a paradigm shift, and all of them mark important milestones in the evolution of physiotherapy treatment.

So watch this space!

Celebrating our PEDro Raters

What's it like to be a PEDro Rater?
To celebrate PEDro's 25th anniversary this year, we asked our PEDro Raters why they volunteer to rate articles on PEDro. Hear what they had to say here.

PEDro is unique. Each clinical trial indexed on PEDro is assessed for methodological quality by at least two independent PEDro-trained Raters. This month, we highlight the invaluable contribution of Raters to PEDro.

For 25 years, PEDro Raters have been critical in helping PEDro users rapidly access the

best available evidence by using the PEDro Scale to rate the quality of trials. PEDro Raters have rated 98% of all clinical trials indexed in PEDro, representing a total of over 128,700 ratings. This is a remarkable collaborative feat! The PEDro Partnership is grateful for the important contributions of the volunteer PEDro Raters.

PEDro rating over 25 years – What's stayed the same?

- PEDro Scale
- Trained Raters to rate trials on PEDro
- At least two independent raters for each trial

What's changed for PEDro Raters?

- Performing the ratings (from mailed paper copies to a web-based platform)
- Opportunities to network globally
- Languages represented by PEDro Raters
- Learn more

What are the benefits for PEDro rating?

- Giving back to the physiotherapy profession
- Keeping on top of the literature
- Enhancing critical appraisal skills
- Networking opportunities
- Learn more

If you'd like to become a PEDro Rater, complete the PEDro Scale Training Program!

PEDro now contains 62,000+ reports of trials, reviews and guidelines

We are pleased to announce that PEDro has just achieved a new milestone. There are now 62,000+ reports of trials, reviews and guidelines indexed on PEDro.

Lee et al. (2024) systematic review summary

Systematic review found the use of acupuncture improved pain and cervical spine extension range of motion compared to no acupuncture in people with whiplash associated disorder.

Whiplash associated disorder (WAD) is common following motor vehicle accidents. This systematic review aimed to summarise and appraise the evidence for the use of acupuncture to treat WAD.

Trials included: RCTs comparing acupuncture, alone or when combined with other treatments, to a comparator (sham or conventional treatments other than acupuncture). Outcomes were cervical spine pain, measured with a visual analogue or numerical rating scale (primary); Cervical spine range of motion (ROM), Neck disability index, adverse events (secondary).

Trial quality was evaluated using the Cochrane risk of bias tool 2. Certainty of evidence

was evaluated using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.

8 trials (525 participants) were included in the systematic review and 7 trials (502 participants) in meta-analyses. Total number of sessions was 6 or more (n=5), between 2-6 sessions (n=1) or one session (n=1). Low risk of bias for 5 trials.

Moderate certainty evidence exists that acupuncture improved cervical spine pain (SMD = -0.57, 95% CI: -0.86 to -0.28, I2= 51%, n = 423, 6 trials); low certainty evidence for effects on cervical spine ROM (SMD = 0.47, 95% CI: 0.05 to 0.89, I2= 56%, n = 216, 3 trials). Only one moderate adverse event occurred in 5 trials that reported adverse events.

This review suggests acupuncture, either alone or combined with other treatments may be superior to sham or other treatments alone in improving cervical spine pain.

Access the full summary in the PEDro blog.

Lee SH, Park SY, Heo I, Hwang EH, Shin BC, Hwang MS. Efficacy of acupuncture for whiplash injury: a systematic review and meta-analysis. *BMJ Open*. 2024 Jan 17;14(1):e077700. doi: 10.1136/bmjopen-2023-07770

Cursino et al. (2024) infographic

Systematic review found that preoperative respiratory muscle training reduces the risk of postoperative pulmonary complications and pneumonia and length of hospital stay following open cardiac surgery. Read more on PEDro.

PREOPERATIVE RESPIRATORY MUSCLE TRAINING REDUCES THE RISK OF PULMONARY COMPLICATIONS AND THE LENGTH OF HOSPITAL STAY AFTER CARDIAC SURGERY

Cursino et al. *Journal of Physiotherapy*. 2024;70:16-24

WHAT DID THEY DO?

Study design: Systematic review of 8 randomised controlled trials.

Population: 696 participants undergoing elective open cardiac surgery.

Intervention: Respiratory muscle training (RMT).

Comparator: No intervention or sham RMT.

Outcome: Post-operative pulmonary complications (PPC), length of stay and respiratory muscle strength.

The dose of RMT varied across the eight trials:

- Initial maximal inspiratory training pressure commenced at 15% (n=1), 30% (n=6) and 40% (n=1).
- Intervention duration ranged from 5 days (n=1), 2 weeks (n=3) and between 2 to 4 weeks (n=4).
- Training sessions ranged from 1 per day (n=4), 2 per day (n=2) and 3 per day (n=2).
- Training regimen ranged from 3 x 10 inspirations (n=1), 5 x 10 inspirations (n=1), 15mins (n=1), 20mins (n=4) and 30mins (n=1).

FINDINGS

Compared to no intervention, RMT:

- lowered the risk of PPC (RR 0.51, 95% CI 0.38 to 0.70), moderate-quality evidence, 6 trials of 645 participants
- lowered the risk of pneumonia (RR 0.44, 95%CI 0.25 to 0.78), high-quality evidence, 6 trials of 645 participants
- resulted in shorter hospital length of stay (MD -1.7 days, 95% CI -2.4 to -1.1), high-quality evidence, 4 trials of 531 participants

Adverse events: Mortality was reported in 2 trials, with 5 deaths in the control group and 3 in the experimental group.

Note: These results were based on high-certainty evidence with low heterogeneity.

There is good quality evidence that RMT reduces the risk of PPC and pneumonia, shortens length of hospital stay and improves inspiratory muscle strength compared to no intervention.

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Infographic prepared by Tiffany Dwyer, Sandeep Gupta and Courtney West

Cursino de Moura JF, Oliveira CB, Coelho Figueira Freire AP, Elkins MR, Pacagnelli FL (2024) Preoperative respiratory muscle training reduces the risk of pulmonary complications and the length of hospital stay after cardiac surgery: a systematic review. *Journal of Physiotherapy* 70:16–24

Funding is vital to sustain PEDro

Support for PEDro comes from the following global physiotherapy organisation.

We thank our Bronze Partners Physiotherapy New Zealand and Félag Sjúkraþjálfara in Iceland who have just renewed their partnership with PEDro for another year.

Thank you to our Association Partners Suomen Fysioterapeutit in Finland, Krajowa Izba Fizjoterapeutów in Poland, Irish Society of Chartered Physiotherapists, Lietuvos Kineziterapeutų Draugija in Lithuania, Physiotherapeuten-Verband Liechtenstein, Panhellenic Physiotherapists' Association in Greece who have just renewed their partnership with PEDro for another year. We welcome and thank Koninklijk Nederlands Genootschap voor Fysiotherapie in the Netherlands for recommencing their partnership with PEDro.

Thank you for your financial support!

You can also help keep PEDro running by making a donation.

Donate to PEDro

PEDro update (14 October 2024)

PEDro contains 62,904 records. In the 14 October 2024 update you will find:

- 47,687 reports of randomised controlled trials (46,687 of these trials have confirmed ratings of methodological quality using the PEDro scale)
- 14,412 reports of systematic reviews, and
- 805 reports of evidence-based clinical practice guidelines.

For latest guidelines, reviews and trials in physiotherapy visit *Evidence in your inbox*.

DiTA update (14 October 2024)

DiTA contains 2,492 records. In the 14 October 2024 update you will find:

- 2,209 reports of primary studies, and
- 283 reports of systematic reviews.

For the latest primary studies and systematic reviews evaluating diagnostic tests in physiotherapy visit *Evidence in your inbox*.

Next PEDro and DiTA updates are on 4 November 2024

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