

A. PEDro update (7 February 2022)

PEDro contains 53,801 records. In the 7 February 2022 update you will find:

- 41,362 reports of randomised controlled trials (40,717 of these trials have confirmed ratings of methodological quality using the PEDro scale)
- 11,737 reports of systematic reviews, and
- 702 reports of evidence-based clinical practice guidelines.

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

B. DiTA update (7 February 2022)

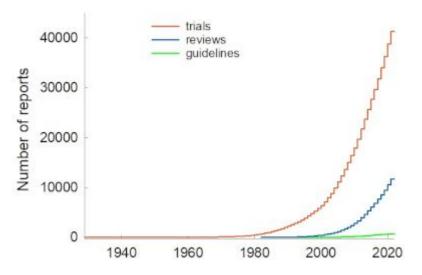
DiTA contains 2,314 records. In the 7 February 2022 update you will find:

- 2,073 reports of primary studies, and
- 241 reports of systematic reviews.

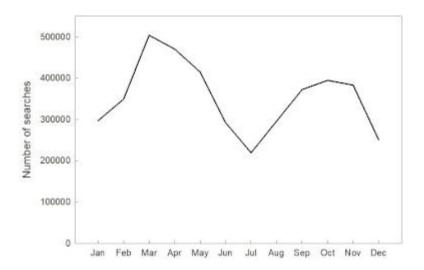
For the latest primary studies and systematic reviews evaluating diagnostic tests in physiotherapy visit *Evidence in your inbox*.

C. Who used PEDro in 2021

An analysis of the contents of PEDro in the 7 February 2022 update is now available on the PEDro statistics page – visit <u>pedro.org.au/english/learn/pedro-statistics/</u>.



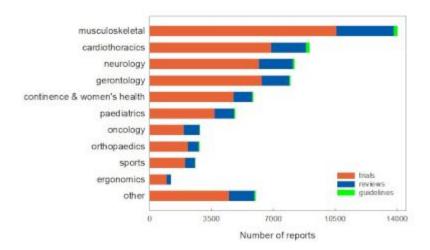
The number of reports of trials has continued to expand at an exponential rate.



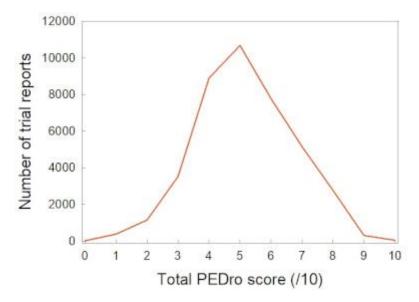
During 2021 PEDro was used to answer 4,247,892 questions. This means that a new search was initiated every 7 seconds, on average, during 2021. PEDro users were from 215 countries.



Countries with the highest usage were: Brazil (25%), Spain (7%), USA (7%), Australia (6%), and France (5%).



Musculoskeletal and cardiothoracic physiotherapy have the largest quantity of trials, reviews and guidelines indexed on PEDro.



For all trial reports indexed on PEDro, the average total PEDro score is 5.2 (standard deviation 1.6). 39% of trial reports are of moderate to high quality, scoring 6/10 or more on the PEDro scale.

D. Infographic for review that found that some types of exercise are more effective than others for adults with chronic low back pain

Last month we summarised the <u>review by Hayden et al</u>. The review concluded that Pilates, McKenzie therapy, functional restoration and core strengthening exercise therapies were more effective than other types of exercise therapy for reducing pain intensity and functional limitations. Nevertheless, people with chronic low back pain should be encouraged to perform the exercise that they enjoy in order to promote adherence.

Some suggestions for applying this evidence into practice are this infographic.

Hayden JA, et al. Some types of exercise are more effective than others in people with chronic low back pain: a network meta-analysis. *J Physiother* 2021;67(4):252-62

INCLUSION CRITERIA

Study design: Network metaanalysis of randomised controlled trials

Population: Adults with chronic low back pain

Intervention: 11 types of

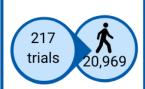
exercise therapy

Comparator: Other exercise types or non-exercise controls

Outcome: Pain (0-100) and functional limitation (0-100)



INCLUDED TRIALS



Most trials investigated core strengthening (n = 110) or mixed (n = 96) exercise types.

FINDINGS

- All exercise types better than minimal treatment.
- Pilates, McKenzie therapy
 + functional restoration
 better than other
 conservative treatment.
- Pilates, McKenzie therapy, functional restoration + core strengthening better than other types of exercise.

TAKE AWAY

Some exercises appear to be more effective than others, but people with low back pain should be encouraged to perform the exercise that they enjoy to promote adherence.

Hayden JA, et al. Some types of exercise are more effective than others in people with chronic low back pain: a network meta-analysis. *J Physiother* 2021;67(4):252-62

Read more on PEDro.

E. Physiotherapists are continuing to fight COVID-19 with updated recommendations

The PEDro team pays tribute to physiotherapists and other healthcare workers who are providing frontline care during the Coronavirus Disease 2019 (COVID-19) pandemic. Your bravery, dedication and expertise have more than earned the gratitude of the global physiotherapy community.

To support frontline physiotherapists in this work in the face of the mutating virus and its evolving effects, an international group of expert physiotherapists in cardiorespiratory

physiotherapy have worked collaboratively to update their consensus recommendations for physiotherapy management of COVID-19 in the acute hospital setting.

The first version of the recommendations for physiotherapy management for COVID-19 in the acute hospital setting was published in April 2020: <u>Thomas P, et al. Physiotherapy management for COVID-19 in the acute hospital setting: clinical practice recommendations. *J Physiother* 2020;66(2):73-82</u>

In accordance with these authors' plan to revise and release new versions of the recommendations as more is known about the treatment of COVID-19, a revised set of recommendations has now been published: Thomas P, et al. Physiotherapy management for COVID-19 in the acute hospital setting and beyond: an update to clinical practice recommendations. *J Physiother* 2022;68(1):8-25

The guideline covers physiotherapy workforce planning and preparation; a screening tool for determining requirement for physiotherapy; and recommendations for the use of physiotherapy treatments and personal protective equipment. New advice and recommendations are provided on: workload management; staff health (including vaccination); providing clinical education; personal protective equipment; and interventions (including awake proning, mobilisation and rehabilitation in patients with hypoxaemia). Additionally, recommendations for recovery after COVID-19 have been added, including roles that physiotherapists can assume in the management of post-COVID syndrome.

The updated guidelines are intended for use by physiotherapists and other relevant stakeholders caring for adult patients with confirmed or suspected COVID-19 in the acute care setting and beyond.

The guidelines have been published in English, but with 17 full-text translations in the online Appendix 2: Bulgarian, Chinese, Dutch, French, German, Greek, Hungarian, Italian, Japanese, Polish, Portuguese, Romanian, Spanish, Taiwanese, Thai, Turkish and Vietnamese. The PEDro team pays particular tribute to the volunteer translators who provided these translations in time for the publication of the main paper.

For physiotherapists who are already familiar with the original guidelines, the new recommendations and the revised recommendations have been labelled for quick identification.

At the time of their publication, the revised recommendations had already been endorsed by World Physiotherapy, the International Confederation of Cardiorespiratory Physical Therapists, the national physiotherapy associations of seven countries, and eight special interest groups in acute cardiorespiratory physiotherapy, intensive care and related clinical areas.

F. Physiotherapy journal editors now expect authors to use estimation methods

In a previous <u>PEDro blog</u>, physiotherapists were encouraged to stop using null hypothesis statistical tests in clinical research. Such tests involve the reporting of p-values and the interpretation of results as statistically significant or non-significant. There are many problems with p-values and claims of statistical significance, as discussed in detail in a Research Note published in <u>Journal of Physiotherapy</u>, which was the topic of the previous PEDro blog. That blog foreshadowed that physiotherapy journal editors would be releasing guidance on this issue. That time has now come.

Twelve leading physiotherapy journals are co-publishing an editorial in early 2022 that outlines the expectations of their editorial board members regarding statistical inference. The take-home message is that editorial board members of those 12 journals will expect manuscripts to use estimation methods instead of null hypothesis statistical tests. Estimation methods do not use p-values and statements about statistical (non-)significance. Instead, estimates are reported with confidence intervals.

Confidence intervals can be reported around numerous types of estimates. For example, a randomised controlled trial might report the mean between-group difference as the trial's estimate of the effect of the experimental intervention in people with a particular disease. An observational study might report a proportion as an estimate of the prevalence of some characteristic in people with a particular clinical condition. Statistics such as these should be thought of as estimates because they are calculated from the study's participants, who represent only a fraction of the entire clinical population of interest; therefore, the estimate is unlikely to be exactly equal to the true value in the wider clinical population.

Each time a confidence interval is reported, in one sense it indicates fundamentally the same thing regardless of which statistic is being reported; it indicates the range of values around the main estimate where the true effect probably lies. For example, a randomised controlled trial in people with ataxia might estimate that the experimental intervention improves gait speed by 7 m/min (because the mean between-group difference is 7 m/min). When this estimate is reported with a confidence interval of 5 to 9, it reminds us that there is some uncertainty in the estimate of 7 m/min but it reassures us that the true average effect of the intervention is probably somewhere between 5 and 9 m/min. A person with ataxia and their physiotherapist can jointly decide whether this estimate is precise enough and beneficial enough to make it worth undertaking the intervention. However, the authors reporting the trial should attempt to interpret whether the intervention would generally be considered worthwhile by people with ataxia. Similarly, an observational study reporting that 15% of 100 competitive breaststroke swimmers have patellofemoral arthritis should report a confidence interval around the prevalence estimate; in this case, the confidence interval would be 9 to 23. The authors should again interpret

what clinical and research implications arise from this evidence that the true prevalence lies somewhere between 9 and 23% in that sporting population.

The editorial provides a list of resources to help authors in making this transition from p-values and statistical significance to estimation methods. The resources include articles that explain confidence intervals from first principles, articles that explain how to interpret confidence intervals, and advice about how to calculate confidence intervals from your own data and from published summary data.

The editors acknowledge that it will take time to make this transition, so editors will give authors the opportunity to revise manuscripts to incorporate estimation methods if the manuscript seems otherwise potentially viable for publication.

The joint editorial was initiated by the <u>International Society of Physiotherapy Journal Editors</u> but the move to estimation methods is not just happening in the physiotherapy profession. Leading statisticians have called upon editors to abandon the concept of statistical significance and editors are responding in research fields from <u>neuroscience</u> to <u>nursing</u> and from <u>pharmacy</u> to <u>psychology</u>.

The estimation train is leaving the station so make sure you're on it. Read the editorial, which is freely available in full text via the link below, to ensure you understand what these physiotherapy journal editors expect in the analysis of research data.

Elkins MR, et al. Statistical inference through estimation: recommendations from the International Society of Physiotherapy Journal Editors. *J Physiother* 2022;68(1):1-4.

G. Shared decision making is an important part of evidence-based physiotherapy

Shared decision making is a collaborative process that involves patients and physiotherapists making health-related decisions together after discussing and considering several things:

- · the available options for treatment;
- the benefits and harms of each treatment option; and
- the patient's values, preferences and personal circumstances.

Shared decision making is therefore a means of translating evidence into practice and facilitating patient-centred care by helping patients to become more active in the process of making decisions about their healthcare management. Ideally, a shared decision incorporates the best available research evidence, the physiotherapist's

knowledge/expertise, and the patient's values/preferences.

A recent Masterclass paper in the *Brazilian Journal of Physical Therapy* explains what physiotherapists need to know about the process of shared decision making.

The paper explains several reasons why shared decision making is important. It can result in higher patient and physiotherapist satisfaction. It acknowledges that both the physiotherapist's perspective and the patient's perspective are important, which can help to equalise any unequal power relationship in the clinical setting. It thereby facilitates good patient-therapist communication, enabling patients to make an evidence-informed decision. It also helps to promote realistic expectations and beliefs about interventions, how they can help and how much effect they are likely to have.

The majority of patient healthcare complaints are due to ineffectual communication or receiving an inadequate amount of information to make an informed decision. Shared decision making works to mitigate this situation by facilitating good patient-therapist communication and enabling patients to make an evidence-informed decision.

A helpful section in the paper considers situations where shared decision making might be more or less appropriate. For example, it is not needed (and therefore less appropriate) in circumstances where there is one clearly superior treatment option. It is most relevant when there are two or more options with similar effectiveness but different costs or different types of benefit or harm). In such situations, there is a need for a value judgement - and the physiotherapist can assist the patient to arrive at that judgement by explaining the evidence in a comprehensible way and by using their experience and expertise to help the patient reason appropriately when considering how that information applies to their own situation.

A flow diagram shows the key elements of the shared decision making process in a typical order in which they might occur. The authors point out, though, that it is often not a linear process and some elements may be revisited before the final decision is made.

The examples discussed above relate to shared decision making about treatments, but shared decision making also applies to screening procedures, diagnostic tests and prevention strategies. For example, the procedures involved in undergoing a diagnostic test may involve some risk of an adverse event, so patients may also benefit from the opportunity to discuss with their physiotherapist the evidence about the test's performance, the importance of the information the test will provide, and the implications of the different possible test results before deciding whether to have a test. A nice aspect of the paper is that it is written to encompass all of these aspects of shared decision making.

The paper also reviews the evidence about physiotherapists' use of shared decision

making, available resources to facilitate shared decision making, and studies of interventions to increase use of shared decision making in physiotherapy.

Hoffmann T, et al. Shared decision making and physical therapy: What, when, how, and why? *Braz J Phys Ther* 2021 Dec 31:Epub ahead of print.

H. Thank you to PEDro volunteers and staff during 2021

PEDro received assistance from a large number of volunteers during 2021. These physiotherapists have donated time and skills to confirm that articles are eligible for indexing in PEDro, apply search codes, and rate trials indexed in PEDro using the PEDro scale. We extend a big vote of thanks to: Alaa Noureldeen Kora, Alessandro Pagano, Alexandra Barnes, Alistair Gardner, Ana Cristina Castro Avila, Ana Salles, Andrea Gardoni, Anne Jahn, Antonella Saponara, Athilas Braga, Bernadette Petzel, Bernadine Teng, Brenda Lucciano, Brice Pennicott, Carlos Sanchez Medina, Cecilia Bagnoli, Christine Tadros, Ciara Harris, Clare Walsh, Claudia Sarno, Claudio Cordani, Connie Jensen, Connor Gleadhill, Daniel Gurin, Daniele Conte, David Fernandez Hernando, David Liska, Diego Poddighe, Elena Ierardi, Elisa Ravizzotti, Emre Ilhan, Eurose Majadas, Eva Ursej, Fereshteh Pourakzemi, Frank Aerts, Gabriel Farhat, Gerardo Candoni, Gessica Tondini, Giovanni Ferreira, Gul Oznur Karabicak, Harry Truong, Henry Pak, Hironobu Uzawa, Hopin Lee, Hubert Makaruk, Ilkim Karakaya, Irene Scotto, Janio Luiz Correia Junior, Jean-Philippe Regnaux, Jess Chan, Jiayen Wong, Joshua Zadro, Julia Chevan, Juliana Fernandes, Julio Fernandes de Jesus, Junior Vitorino Fandim, Kamil Adamiec, Kathrin Fiedler, Kerry West, Kylie Turton, Laura Blanco, Laura Crowe-Owen, Laura Daly, Leonardo Piano, Letizia Micca, Llanos de la Iglesia Avila, Lorenzo Vannucci, Luca Bertazzoni, Maciej Plaszewski, Mahsa Seydi, Mai Kenawy, Manuela Besomi, Marco Bisozzi, Marco Bordino, Marco Bravi, Maria Alva Staufert, Maria Letizia Zuccotti, Maribeth Gelisanga, Matteo Gaucci, Matteo Locatelli, Mia Boye Nyvang, Michelle Liu, Mykola Romanyshyn, Nicolas Ferrara, Paoline Li, Paolo Caneparo, Pedro Andreo, Peter Geagea, Pirashikah Prahatheesan, Rik Dawson, Robyn Porep, Rodrigo Cappato, Roger Andrey, Ryan Carroll, Sabrina Grappiolo, Sacha Bossina, Scott Wilson, Shahn Aldrouich, Shaimaa Eldeeb, Shalin Patel, So Nishimura, Stacey Cubitt, Stefan Liebsch, Stefano Berrone, Stephen Chan, Sukhjit Singh, Tim Oostenbroek, Tory Toogood, Uwe Eggerickx, Vaishnavi Kulkarni, Valentin Valliant, Vladyslav Talalaiev, Weronika Krzepkowska, Yaroslav Sybiriankin, Ye Tao Xu, Zoe Nicholas, and Zoe Russell.

Several staff are employed to develop and maintain PEDro. The staff for 2021 include: Anne Moseley (Manager); Alla Melman (Research Officer); Courtney West (Administration); Chen Qiuzhe, Johnny Kang, Jooeun Song, Julia Scott, Sweekriti Sharma, Theresa Ford, and Yen-Ning Lin (PEDro raters).

I. Next PEDro and DiTA updates (March 2022)

The next PEDro and DITA updates are on Monday 7 March 2022.



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Our mailing address is:

Physiotherapy Evidence Database (PEDro) PO Box M179 MISSENDEN ROAD, NSW 2050 Australia

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