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A. PEDro update (8 September 2020)

PEDro contains 48,252 records. In the 8 September 2020 update you will find:

- 37,454 reports of randomised controlled trials (36,636 of these trials have confirmed ratings of methodological quality using the PEDro scale)
- 10,113 reports of systematic reviews, and
- 685 reports of evidence-based clinical practice guidelines.

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

B. DiTA update (7 September 2020)

DiTA contains 1,850 records. In the 7 September 2020 update you will find:

- 1,675 reports of primary studies, and
- 175 reports of systematic reviews.

For the latest primary studies and systematic reviews evaluating diagnostic tests in physiotherapy visit <u>Evidence in your inbox</u>.

C. PEDro honours the adaptability and resilience of physiotherapists during the COVID-19 pandemic for World Physiotherapy Day

2020 has been an exceptional year for the global physiotherapy community, who have risen to the

challenges of the COVID-19 pandemic, demonstrating both resilience and adaptability. The <u>American Psychological Society</u> defines resilience as "the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress". According to the <u>Cambridge Dictionary</u>, adaptability is "an ability or willingness to change in order to suit different conditions".

For World Physiotherapy Day the PEDro Team are featuring five innovative physiotherapists from around the world who have demonstrated leadership despite adversity. These physiotherapists have worked proactively across clinical care, education and research to overcome challenging circumstances. They have displayed tenacity, flexibility, collaboration, long-term vision and high calibre reasoning skills.



We interviewed Bishwas Shrestha,
Consultant Neurophysiotherapist at Nepal
Mediciti Hospital and Senior Vice
President of the Nepal Physiotherapy
Association. Bishwas ensured his team
were following regulations for social
distancing, hand hygiene and personal
protective equipment, and developed
triage protocols for patients that needed
priority outpatient care. The Nepal
Physiotherapy Association distributed

personal protective equipment to front line physiotherapists, and contributed to online physiotherapy professional education during the pandemic. The Association also adapted guidance from the World Health Organization and World Physiotherapy to the Nepalese setting, producing the "Clinical Guidelines for Physiotherapy Management of Patient with COVID-19 in Acute Hospital Setting in Nepal". Regarding adaptability and resilience, Bishwas reflects: "adaptability is an art to create a new normal, what we are up to now in this pandemic, and resilience creates more adaptive capability. We all know that physiotherapy is a part of medical science, which keeps on evolving and changing with time. So, adaptability and resilience in physiotherapy practice is a must-have quality".



Renato José Soares, Professor at the University of Taubaté and Director of Grupo Equality physiotherapy practice in São Paulo (Brazil), shared his insights into adapting physiotherapy practice during the pandemic. His clinical work is focused on evidence-based conservative treatment of spinal pain, with the goal of reducing rates of spinal surgery. At the onset of the

pandemic, he collaborated with colleagues to fast track a

telerehabilitation startup called "Hi! Healthcare Intelligence", which has trained 20 physiotherapists and performed over 3,150 consultations. Telerehabilitation technology has been a vital link in allowing patients to continue accessing care. His advice for clinicians regarding adaptability and resilience in physiotherapy practice is: "to support your decisions with high quality clinical research, be flexible to new professional challenges, and make choices that are in the best interests of public health".



Benita Olivier is the Professor in

Musculoskeletal Physiotherapy at the
University of the Witwatersrand and the
Research Director of Wits Sport and
Health Research Group in Johannesburg,
South Africa. In response to the pandemic,
Benita has created online academic tools
and resources to support both research
and education. During this time she
founded the "Research Masterminds"

platform, which supports research productivity. A flagship biennial event which she organises with her team, the Wits Faculty of Health Sciences Research Day, is one of the many events which rapidly moved online and which required deep breathing, rational thinking and resilience to actualise. She acknowledges the dedicated work of her colleagues who converted hundreds of hours of undergraduate teaching to an online platform in a short time frame. Benita has supported postgraduate students experiencing data collection disruption due to the pandemic, helping them problem solve creatively. She recommends judicious use of online meetings to maintain productivity, and found Microsoft Teams and the Moodle learning management system to be helpful in her work. Regarding resilience, Benita advocates: "not being afraid to make and learn from your mistakes".



Rachael Moses (Consultant Respiratory
Physiotherapist and Associate Director of
Rehabilitation at Royal Brompton and
Harefield Foundation Trust and Chief
Allied Health Professional Lead at
National Health Service Nightingale
Hospital London, United Kingdom) and
Michelle Kho (Associate Professor in the
School of Rehabilitation Science,
McMaster University and clinician in the
intensive care unit at St Joseph's

Healthcare Hamilton, Canada) were part of the inspiring team that rapidly produced the "Physiotherapy Management for COVID-19 in the Acute Hospital Setting: Clinical Practice Recommendations".

Rachael Moses would like to honour the amazing adaptability of physiotherapists in the United Kingdom, who stepped out of their comfort zones to provide high-quality clinical care during the pandemic. At the Nightingale Hospital London she saw military and private sector physiotherapists with previous respiratory experience put themselves forward to assist in treating critically ill COVID-19 patients. Rachael highlights the importance of doing respiratory physiotherapy rotations early in one's career as these can be incredibly useful skills to have in a public health crisis. Intensive care units in the United Kingdom had to increase their capacity by 2- to 4-fold, and physiotherapists with recent respiratory experience were rapidly upskilled in the management of critically ill patients. Physiotherapists with neurological or musculoskeletal expertise were redeployed to work on medical rehabilitation wards (dealing with issues such as breathlessness, fatigue and nerve palsy) and in "proning teams" (assisting patients to move into the prone position in critical care units). She comments on the important contribution made by 'shielded workers' (ie, those at high COVID-19 risk) to online teaching and writing policies and guidelines. She reflects that COVID-19 has changed how we share resources such as practice guidelines and infection control policies, and that there has been much more pooling of knowledge and resources than in the past.



Michelle Kho shared her thoughts on how physiotherapists have demonstrated flexibility and teamwork locally and internationally. As the Canada Research Chair in Critical Care Rehabilitation and Knowledge Translation, she led the development of multidisciplinary guidance entitled "Rehabilitation for Patients with COVID-19". She is one of the site investigators for SPRINT-SARI study, an international, multi-centre, prospective,

incidence observational study of patients with severe acute respiratory infection (SARI). She notes that physiotherapists have been involved in gathering epidemiological data for the SPRINT-SARI study to help inform the COVID-19 pandemic. Michelle commends the resilience of her physiotherapy colleagues at St Joseph's Healthcare Hamilton, who, in addition to providing treatment during the pandemic, had to deal with the department flooding. She acknowledges the ability of physiotherapists and physiotherapy assistants to 'pivot' across clinical areas, collaborating to coordinate case loads with fellow physiotherapists when required.

We are pleased to announce that PEDro has just achieved a new milestone for the amount of evidence. There are now 48,000+ reports of trials, reviews and guidelines indexed on PEDro.



E. PEDro World-Wide Journal Club on exercise for rotator cuff related shoulder pain is now available

Welcome to the PEDro World-Wide Journal Club. The purpose of the PEDro World-Wide Journal Club is to encourage the global physiotherapy community to read trials, reviews and guidelines that have important implications for clinical practice. We hope that facilitating discussion of this research will help physiotherapists to implement the results into their clinical practice.

Journal clubs are a great way to translate research into practice. In <u>March 2020</u> PEDro published a blog that outlined some key features of running a successful journal club. We are going to use this framework to run three or four journal clubs during 2020. The idea is for physiotherapists to use resources provided by PEDro as the basis for running a local journal club with their peers.

The third PEDro World-Wide Journal Club is about exercise for rotator cuff related shoulder pain. We will

be discussing the exercise for rotator cuff related shoulder pain <u>systematic review by Naunton et al</u>. We encourage physiotherapists with an interest in musculoskeletal to participate in a five-step process:

- 1. invite your colleagues to be involved
- 2. read the article
- 3. watch (or listen to) the video summarising the exercise for rotator cuff related shoulder pain review
- 4. <u>watch (or listen to) the video</u> of the panel discussing the exercise for rotator cuff related shoulder pain review
- 5. meet with your colleagues to have your own discussion about the exercise for rotator cuff related shoulder pain review.

If you are interested in being involved, please visit the PEDro web-site for more information.

F. New PEDro website will be launched on 16 September 2020

We are excited to announce that the new PEDro website will be launched on 16 September 2020.

The <u>PEDro website</u> is available in 13 languages (English, simplified Chinese, traditional Chinese, Portuguese, German, French, Spanish, Italian, Japanese, Korean, Turkish, Tamil and Arabic). You can select your preferred language in the header.

You can use the PEDro website to SEARCH for research articles that answer your clinical questions, BROWSE the latest research in your area of interest, LEARN more about using PEDro and skills for evidence-based practice, access useful RESOURCES, or find out more ABOUT this invaluable global resource.

PEDro has three search pages (Advanced, Simple and Consumer). We strongly encourage health professionals to use the Advanced Search. This is why the SEARCH buttons in the header, footer and PEDro icon in the new PEDro website take you directly to the Advanced Search page. The Advanced Search page contains 13 fields to define search terms with precision. Those who are new to searching may like to begin with the Simple Search, which contains a single text field. Patients and other users of physiotherapy can access the Consumer Search, which has less technical language. You can click through to the Simple and Consumer search pages from the PEDro Advanced Search page.

The BROWSE page gives you access to the latest Evidence in your inbox monthly feeds. This is a curated collection of recent randomised controlled trials, systematic reviews and clinical practice guidelines, grouped by 15 areas of clinical practice (cardiothoracics, continence and women's health, ergonomics and occupational health, gerontology, musculoskeletal, neurology, oncology, orthopaedics, paediatrics, sports, cerebral palsy, chronic pain, chronic respiratory disease, neurotrauma and whiplash). Scroll down to

subscribe to PEDro's *Evidence in your inbox*. The latest research will be emailed to you each time PEDro is updated. Subscription is free.

The LEARN page gives you access to tutorials, frequently asked questions, search help, PEDro statistics, indexing criteria and codes, the PEDro Top 20 Trials (available in the English, Portuguese and Spanish sections), World-Wide Journal Club (only available in the English section), and the latest news (available in the English and Portuguese sections). For tips on PEDro searching using the Advanced Search page we suggest you visit the search help page and watch the 'How to perform a PEDro advanced search' video. The World-Wide Journal Club page includes instructions and materials to facilitate the translation of research findings into clinical practice.

The RESOURCES page includes tools to help you use PEDro and implement evidence-based practice. These are the PEDro scale, confidence interval calculator, publications about PEDro (only available in the English section), systematic review summaries published in the British Journal of Sports Medicine (only available in the English section), filters for referencing software, useful links, newsletter archive (available in the English and Portuguese sections) and press release archive (only available in the English section).

To find out more about the team behind PEDro visit the ABOUT page.

Revising the PEDro website has been a real team effort. We are grateful to the following people who helped with translation: Yen-Ning Lin (simplified and traditional Chinese); Tiê Parma Yamato and Bruno Tirotti Saragiotto (Portuguese); Cordula Braun and Kerstin Luedtke (German); Pierre Trudelle and Jean-Philippe Regnaux (French); Antonia Gómez Conesa, Fernando Ramos Gómez and Carmen Suárez Serrano (Spanish); Roberto Iovine, Francesco Gambino, Silvia Terzi and Daniele Sarti (Italian); Takahiro Miki (Japanese); Jooeun Song (Korean); İlkim Çıtak Karakaya (Turkish); Cynthia Swarnalatha Srikesavan (Tamil); and, Ali Alshami and Sami Al-Mubireek (Arabic).



G. Meet the people behind PEDrinho

Since 2015 PEDro has communicated to users via newsletters, blogs, Facebook and Twitter in both English and Portuguese. This September 2020 issue is our 61st newsletter! The Portuguese communication channels are called "PEDrinho", or "little PEDro" (a term of endearment often used for soccer players). A succession of physiotherapists have made important contributions to producing PEDrinho. In this post we introduce some of the key players.

Bruno Tirotti Saragiotto and Tiê Parma Yamato created PEDrinho when they were working for PEDro while undertaking their doctoral studies at The University of Sydney. Upon receiving their PhD awards in 2017, Bruno and Tiê returned to Brazil and took up important teaching and research positions at the Universidade Cidade de São Paulo (UNICID) in Brazil. The focus of Bruno's work is telehealth for people with chronic pain. Tiê is supported by the Sao Paulo Research Foundation and holds a fellowship to investigate musculoskeletal pain in children and adolescents.



Bruno Tirotti Saragiotto



Tiê Parma Yamato



Bruno and Tiê passed custodianship of PEDrinho onto Giovanni Ferreira. Giovanni was working for PEDro while researching how back pain is treated in primary care and in emergency departments for his PhD at The University of Sydney. With his PhD under examination, Giovanni is leaving PEDro to take on a post-doctoral fellowship in ANZBACK, the Australia and New Zealand low back pain research network.

We are now excited to introduce Mariana Leite and Junior Vitorino Fandim, who have volunteered to coordinate and write for PEDrinho from September 2020. Mariana and Junior are both PhD scholars in the <u>Universidade Cidade de São Paulo (UNICID)</u> in Brazil. While Mariana is new to the PEDro team, Junior has already had a long association with PEDro as a volunteer rater (over the past 5 years he has rated over 200 trials). We look forward to working with them both.



Mariana Leite



Junior Vitorino Fandim

We are always looking for volunteers to help us locate and rate trials, reviews and guidelines. If you think you might like to assist in this way, <u>please contact us</u>. You can be a volunteer from anywhere in the world.

H. Infographic for systematic review that found resisted and progressive exercise reduces pain and dysfunction, but non-resisted or non-progressive exercise does not, in people with rotator cuff related shoulder pain

Last month we summarised the systematic review by Naunton et al. The review concluded that resisted

and progressive exercise reduces pain and dysfunction, but non-resisted or non-progressive exercise does not, in people with rotator cuff related shoulder pain.

Some suggestions for providing resisted and progressive exercise for people with rotator cuff related shoulder pain are included in this infographic.



A systematic review of 7 trials suggests resisted and progressive exercise reduces pain and dysfunction, but non-resisted or non-progressive exercise does not, in people with rotator cuff related pain

What does resisted and progressive exercise involve?

- Adding a load using weights or elastic resistance bands
- Increasing the amount of load or volume over time

Other key points

- Effects were largest in trials that provided supervision for the exercise program
- There is uncertainty about whether the effects of resisted and progressive exercise are clinically important

ITATION

Naunton J, et al. Effectiveness of progressive and resisted and nonprogressive or non-resisted exercise in rotator cuff related shoulder pain: a systematic review and meta-analysis of randomized controlled trials. Clin Rehabil 2020 Jun 22:Epub ahead of print.



Naunton J, et al. Effectiveness of progressive and resisted and non-progressive or non-resisted exercise in rotator cuff related shoulder pain: a systematic review and meta-analysis of randomized controlled trials. *Clin Rehabil* 2020;34(9):1198-216

Read more on PEDro.

I. Systematic review found that exercise alone or combined with education probably reduces future low back pain intensity and disability in working aged adults

Low back pain is the leading cause of global disability and a common reason for absence from work, reduced productivity and seeking care. Prevention strategies are required to reduce the burden associated with this chronic, recurrent condition. This systematic review and meta-analysis aimed to estimate the effect of prevention strategies to reduce the impact of low back pain; as measured by

pain intensity and associated disability.

Guided by a prospectively registered protocol, randomised controlled trials were identified through sensitive searches of five databases and citation tracking. Trials evaluating any strategy to reduce the future impact of low back pain, reporting pain intensity or disability at least 3 months after randomisation, and using a no intervention, placebo or minimal intervention control group were included. Prevention strategies could include any approach aiming to prevent or reduce the future impact of low back pain, including workplace interventions targeting risk factors or interventions to make people more fit, healthy or resilient. Trials evaluating the treatment of low back pain were excluded. The primary outcomes were pain intensity and disability (with data converted to a 0-100 point scale) in the short-term (6 months after randomisation) and long-term (12 months after randomisation). Risk of bias was assessed using the Physiotherapy Evidence Database scale and certainty of evidence was determined using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system. Trial selection, data extraction, and appraisal of risk of bias and certainty were independently performed by two reviewers, with any disagreements resolved through discussion. Meta-analyses were used to calculate mean between-group differences and 95% confidence intervals (CI) when trial interventions and populations were considered to be sufficiently similar.

Twenty-seven articles met the criteria to be included in the review. Of those, 21 trials (7,269 participants) published in 23 articles were included in the primary analyses. Prevention strategies were tested in three populations: working aged adults (18 trials, mainly recruited from hospitals or other workplaces, average age 45 years, 76% women), pregnant women (2 trials), and children (1 trial). Six different prevention strategies were evaluated in working aged adults: exercise (3 trials), exercise and education (5 trials), education (8 trials), ergonomics (3 trials), and ergonomics and education (2 trials) [note: some trials had multiple treatment arms so are included in more than one strategy]. Exercise was evaluated in pregnant women. Exercise combined with education was evaluated in children.

For working aged adults, exercise reduced future low back pain intensity (mean difference -5 points on a 100-point scale; 95% CI -7 to -2; 3 trials; 612 participants; moderate certainty) but not disability (-2; -7 to 2; 1 trial; 189 participants; very low certainty) in the short-term when compared to a control intervention. No trials evaluated the long-term outcomes associated with exercise. There was no effect of exercise and education on future low back pain intensity in the short-term (-2; -10 to 6; 3 trials; 184 participants; low certainty) or long-term (-4; -9 to 0; 4 trials; 471 participants; moderate certainty) or on disability in the short-term (-5; -13 to 3; 2 trials; 150 participants; low certainty) when compared to a control group. However, exercise and education did reduce disability in the long-term (-6; -10 to -3; 4 trials; 471 participants; moderate certainty). There was no effect of education alone on either future pain intensity in the short-term (-2; -5 to 1; 3 trials; 777 participants; moderate certainty) or long-term (2; -6 to 10; 2 trials; 126 participants; low certainty) or future disability in the

short-term (-3; -6 to 1; 4 trials; 804 participants; moderate certainty) or long-term (0; -5 to 4; 2 trials; 176 participants; low certainty). There was no effect of ergonomics on future pain intensity in the short-term (1; -3 to 6; 1 trial; 552 participants; low certainty) or long-term (2; -3 to 7; 1 trial; 538 participants; low certainty) when compared to control interventions. No trials evaluated disability after ergonomic intervention. Similarly, there was no effect of ergonomics and education on future pain intensity in the short-term (1; 95% CI -7 to 9; 1 trial; 192 participants; very low certainty) or long-term (0; -7 to 7; 2 trials; 266 participants; low certainty) or on disability in the short-term (2; -2 to 6; 1 trial; 192 participants; very low certainty) or long-term (1; -3 to 6; 1 trial; 184 participants; very low certainty).

For pregnant women, exercise did not reduce future low back pain intensity (-3; -7 to 1; 2 trials; 452 participants; moderate certainty) or disability (-3; -7 to 1; 1 trial; 240 participants; low certainty) in the short-term, when compared to control interventions. No trials evaluated long-term outcomes.

For children, when compared to a control intervention, exercise and education did not reduce future low back pain intensity in the short-term (0; -12 to 12; 1 trial; 70 participants; very low certainty). No trials evaluated disability or long-term pain.

This review provides moderate quality evidence that an exercise program, or a program combining exercise and education, may reduce future low back pain intensity (short-term) and associated disability (long-term) in working aged adults. In contrast, interventions focusing on education and ergonomics (separately or in combination) are unlikely to reduce future low back pain intensity or disability in this patient group. Exercise probably doesn't reduce future low back pain in pregnant women, and exercise and education may not reduce future low back pain in children.

de Campos TF, et al. Prevention strategies to reduce future impact of low back pain: a systematic review and meta-analysis. *Brit J Sports Med* 2020 Jul 9:Epub ahead of print

Read more on PEDro.

J. What makes a great clinical trial? Editorial about PEDro's Top 5 Trials in 2014-2019 provides some insights

Some trials are ground-breaking and grab a great deal of attention. Others fail to excite. What makes them different? A recent editorial published in the *British Journal of Sports Medicine* featured the PEDro Top 5 Trials in 2014-2019 initiative and offers some insights.

To mark PEDro's 20th anniversary, we invited physiotherapists from all over the world to nominate

randomised clinical trials published between 2014 and 2019 that answered important clinical questions in a robust and novel way. A panel of experts in clinical trials judged the nominations and established the Top 5 Trials: LIPPSMAck POP, SARAH, AVERT, HIHO, and UK FASHION.

LIPPSMAck POP demonstrated that a single 30 minutes education and training session delivered by physiotherapists halves the incidence of hospital-acquired pneumonia when compared with an information booklet. SARAH found that adding hand exercises to usual pharmacological care improves hand function in rheumatoid arthritis and is cost-effective. AVERT revealed that very early mobilisation following stoke (within 24 hours) led to more disability than usual care (OR 0.73, 95% CI 0.59 to 0.90). HIHO found that intensive inpatient rehabilitation (two sessions/day for 10 days) was not better than monitored home-exercise for uncomplicated total knee arthroplasty. UK FASHION demonstrated that hip arthroscopy improved quality of life more than 'best' conservative care (6.8 points; 95% CI 1.7 to 12.0). Short videos summarising each trial are available on the PEDro website.

The PEDro Top 5 Trials attracted widespread attention. AVERT has already been cited over 250 times, HIHO was picked up by 13 news outlets, including the New York Times. SARAH and AVERT have changed guidelines. LIPPSMAck POP, AVERT and UK FASHION have informed the development of decision tools for clinicians.

What sets the Top 5 Trials apart from other trials? These five trials had rigorous methods (scoring 8 out of 10 on the PEDro scale), high follow-up rates (89% to 99%), prospective registration, moderate or large sample sizes (range 165 to 2,104) and recruited from many sites (2 to 56). But there are two other crucial characteristics that set these trials apart! First, they all asked important questions that addressed significant gaps in clinical practice for conditions with high disease burden. And second, they all had clinically important endpoints and clear implications for clinicians and health systems. Interestingly, AVERT and HIHO were 'negative trials' that highlighted a need to change current practice. Trials do not have to have large positive findings to be influential. Negative findings can also have important implications for patient care and health policy.

Inspection of the Top 5 Trials in physiotherapy tells us that if you want to conduct a landmark trial, you need to have more than top-notch methods and a large sample size. Landmark trials ask important questions, challenge conventional thinking and have immediate implications for clinical practice. Including health economic evaluation makes trial results more impactful because those data can influence policy. In short, ask important questions ... and answer them with clinically relevant results!

Amorim AB, et al. What makes a great clinical trial? Exploring the features of five important physiotherapy trials. *Br J Sports Med* 2020 Aug 7:Epub ahead of print.

K. Support for PEDro comes from the Hong Kong Physiotherapy Association and Deutsche Gesellschaft für Physiotherapiewissenschaft

We thank <u>Hong Kong Physiotherapy Association</u> and <u>Deutsche Gesellschaft für</u>

<u>Physiotherapiewissenschaft</u> who have just renewed their partnership with PEDro for another year.

L. Next PEDro and DiTA updates (October 2020)

The next <u>PEDro</u> and <u>DiTA</u> updates are on Tuesday 6 October 2020. This is later than usual because Monday is a public holiday in Sydney.

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