

You Ask #PEDroAnswers, a global social media campaign to help physiotherapists improve their searching skills to find high-quality evidence

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What is Evidence-Based Healthcare?

Evidence-based practice refers to the integration of high-quality research evidence with clinical expertise and patient preferences to guide clinical decision-making [1]. Healthcare professionals, including physiotherapists, follow the principles of evidence-based practice to optimise patient care by increasing the use of (cost-)effective treatments and minimising the use of ineffective or harmful treatments in clinical practice. Two of the key steps in evidence-based practice involve asking a clinical question and then finding the best high-quality research to answer the question. Physiotherapists can use research databases including PubMed or the Physiotherapy Evidence Database (PEDro) to search for and find research evidence; however, only about one-third of physiotherapists perform database searches on a monthly basis [2]. A potential reason for this is that some physiotherapists may lack adequate skills to search for and find research [3], which may also hinder their ability to apply the results of high-quality clinical research into clinical practice.

What is PEDro?

The Physiotherapy Evidence Database, commonly known as PEDro, is a freely available and well-established website which aims to provide rapid access to clinical research relevant to physiotherapists. Launched in 1999, the purpose of PEDro is to provide physiotherapists with high-quality clinical research evaluating the effects of physiotherapy interventions, specifically to evidence-based clinical practice guidelines, systematic reviews, and randomised controlled trials. All trials indexed on PEDro are rated for quality using the PEDro scale. These quality ratings are used to rank search results, which allows physiotherapists to quickly identify higher quality trials. In 2021, 39% of trials were rated as moderate to high quality (scoring 6 or more out of 10 on the PEDro scale) [4]. In February 2022, PEDro indexed over 54,000 trials, reviews, and guidelines, and the

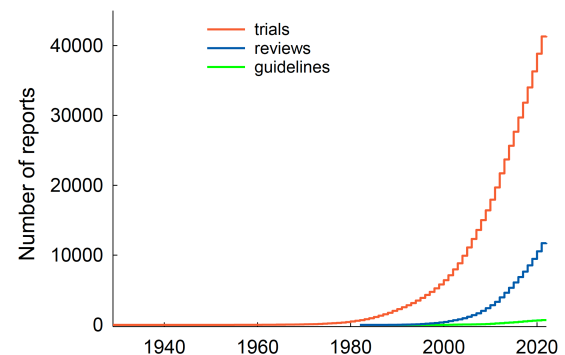


Figure 1 Cumulative number of trials, reviews and guidelines indexed on PEDro [4]

rate of new articles is growing exponentially, as illustrated in Figure 1. The areas of physiotherapy practice that had the largest number of articles include musculoskeletal and cardiothoracics.

In 2021, PEDro users from over 200 countries performed a search every 7 seconds, totalling 4.2 million searches [4]. In 2021, physiotherapists from Brazil (25%), Spain (7%), the United States of America (7%), Australia (6%), and France (5%) were the top users of PEDro globally (Figure 2). The PEDro website is available in 17 languages, including French, English, Portuguese, Italian, Spanish, and German. There are no language restrictions for indexing articles on PEDro, and 8.5% of articles are published in languages other than English.

The PEDro You Ask #PEDroAnswers campaign

Searching for high-quality research to guide clinical decision-making is a fundamental skill in evidence-based practice, but two-thirds of physiotherapists users indicate they do not have adequate skills in performing efficient database searches to answer clinical questions [3]. To address this common barrier, PEDro launched the *You Ask #PEDroAnswers* campaign

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on January 15, 2021. The campaign aimed to provide **tip posts** on how to use the PEDro Advanced Search, demonstrate searching to find research to answer some clinical questions using **search posts**, and used **callouts** to encourage physiotherapists from different countries and areas of practice to participate in the campaign by submitting clinical questions. The content for the campaign was shared in PEDro newsletters, blogs, and social media pages on Facebook and Twitter which are available in English ([newsletter](#), [news](#), [Facebook](#), and [Twitter](#)) and Portuguese ([newsletter](#), [news](#), [Facebook](#), and [Twitter](#)).

During the campaign, physiotherapy students and clinicians worldwide submitted clinical questions via Facebook, Twitter or a contact form on the PEDro website. Users were encouraged to submit their questions in the well-known PICO format (i.e., including the Patient, Intervention, Comparator and Outcome). Questions were submitted about specific groups (e.g., older people, musicians), conditions (e.g., incontinence, tennis elbow), and interventions (e.g., motivational interviewing, mirror therapy). Each month in 2021, the PEDro campaign team selected a clinical question and produced a video (and related newsletter items, blogs, and social media posts) to demonstrate the best search strategy using PEDro's Advanced Search. For example, during the COVID-19 pandemic one user asked, "In people experiencing post-COVID-19 syndrome, does aerobic exercise improve exercise tolerance more than watchful waiting?". The video advised that users should consider possible synonyms of each element of the question (e.g., the "fitness training" code in the therapy drop down list could be used for the intervention, aerobic exercise) and which PICO elements would be most likely to identify articles that answer the question. Once the search was performed using the Advanced Search function, users were shown where to find the full text of an article using the hyperlinks in each record. The campaign videos were made available on YouTube and Facebook and were available in English, French, and Portuguese. The full list of PICO questions is in Box 1.

During each month of the campaign, PEDro also released tips on how to use the PEDro Advanced Search. These tips addressed some of the important features and pitfalls of searching PEDro. These included [how to use wildcards](#) (i.e., truncating words and replacing letters with symbols to represent multiple versions of a word (e.g., *edema returns oedema, lymphedema or lymphoedema)), [avoiding Boolean operators](#), or [what to do if too many search results are returned](#). Two tips involved launching new versions of PEDro 'how to' videos: how to ask a clinical question in PICO format ([Tip 1](#)) and how to do a PEDro Advanced Search ([Tip 3](#)). The full list of tips is in Box 2.

Collaboration between Société Française de Physiothérapie (SFP) and PEDro

Being an international campaign, You Ask #PEDroAnswers was supported by the Australian Physiotherapy Association, Asociación Española de Fisioterapeutas, Physio Deutschland, Società Italiana Fisioterapia, and Société Française de Physiothérapie (SFP). The purpose of SFP's participation in the You Ask #PEDroAnswers campaign was to promote the use of PEDro by French-speaking students and physiotherapists who may not have been familiar with the PEDro resource. By developing the relationship between PEDro and SFP, French-speaking students and physiotherapists may benefit from access to the best high-quality research evidence available to aid clinical decision-making.

SFP and PEDro have a long history of collaboration. This has involved translating the PEDro web-site into [French](#) and, in 2010, translating and cross-culturally adapting the PEDro scale into French [5], and rating French-language trials indexed in PEDro using the PEDro scale. For the [French-version](#) of the You Ask #PEDroAnswers campaign, the SFP established a working group that translated and audio-recorded the 10 videos that demonstrated PEDro searching, and also translated the 10 tips into French. Each translation involved two SFP members, one who

performed the initial translation from English to French and another member who verified the French content and made sure that it was clearly communicated. One of the pair then recorded the audio for the French video.

Box 1

1. In older people living at home, does telephone motivational interviewing with a physiotherapist increase physical activity compared to providing written advice?
2. In stroke survivors, does mirror therapy improve upper limb function more than usual care?
3. In people with a cervical disc herniation, does computerised traction reduce pain more than exercise therapy?
4. In musicians with musculoskeletal injuries, does trigger point therapy decrease the time to return to playing an instrument compared to rest and advice?
5. In older people with urinary incontinence who live in residential aged care facilities, does pelvic floor muscle training combined with mobility training reduce episodes of incontinence compared to mobility training alone?
6. Does cooling decrease delayed onset muscle soreness following intense exercise in athletes compared to rest?
7. In people experiencing post-COVID-19 syndrome, does aerobic exercise improve exercise tolerance more than watchful waiting?
8. In people with stroke, does repetitive functional task practice improve mobility more than Bobath therapy?
9. In women with breast-cancer related lymphoedema, does adding upper limb strength training to usual care have more adverse events compared to usual care alone?
10. In children with cerebral palsy, does functional and repetitive training of sit-to-stand reduce disability more than usual care?

Box 1: PICO questions used for videos and search posts in the You Ask #PEDroAnswers campaigns

How users engaged with the You Ask #PEDroAnswers campaign

We downloaded usage metrics for the PEDro website (i.e., page views for campaign blogs and webpages using Google Analytics), videos (i.e., video views on YouTube and Facebook), and social media posts (i.e., reach and engagement for Facebook and Twitter) for each element of the You Ask #PEDroAnswers campaign. Reach is the number of users that saw a post on Facebook and Twitter, and engagements includes any action a user made on a post, including commenting/replying, sharing/retweeting, clicking on a link or liking. We merged the data for each post and their translated counterparts (i.e., English, French and Portuguese) (Figure 3) to simplify interpretation. Across the PEDro website, Facebook, Twitter and YouTube, the campaign totalled 242 posts including 6 posts launching the campaign, 102 posts about searching, and 30 videos demonstrating searches (i.e., 10 searches in English, Portuguese and French), 60 posts explaining search tips, and 8 videos related to the search tips (i.e., two tips in English, Portuguese, French and Turkish), 68 callout posts, and 6 posts which concluded the campaign.

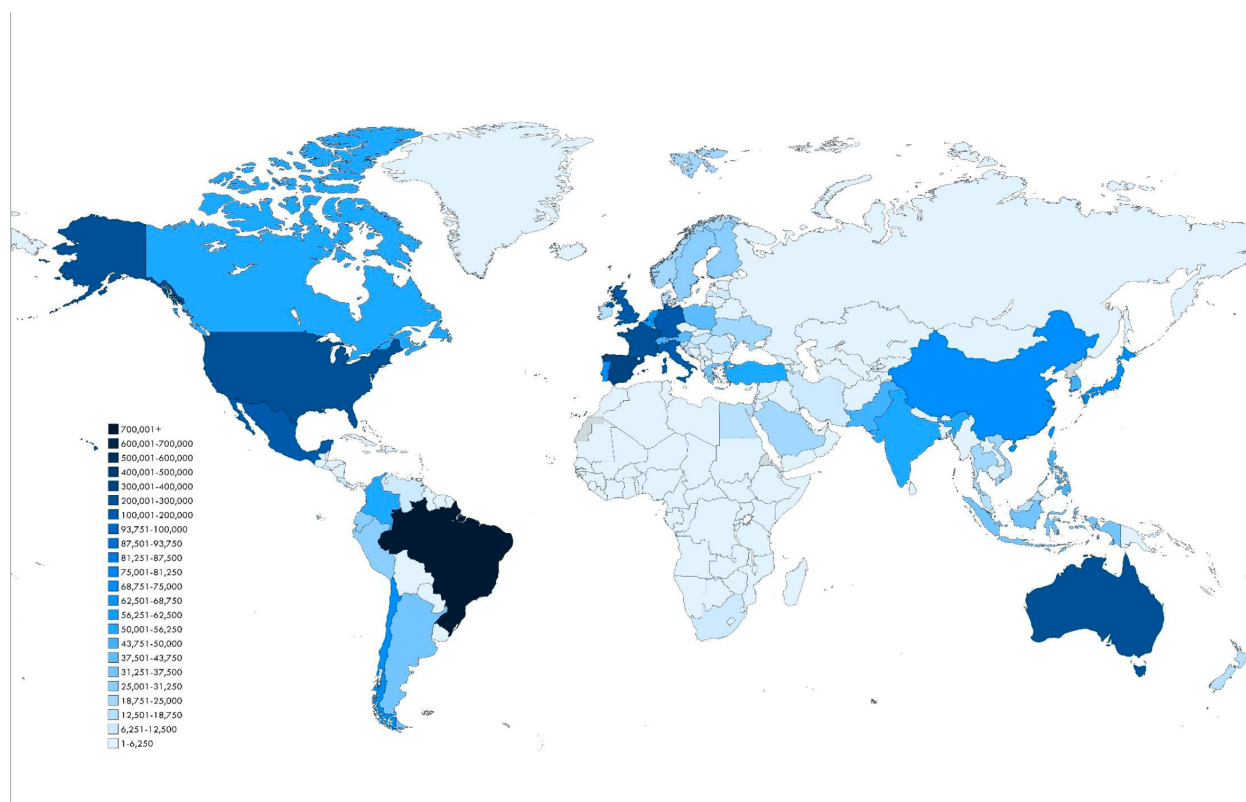


Figure 2 A heat map of PEDro searches performed in 2021 [4]

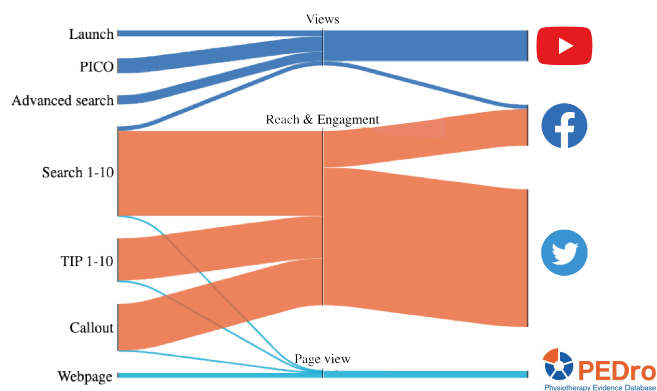


Figure 3 Flow of campaign on each platform. *Views* is shown by the blue component and represents video views on YouTube and Facebook. The orange component represents *reach and engagement* on Facebook and Twitter. *Page view* is displayed in cyan and shows the number of times a campaign-related blog or webpage was viewed on the PEDro website. The thicker the width of the flow, the higher the number of video views, reach and engagement, and page views. Users engaged more with search posts (Search 1-10) than other posts, and posts on Twitter reached more users compared to the other platforms.

PEDro blog

There were 5,674 page views for campaign blogs and webpages. The most viewed **search post** was *Search 7* (i.e., “In people experiencing post-COVID-19 syndrome, does aerobic exercise improve exercise tolerance

more than watchful waiting?”) with 126 page views. The most viewed **tip post** was *Tip 1* (i.e., “Ask a PICO question before you search”) with 639 page views. The most viewed **callout post** encouraged physiotherapists from Germany and France to submit their clinical questions to the campaign (21 page views).

Campaign videos

Videos were distributed on YouTube and Facebook, with a total of 26,400 video views. The most viewed videos for the You Ask #PEDroAnswers campaign were “How to ask a clinical question in PICO format” (11,418 views; *English, Portuguese, French and Turkish*), “How to perform an Advanced Search in PEDro” (6,949 views; *English, Portuguese, French and Turkish*), “Welcome to the ‘You Ask #PEDroAnswers’ campaign” (4,742 views; *English, Portuguese and French*), *Search 1* (i.e., “In older people living at home, does telephone motivational interviewing with a physiotherapist increase physical activity compared to providing written evidence?”; 649 views; *English, Portuguese and French*), and *Search 3* (i.e., “In people with a cervical disc herniation, does computerised traction reduce pain more than exercise therapy?”; 440 views; *English, Portuguese and French*).

PEDro social media

The campaign totalled 954 engagements and reached 29,321 users on Facebook and 1,484 engagements and 107,851 reaches on Twitter. Below we describe the search, tip, and callout posts that reached most users on Facebook and Twitter and how many users engaged with these posts. The top **search posts** according to the engagement metric on PEDro’s Facebook and Twitter pages included *Search 3* (168 engagements and reached 9,450 users), *Search 10* (i.e., “In children with cerebral palsy, does functional and repetitive training of sit-to-stand reduce disability more than usual care?”; 160 engagements and reached 6,306 users) and *Search 2* (i.e., “In stroke survivors, does mirror therapy improve upper limb function more

than usual care?"; 107 engagements and reached 6,732 users). **Search 7** had the largest reach of the search posts (10,032 users, 106 engagements). This may be because Search 7 was related to COVID-19 which was a trending topic on social media during the pandemic.

The **tip posts** that users were most engaged with included **Tip 1** (153 engagements and reached 5,860 users), **Tip 3** (i.e., "Use the PEDro Advanced Search (not Simple)"; 86 engagements and reached 2,718 users) and **Tip 9** (i.e., "Screen titles first, then look at abstracts"; 54 engagements and reached 3,611 users).

The top **callout posts** included encouraging users to submit questions related to gerontology, neurology and neurotrauma (115 engagements and reached 6,400 users). This may have occurred because relevant organisations including the *International Neurological Physical Therapy Association* and the *International Association of Physiotherapists working with Older People* (subgroups of *World Physiotherapy*) were tagged in and subsequently engaged with the post. The second most engaged and reached callout post was calling on physiotherapy students to submit questions to the campaign (67 engagements and reached 4,536 users). The third most engaged and reached callout post was asking users to submit questions related to women's health and continence, which occurred during *World Continence Week* (49 engagements and reached 4,671 users).

Box 2

1. Ask a PICO question before you search
2. Don't enter search terms for each element of the PICO question
3. Use the PEDro Advanced Search (not Simple)
4. Use wildcards (truncation)
5. Use phrase searching
6. Don't use Boolean operators
7. If you get too many search results...
8. If you get too few search results...
9. Screen titles first, then look at abstracts
10. Access full text using links in PEDro

Box 2: Tips used in posts in the *You Ask #PEDroAnswers* campaign

Other PEDro resources

PEDro continues to develop resources to help physiotherapists stay abreast of the latest, high-quality research. To celebrate PEDro's 20th anniversary in 2019, users were asked to identify the 5 most influential trials published between 2014 and 2019. A panel of physiotherapy trialists judged these nominations. The 5 trials were combined with the 15 trials from the 15th anniversary in 2014 to form the **PEDro Top 20 Trials**. These trials represent the most ground-breaking and paradigm-shifting contributions to the profession of physiotherapy, the earliest trial being published in 1958! A series of YouTube videos were developed to summarise the research from each of these trials. A recent editorial suggested that these best physiotherapy trials were not only those that had rigorous methodologies, high participant follow-up rates, were prospectively registered, had moderate to high sample sizes, and were multi-site, but they also asked questions challenging the status-quo and had important implications to practice [6]. In 2020, PEDro began producing journal clubs to assist physiotherapists to translate research into practice. Each journal club

includes of a diverse discussion panel of individuals including researchers, clinicians, and patients who consider the clinical implications of a recently published article. In the 3 months following the first videos of the World-Wide Journal Club, 3,000 physiotherapists visited the website and videos were viewed 757 times. PEDro has also been releasing monthly infographics and summaries of systematic reviews across each of PEDro's communication platforms. The infographics contain a very short summary of the research and findings pertinent to clinical practice. Finally, PEDro offers a free monthly email subscription service called Evidence in your inbox. This service helps physiotherapists keep up to date with the latest research in their area of practice. Users can choose to receive emails about the latest updates in clinical practice guidelines, systematic reviews, and randomised controlled trials in 15 areas of physiotherapy research. Subscription is free.

Conclusion

Evidence-based practice enables optimal patient care through effortful and deliberate application of research. A skill that is fundamental to the practice of evidence-based physiotherapy is searching for high-quality research to answer clinical questions. The You Ask #PEDroAnswers campaign, a collaboration between PEDro and the SFP in 2021, was created to promote searching skills among physiotherapists around the world. The campaign demonstrated searching PEDro using clinical questions submitted by physiotherapists from around the world. Step-by-step videos on running a search to answer these questions plus blogs and videos describing searching tips were produced for the campaign. Most importantly, to enable greater reach and global impact, the resources for the campaign were developed in English, French, Portuguese, and Turkish. PEDro continues to collaborate with the SFP and other physiotherapy organisations to develop resources to enable greater access to research evidence by physiotherapists.

Disclosure of interest

Courtney Anne West is employed by PEDro. Matthieu Guemann is president of the French Physiotherapy Society who contributed to the content of the You Ask #PEDroAnswers campaign.

Ethics

As this article is an article-based commentary, no ethical approval was required.

Data availability

As this article is an article-based commentary, no data has been used.

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