Research issues in PRM,
from the past to the future


Syracuse

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& European Society of Physical and Rehabilitation Medicine

ISPRM Herman J. Flax Lifetime Achievement Award 2021

E. M. R. S. S.

20° Euro-Mediterranean
PRM School 'Haim Ring' - 2025

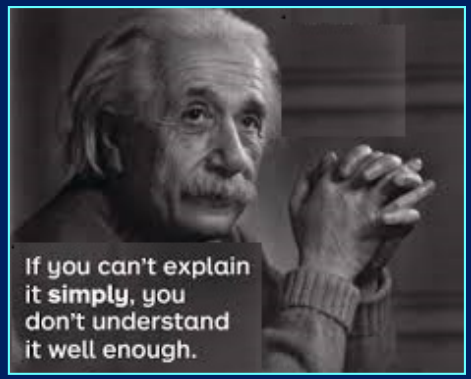
Lecture outline

FIRST PART

1. What is the Scientific Research
2. The role of the research in clinical practice
3. The role of the research in professional life
4. Factors influencing clinical research

SECOND PART

1. Research and scientific writing
2. Tools for research
3. Key issues to consider before starting a research



THIRD PART

1. What's new, what's next (publishing companies, published papers per year, article turnaround times)
2. The vicious circle & hot issues

FOURTH PART

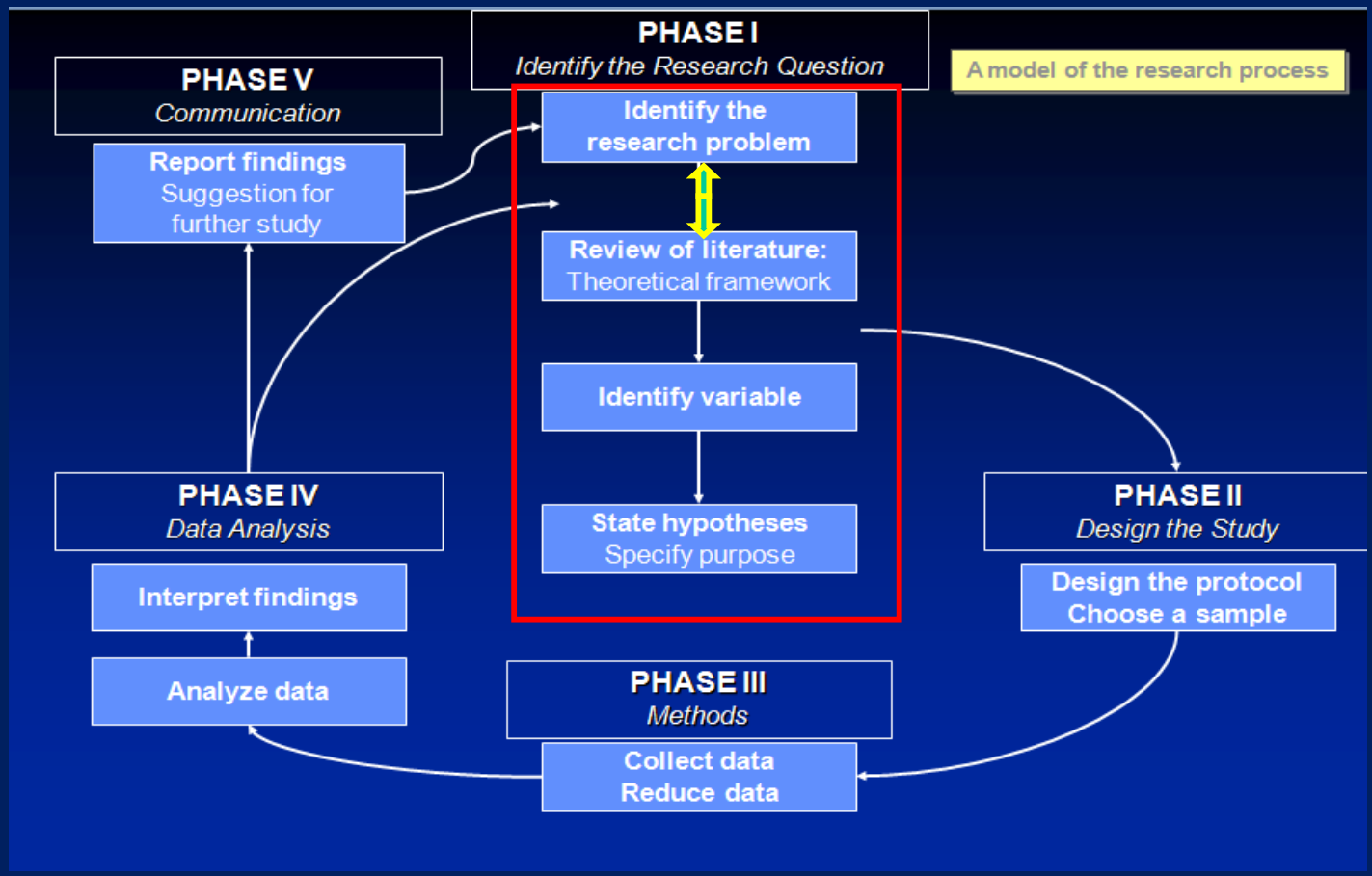
Take home messages

PART I

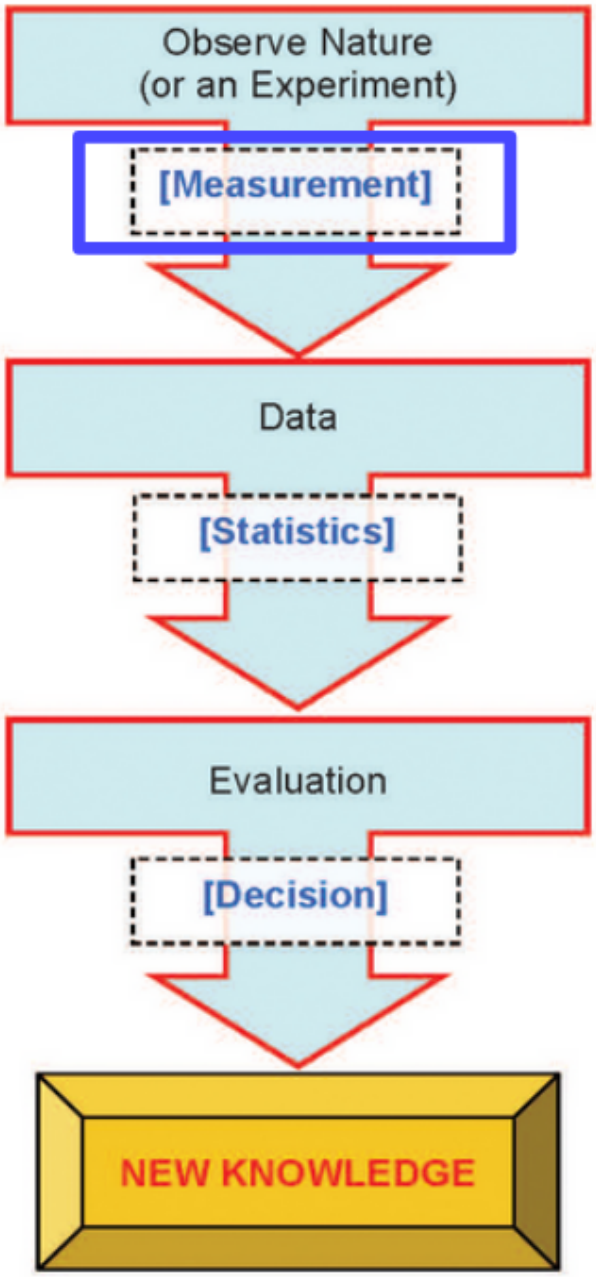
I/1 - What is the Scientific Research

Scientific research is a systematic and empirical investigation of phenomena of interest, involving observation, experimentation, and analysis to generate new knowledge, validate existing theories, or develop new technologies.

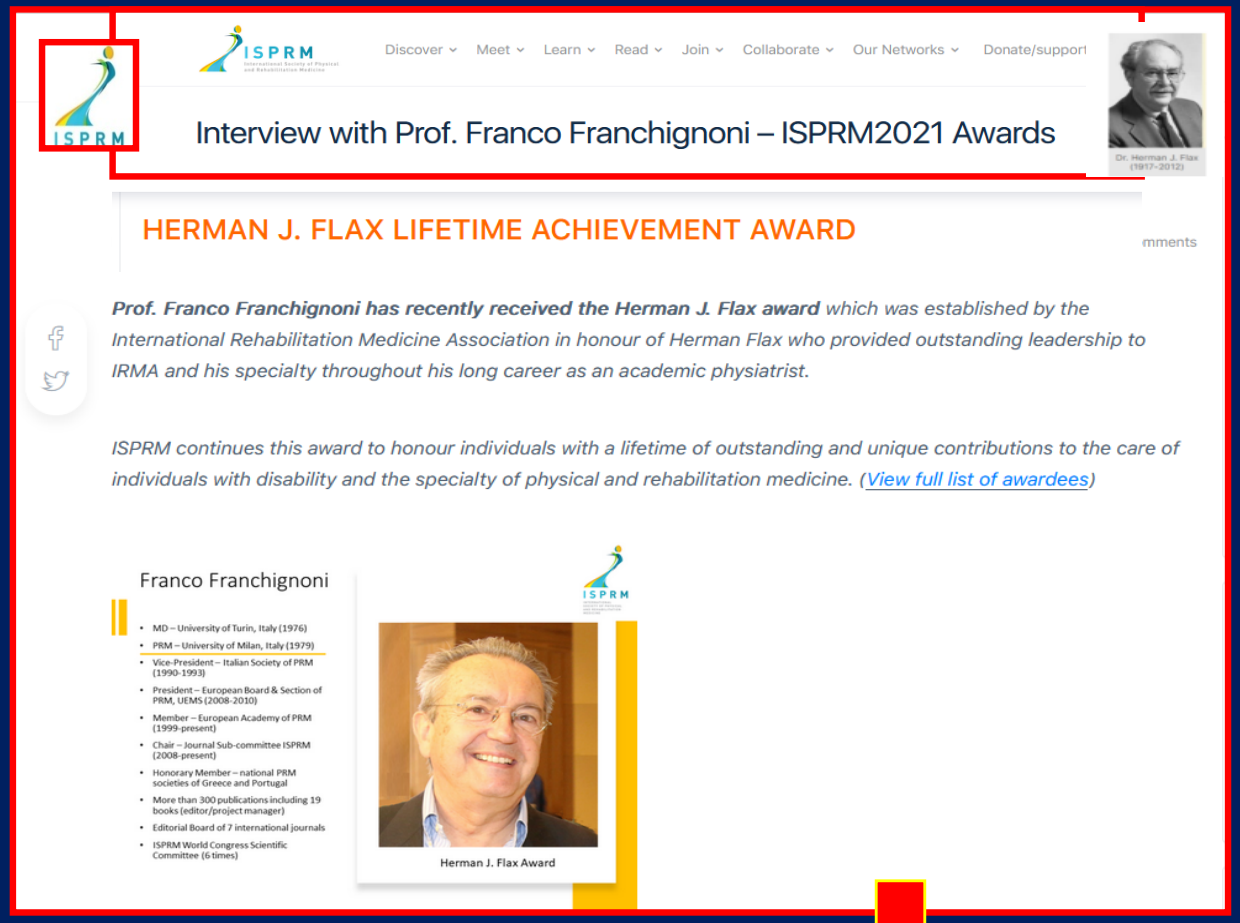
It's a dynamic process of inquiry that utilizes the scientific method to explore and understand the natural world, **also taking into account legal, social and professional considerations.**



I/2 - The role of the research in clinical practice



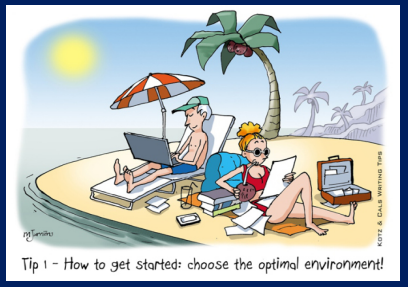
I/3 - The role of the research in professional life



"… a professional career can be compared with a Regency armchair (XVIII century) with four legs connected with a shaped X-form stretcher".

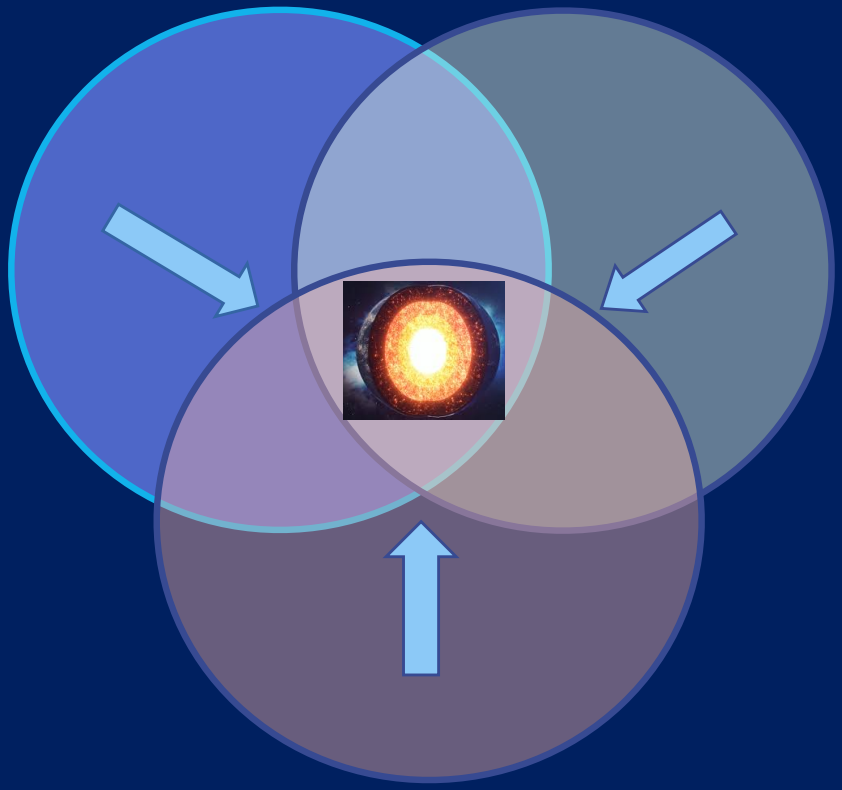
They are your clinical, research, educational & academic, and editorial activities in PRM field.

I/4 - Factors influencing clinical research



Personal factors

Ambition, talent, passion, motivation…



Environmental factors

Facility, patients, funding…

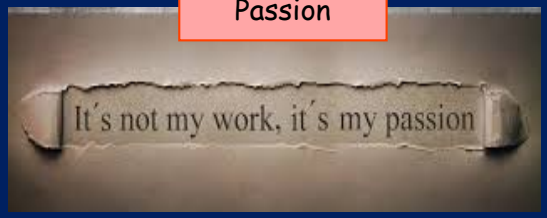
Intermediate (core) factors

Mentor, research group, available time, resources, **methodology**

Curiosity & interests

Enthusiasm

Passion



Personal factors

(basic)

Talent

Resilience

Willingness

Ambition

Mentor

Environmental & intermediate factors

Team work

Facility, labs, patients, funding ..

Mind and spirit have no limits

The most important factors

The cardinal (moral) virtues

Prudence = Wisdom

Justice = Fairness

Courage = Fortitude

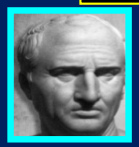
Temperance = Self control

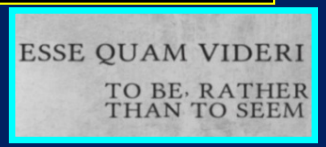
Commitment

Reliability

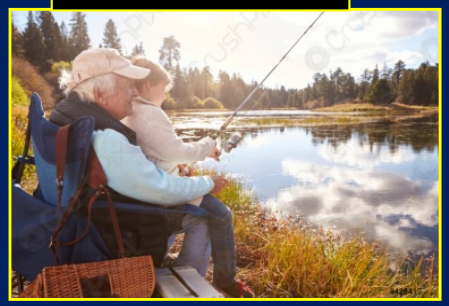
Pursuit of Quality

Ethical conduct





Methodology



PART II

II/1 - Research and scientific writing

Scientific writing is a communication of research results to an intended audience and in an unbiased manner.

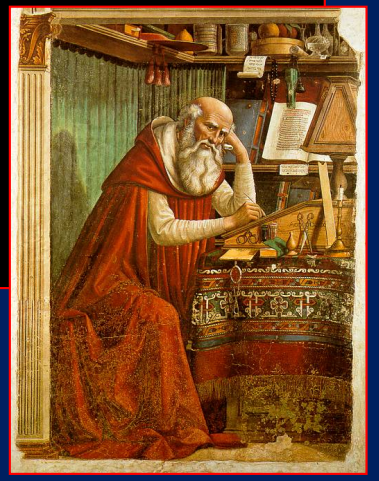
Three main reasons to care about writing research skills:

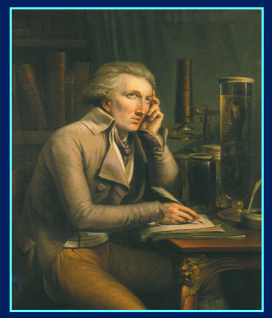
1. Scientific writing is an invaluable mental discipline, that enhances clear thinking. People who don't submit their work for peer review do very poor work (research is not been completed until the results have been published);

2. Making a subject intelligible to others means that you understand and remember it better;

3. If you don't publish it, you haven't done it
(In science, "the credit goes to the man who convinces the world…").

*"Reading makes a full man, conference a ready man, and **writing an exact man**" (Sir Francis Bacon)*





WRITING IS AN **ART** (a skill at doing a specific thing, typically one acquired through **PRACTICE, EFFORT,** and **DISCIPLINE**)

SCIENTIFIC WRITING IS CLOSE TO BEING A **SCIENCE**, BECAUSE IT REQUIRES **KNOWLEDGE and SKILLS**,

to produce well-structured documents that present information clearly and concisely.

One of the natural by-products of learning scientific writing skills is the **ability to critically read, understand and memorise the scientific literature.**

Moreover, **the more you know about "how to write", the faster and more effectively you read and learn science.**

Scientific writing is:

1. Communication of knowledge (research results).

2. A two-way process (need to be understood → clarity everywhere: clearly stated problem, methods, discussion, etc.).

3. Best style (not literature, nor poetry; completeness with conciseness: same sense but in the fewest possible words).

When you write a paper, please mind your goal:

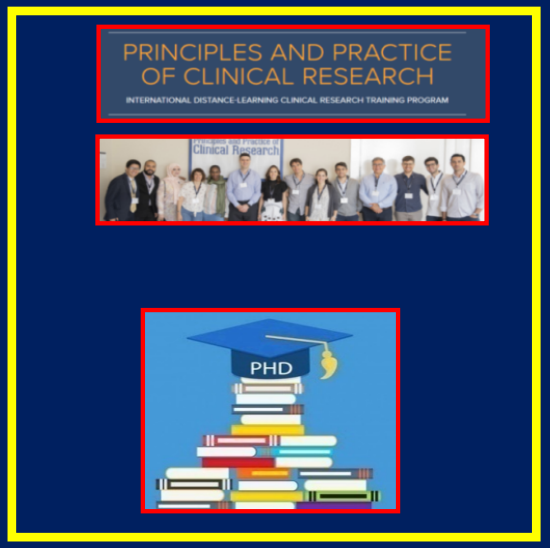
a. Study design must be appropriate for answering the **research question**;

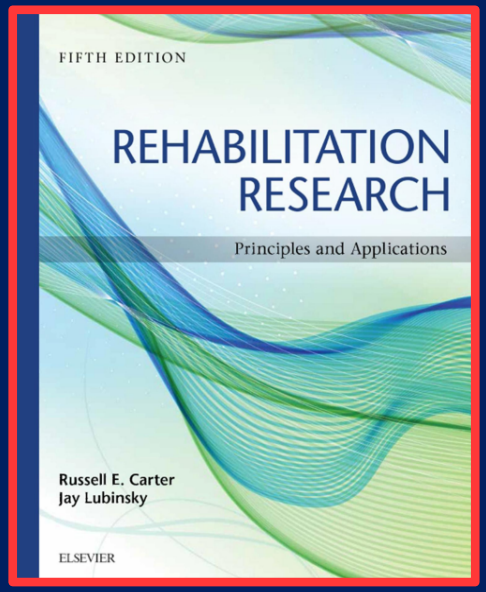
b. Results should focus on answering that question;

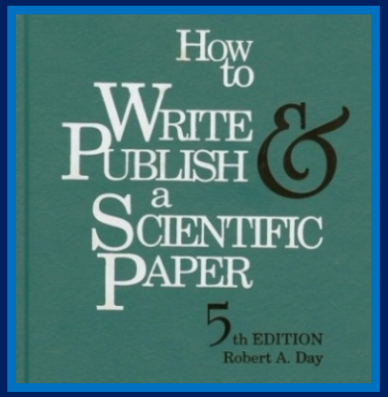
c. Discussion and conclusion must be relevant to the research question.

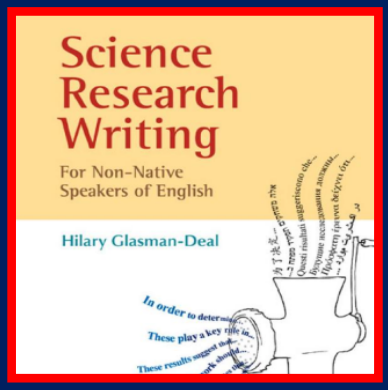
Violin Sonata

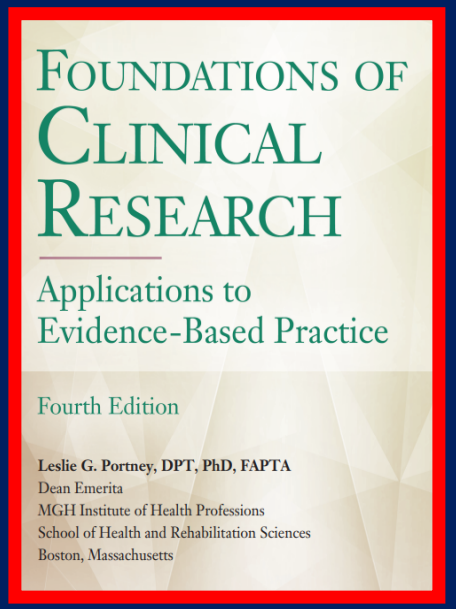
II/2 - Tools for research











PubMed

Cochrane
Rehabilitation, Functioning, and Disability

Clarivate
Web of Science™

Amedeo
The Medical Literature Guide

Google Scholar

PEDro
Physiotherapy Evidence Database

ELSEVIER
Scopus

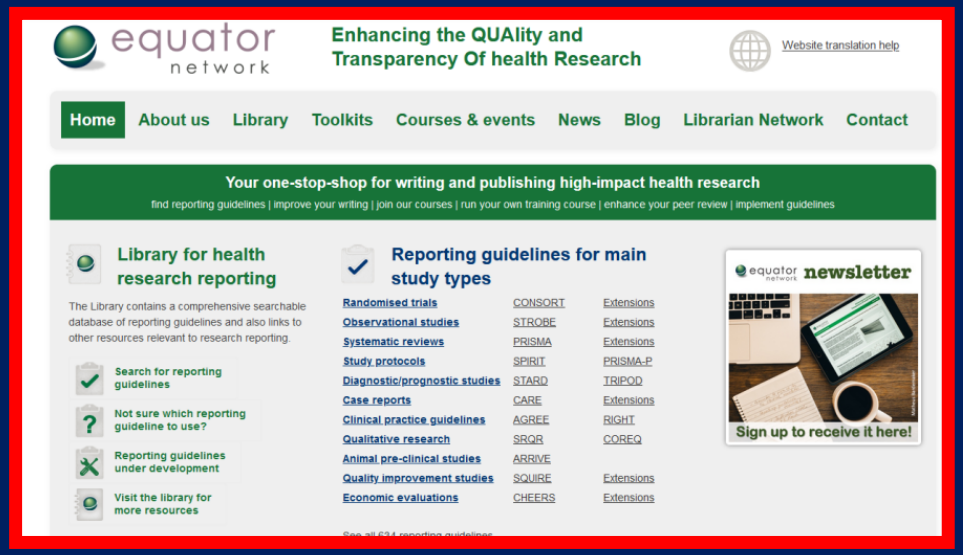
AMA MANUAL OF STYLE

Web resources

ICMJE INTERNATIONAL COMMITTEE of MEDICAL JOURNAL EDITORS

Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals

Updated April 2025



II/3 – Key issues to consider before starting a research

A. Originality → Research question

B. The study protocol

C. The reporting guidelines

D. Choosing the "right" journal

E. Take care of the layout (Instruction for authors) & English style

II/3A – Originality, identify knowledge gap and formulate the research question

The research question represents the core of the paper. Bear in mind that the 'research story' you will tell must be:

- Feasible (adequate/ affordable/ manageable) F
- Interesting (new understanding) I
- Novel (confirms/ refutes/ extends/ provides…) N
- Ethical E
- Relevant (to scientific knowledge, clinical & health policy, future research, etc.) R

When defining the question/ aim /hypothesis it is useful to think in terms of "**PICO model**":

P — **P = Patient, Problem, Population** (How would you describe a group of patients similar to you? What are the most important characteristics of the patients?)

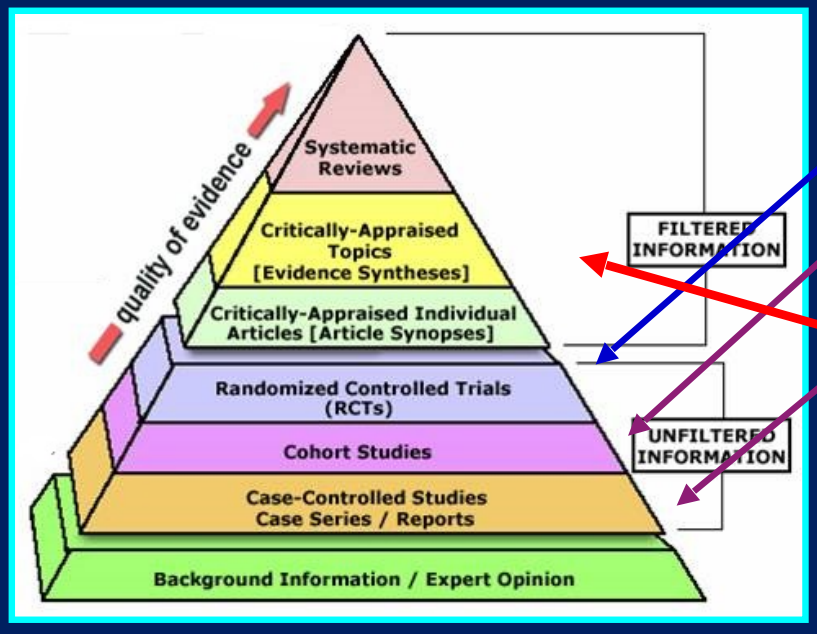
I — **I = Intervention, Prognostic Factor, Exposure** (What main intervention are you considering? What do you want to do with this patient? What is the main alternative being considered?)

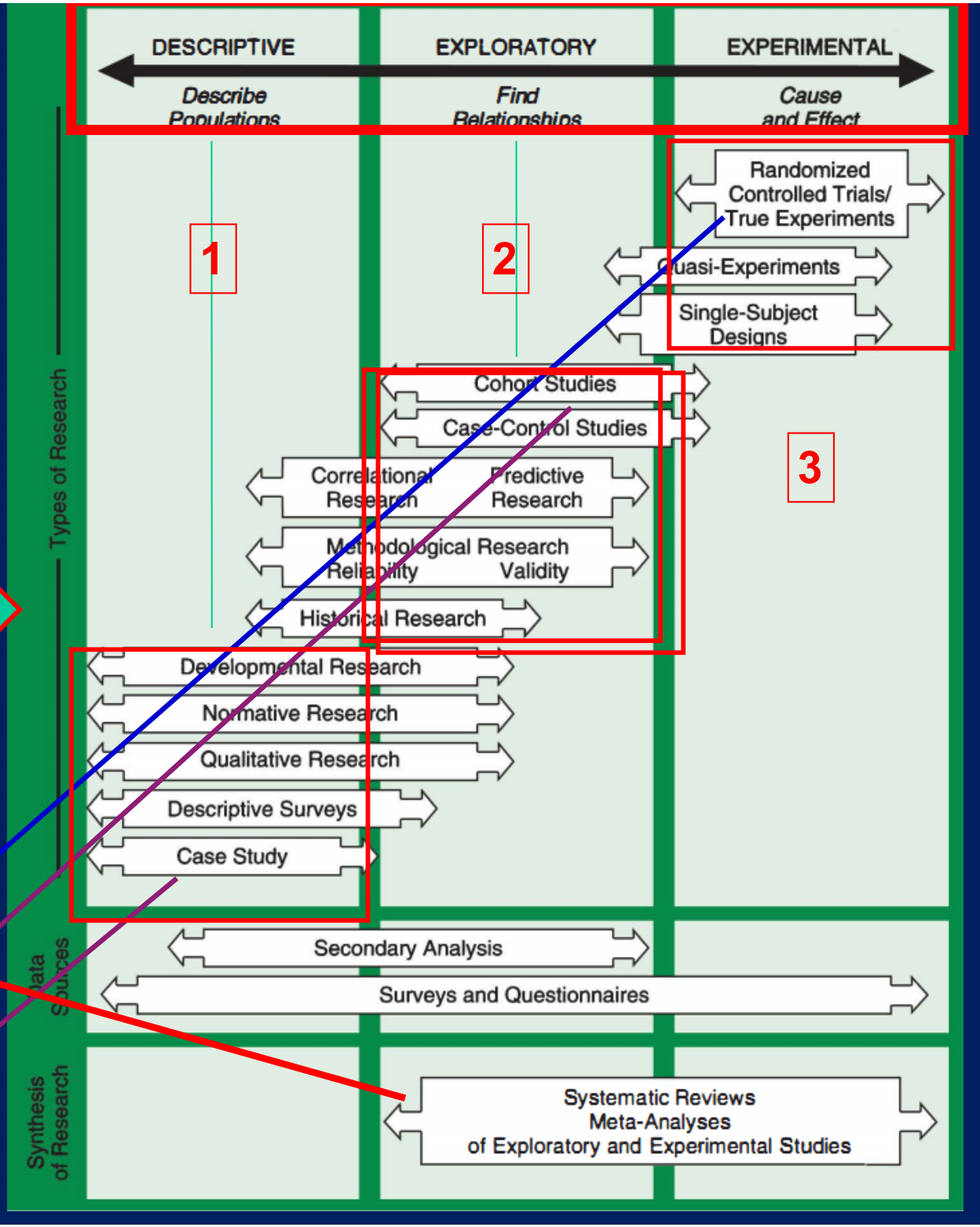
C — **C = Comparison (Can be none or placebo.)** (What is the main alternative to compare with the intervention? Are you trying to decide between two drugs, a drug and no medication or placebo, or two diagnostic tests?)

O — **O= Outcome** (What are you trying to accomplish, measure, improve or affect? Outcomes may be disease-oriented or patient-oriented? **T**ime frame?).

TYPE OF QUESTION
Etiology
Prognosis
Diagnosis
Therapy

For each question a research design





Search for existing information (literature review)

Web of Science

Web of Science will undergo scheduled maintenance from November 13, 2019 at 11:00 GMT to November 1
During this time, access may be intermittent. We apologize for any inconvenience.

Select a database: Web of Science Core Collection

Basic Search | Author Search BETA | Cited Reference Search | Advanced Search

Scopus

Document search

Documents | Authors

Cochrane Rehabilitation

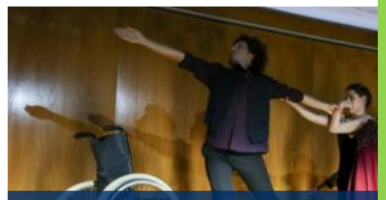
English | Español | Françai

Trusted evidence.
Informed decisions.
Better health.

About us | Evidence | Resources | News & Eve

Tweets by @CochraneRehab

@CochraneReha
@CochraneReha
An #CochraneRehabilitation interactive session at #MCPRM19



Cochrane Rehabilitation Newsletter Special Issue| October 2019

PEDro

Physiotherapy Evidence Database

Advanced search
Simple search
Consumer search

English
- PEDro Top 5 Trials 2014-2019
- Frequently asked questions

Welcome to PEDro

PEDro is the Physiotherapy Evidence Database, a free database of over
trials, systematic reviews and clinical practice guidelines in physiotherapy
review or guideline, PEDro provides the citation details, the abstract and
where possible. All trials on PEDro are independently assessed for quali
ratings are used to quickly guide users to trials that are more likely to be
sufficient information to guide clinical practice. PEDro is produced by the
Musculoskeletal Health, School of Public Health at the University of Sydn
Neuroscience Research Australia (NeuRA).

NIH U.S. National Library of Medicine

PRODUCTS AND SERVICES | RESOURCES FOR YOU

PubMed Tutorial

Home > Learning Resources > PubMed Online Training

- Introduction
  - PubMed Overview
  - What's in PubMed?
  - Navigating PubMed
  - Quiz
- Understanding the Vocabulary
- Building the Search
- Managing the Results
- Saving the Search
- Getting the Articles
- Beyond PubMed
- My NCBI
- Review

PubMed Tutorial

Note: A new PubMed, being developed at PubMed Labs
Technical Bulletin for details.

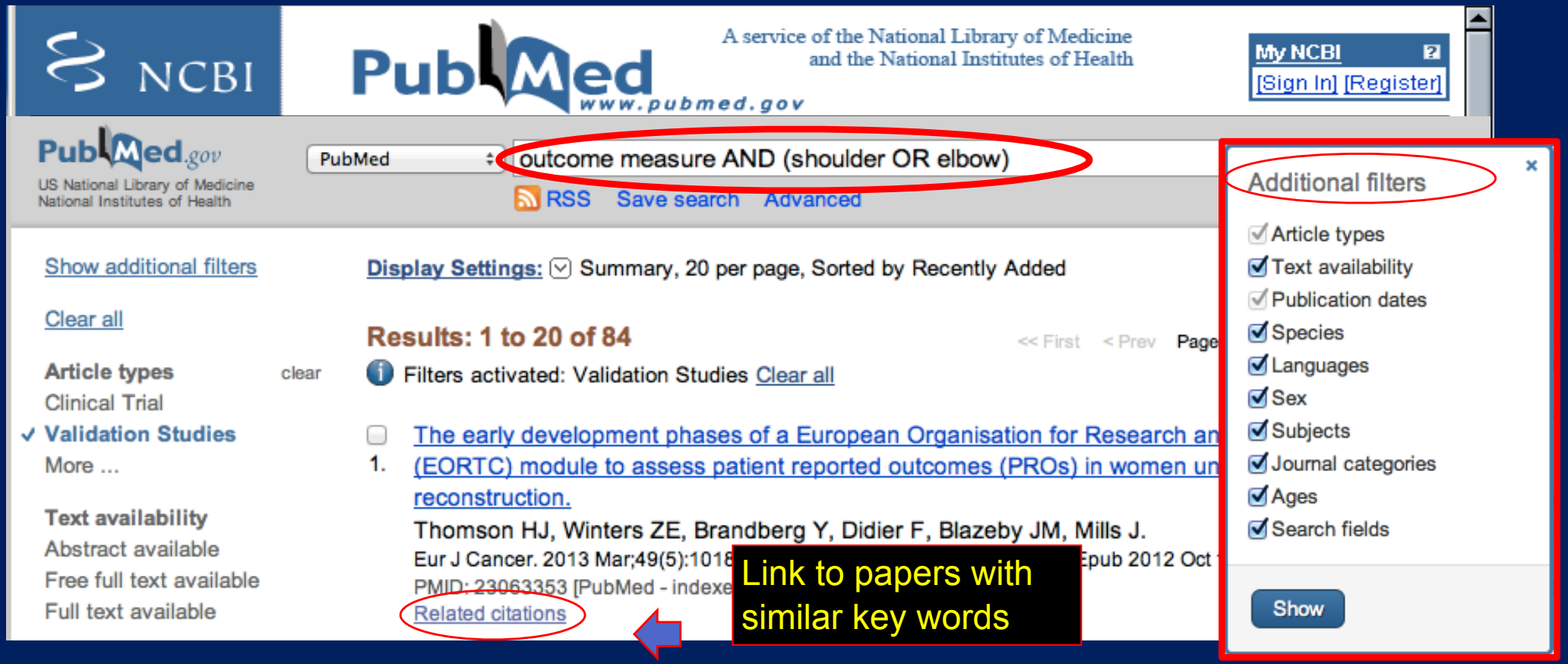
Introduction

PubMed is a free resource that provides access to MEDLI
the fields of medicine, nursing, dentistry, veterinary medic

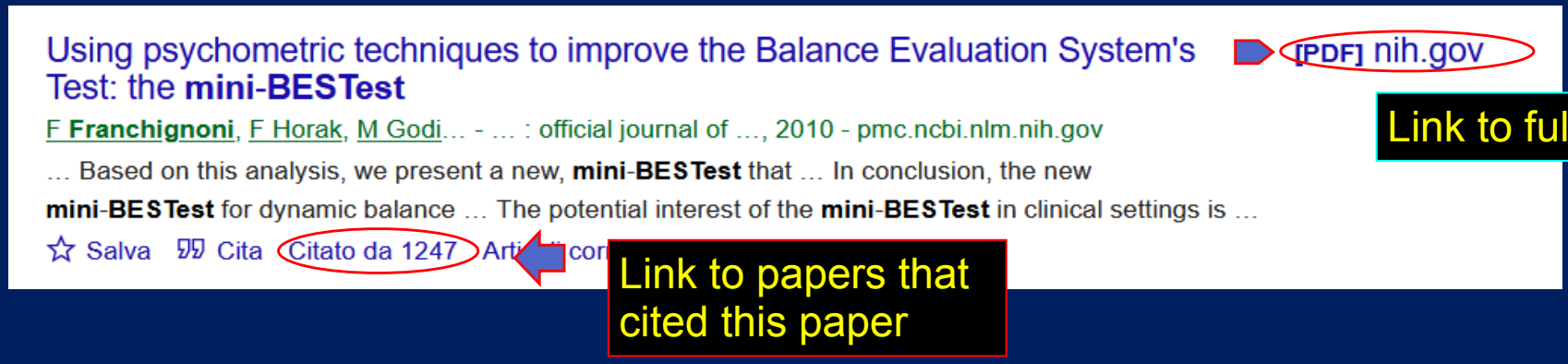
Goals and Objectives

By the end of this course, you should be able to:

- Understand PubMed's scope and content.
- Understand how the Medical Subject Headings (MeSH

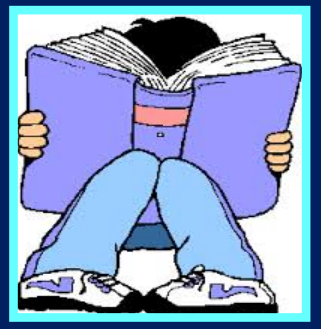

NCBI
PubMed
www.pubmed.gov
A service of the National Library of Medicine and the National Institutes of Health
My NCBI
[Sign In] [Register]
PubMed.gov
US National Library of Medicine
National Institutes of Health
PubMed
outcome measure AND (shoulder OR elbow)
RSS
Save search
Advanced
Show additional filters
Clear all
Article types
clear
Clinical Trial
Validation Studies
More ...
Text availability
Abstract available
Free full text available
Full text available
Display Settings: Summary, 20 per page, Sorted by Recently Added
Results: 1 to 20 of 84
<< First
< Prev
Page
Filters activated: Validation Studies Clear all
1.
The early development phases of a European Organisation for Research an
(EORTC) module to assess patient reported outcomes (PROs) in women un
reconstruction.
Thomson HJ, Winters ZE, Brandberg Y, Didier F, Blazeby JM, Mills J.
Eur J Cancer. 2013 Mar;49(5):1018
Epub 2012 Oct
PMID: 23063353 [PubMed - indexe
Related citations
Link to papers with similar key words
Additional filters
Article types
Text availability
Publication dates
Species
Languages
Sex
Subjects
Journal categories
Ages
Search fields
Show


Google
Scholar


Using psychometric techniques to improve the Balance Evaluation System's Test: the mini-BESTest
[PDF] nih.gov
Link to full-text
F Franchignoni, F Horak, M Godi... - ... : official journal of ..., 2010 - pmc.ncbi.nlm.nih.gov
... Based on this analysis, we present a new, mini-BESTest that ... In conclusion, the new mini-BESTest for dynamic balance ... The potential interest of the mini-BESTest in clinical settings is ...
Salva
Cita
Citato da 1247
Link to papers that cited this paper

Amedeo
The Medical Literature Guide

www.amedeo.com



1. Your Amedeo Subscriptions

– Rehabilitation Medicine

2. Modify the journal selection

Select a subscription and click *Modify Journal*

Subscription:

Rehabilitation Medicine

Modify Journal Selection

3. Free subscription to additional Amedeo

Click *Additional Newsletters*.

Additional Newsletter

Stay up-to-date on your research topics

1. ☐ Am Fam Physician
2. ☑ Am J Phys Med Rehabil
3. ☐ Am J Psychiatry
4. ☐ Am J Public Health
5. ☐ Am J Sports Med
6. ☑ Arch Phys Med Rehabil
7. ☑ BMJ
8. ☐ Br J Gen Pract
9. ☐ Brain Inj
10. ☑ Clin Rehabil
11. ☑ Disabil Rehabil
12. ☑ Eur J Phys Rehabil Med
13. ☐ Heart Dis
14. ☐ Int J Geriatr Psychiatry
15. ☐ J Am Acad Dermatol
16. ☐ J Am Geriatr Soc
17. ☐ J Bone Joint Surg Br
18. ☐ J Burn Care Rehabil
19. ☐ J Cardiopulm Rehabil
20. ☑ J Neurol
21. ☐ J Occup Rehabil
22. ☑ J Rehabil Med
23. ☑ JAMA
24. ☑ Lancet
25. ☐ Pediatr Rehabil
26. ☐ Phys Occup Ther Pediatr
27. ☑ Phys Ther

14. Men's Health
15. Dermatology
16. Ophthalmology
17. Otorhinolaryngology
18. Surgery
19. Dentistry
20. Emergency Medicine
21. Intensive Care
22. **Rehabilitation Medicine**
23. Diagnostic Procedures
24. Nutrition
25. Substance Abuse
26. Others Metabolism

Your Amedeo Recommendation Code

Share it with your colleagues and students to help them stay updated:

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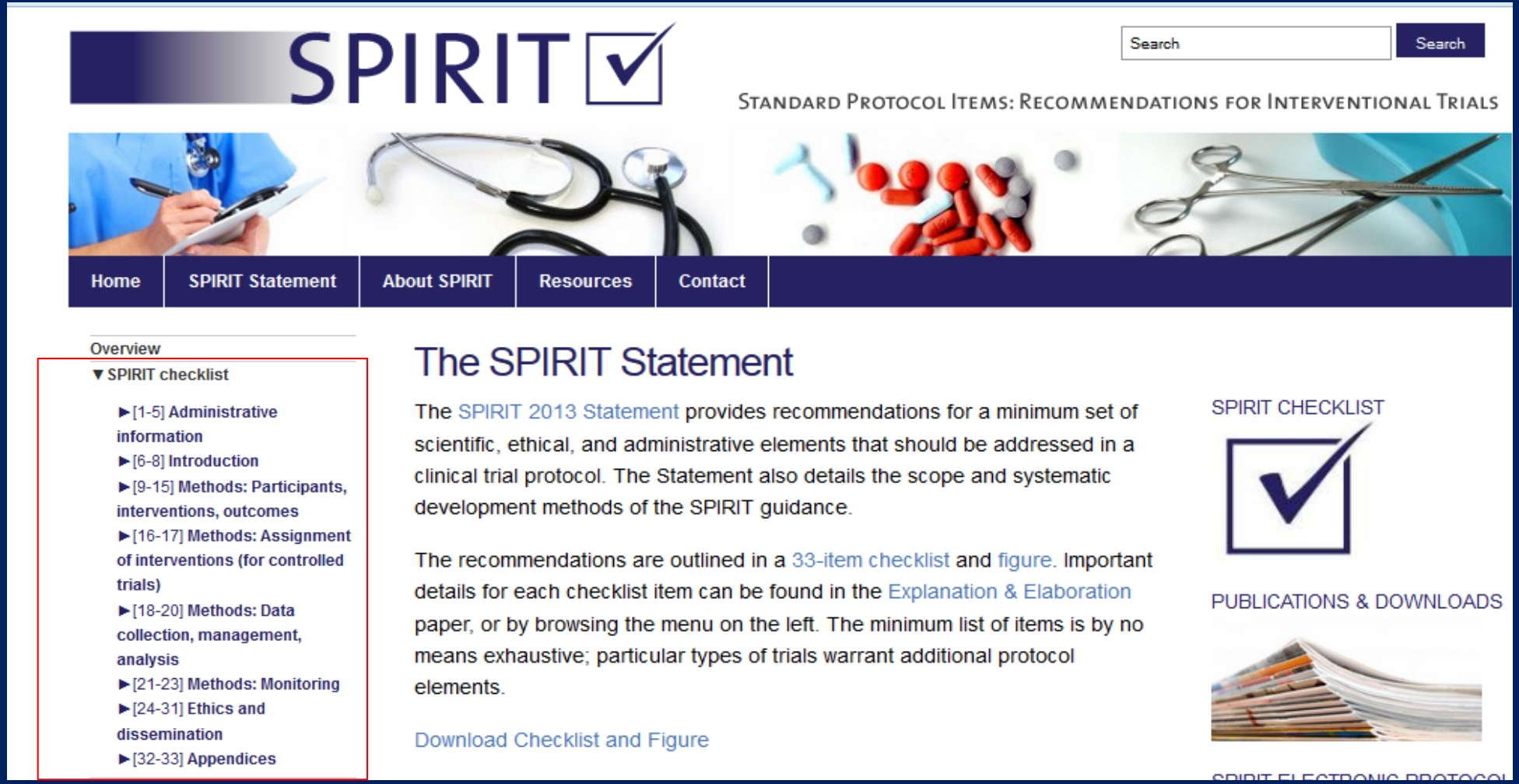
II/3B - The study protocol



The protocol of a clinical trial serves as the foundation for study planning, conduct, reporting and appraisal.

The 33-item SPIRIT checklist applies to protocols for all clinical trial, and focuses on content (rather than format).

SPIRIT 2013 Statement: Defining Standard Protocol Items for Clinical Trials

SPIRIT 2025 checklist of items to address in a randomized trial protocol*

Section / Topic	No	SPIRIT 2025 checklist item description	Reported on page no.
Administrative information			
Title and structured summary	1a	Title stating the trial design, population, and interventions, with identification as a protocol	
	1b	Structured summary of trial design and methods, including items from the World Health Organization Trial Registration Data Set	
Protocol version	2	Version date and identifier	
Roles and responsibilities	3a	Names, affiliations, and roles of protocol contributors	
	3b	Name and contact information for the trial sponsor	
	3c	Role of trial sponsor and funders in design, conduct, analysis, and reporting of trial; including any authority over these activities	
	3d	Composition, roles, and responsibilities of the coordinating site, steering committee, endpoint adjudication committee, data management team, and other individuals or groups overseeing the trial, if applicable	
Open science			
Trial registration	4	Name of trial registry, identifying number (with URL), and date of registration. If not yet registered, name of intended registry	
Protocol and statistical analysis plan	5	Where the trial protocol and statistical analysis plan can be accessed	
Data sharing	6	Where and how the individual de-identified participant data (including data dictionary), statistical code, and any other materials will be accessible	
Funding and conflicts of interest	7a	Sources of funding and other support (e.g., supply of drugs)	
	7b	Financial and other conflicts of interest for principal investigators and steering committee members	
Dissemination policy	8	Plans to communicate trial results to participants, healthcare professionals, the public, and other relevant groups (e.g., reporting in trial registry, plain language summary, publication)	
Introduction			
Background and rationale	9a	Scientific background and rationale, including summary of relevant studies (published and unpublished) examining benefits and harms for each intervention	
	9b	Explanation for choice of comparator	
Objectives	10	Specific objectives related to benefits and harms	
Methods: Patient and public involvement, trial design			
Patient and public involvement	11	Details of, or plans for, patient or public involvement in the design, conduct, and reporting of the trial	
Trial design	12	Description of trial design including type of trial (e.g., parallel group, crossover), allocation ratio, and framework (e.g., superiority, equivalence, non-inferiority, exploratory)	

The number and order of authors should be discussed and agreed upon as early as possible

ICMJE INTERNATIONAL COMMITTEE of MEDICAL JOURNAL EDITORS

The **ICMJE** (http://www.icmje.org) recommends that authorship be based on the following 4 criteria:

- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work (no ghost/ guest/ gift authorships!);
- Drafting the work or revising it critically for important intellectual content;
- Final approval of the version to be published;
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

SUBMIT STUDIES

Why Should I Register and Submit Results?
FDAAA 801 Requirements
How to Apply for an Account
How to Register Your Study
How to Edit Your Study Record
How to Submit Your Results
Frequently Asked Questions
Support Materials
Training Materials

Related Pages
- Protocol Registration and Results System (PRS)

Do you or someone you know want to participate in a clinical study? See information fo and families.

How to Register Your Study

Contents

WHO (ICMJE) – ClinicalTrials.gov Cross Reference

WHO Trial Registration Data Set (v 1.2.1)[1]	ClinicalTrials.gov Data Element(s)[2]
1. Primary Registry and Trial Identifying Number	ClinicalTrials.gov Identifier (NCT Number) - *assigned by system*
2. Date of Registration in Primary Registry	*Generated by system*
3. Secondary Identifying Numbers	Organization's Unique Protocol ID Secondary IDs
4. Source(s) of Monetary or Material Support	Sponsor, Collaborators
5. Primary Sponsor	Sponsor
6. Secondary Sponsor(s)	Collaborators
7. Contact for Public Queries	Facility Contact OR Central Contact
8. Contact for Scientific Queries	Overall Study Officials
9. Public Title	Brief Title

- See the Protocol Data Element Definitions for descriptions and examples of the information to

II/3C - The reporting guidelines

ti Aiuto

vork | Enha...

Cerca

equator network

Enhancing the QUAlity and Transparency Of health Research

EQUATOR resources in Portuguese | Spanish

Home | Library | Toolkits | Courses & events | News | Blog | About us | Contact

Essential resources for writing and publishing health research

Library for health research reporting

The Library contains a comprehensive searchable database of reporting guidelines and also links to other resources relevant to research reporting.

- Search for reporting guidelines
- Not sure which reporting guideline to use?
- Reporting guidelines under development
- Visit the library for more resources

Reporting guidelines for main study types

Randomised trials	CONSORT	Extensions
Observational studies	STROBE	Extensions
Systematic reviews	PRISMA	Extensions
Study protocols	SPIRIT	PRISMA-P
Diagnostic/prognostic studies	STARD	TRIPOD
Case reports	CARE	Extensions
Clinical practice guidelines	AGREE	RIGHT
Qualitative research	SRQR	COREQ
Animal pre-clinical studies	ARRIVE	
Quality improvement studies	SQUIRE	Extensions
Economic evaluations	CHEERS	Extensions

See all 685 reporting guidelines

New book edited by the EQUATOR team Guidelines for Reporting Health Research: a User's Manual

thebmj

CrossMark

BMJ 2014;348:g1687 doi: 10.1136/bmj.g1687 (Published 7 March 2014)

RESEARCH METHODS & REPORTING

Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide

The **intervention description** has key features (e.g. duration, dose or intensity, mode of delivery, essential processes, and monitoring) that can all influence **replicability** and **efficacy.**

The 12-item TIDieR checklist is an extension of the CONSORT 2010 statement (item 5) and the SPIRIT 2013 statement (item 11).

TIDieR
Template for Intervention Description and Replication

The TIDieR (Template for Intervention Description and Replication) Checklist*:

Information to include when describing an intervention and the location of the information

Item number	Item	Where located **	
		Primary paper (page or appendix number)	Other † (details)
	BRIEF NAME		
1.	Provide the name or a phrase that describes the intervention.		
	WHY		
2.	Describe any rationale, theory, or goal of the elements essential to the intervention.		
	WHAT		
3.	Materials: Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training of intervention providers. Provide information on where the materials can be accessed (e.g. online appendix, URL).		
4.	Procedures: Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities.		
	WHO PROVIDED		
5.	For each category of intervention provider (e.g. psychologist, nursing assistant), describe their expertise, background and any specific training given.		
	HOW		
6.	Describe the modes of delivery (e.g. face-to-face or by some other mechanism, such as internet or telephone) of the intervention and whether it was provided individually or in a group.		
	WHERE		
7.	Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features.		
	WHEN and HOW MUCH		
8.	Describe the number of times the i the number of sessions, their sche		
	TAILORING		
9.	If the intervention was planned to b when, and how.		
	MODIFICATIONS		
10.‡	If the intervention was modified du when, and how).		
	HOW WELL		
11.	Planned: If intervention adherence strategies were used to maintain o		
12.‡	Actual: If intervention adherence o intervention was delivered as plan		

Strengthening the reporting of observational studies in epidemiology (STROBE) statement: guidelines for reporting observational studies

Poor reporting of research hampers assessment and makes it less useful. An international group of methodologists, researchers, and journal editors sets out guidelines to improve reports of observational studies

STROBE Statement—checklist of items that should be included in reports of observational studies

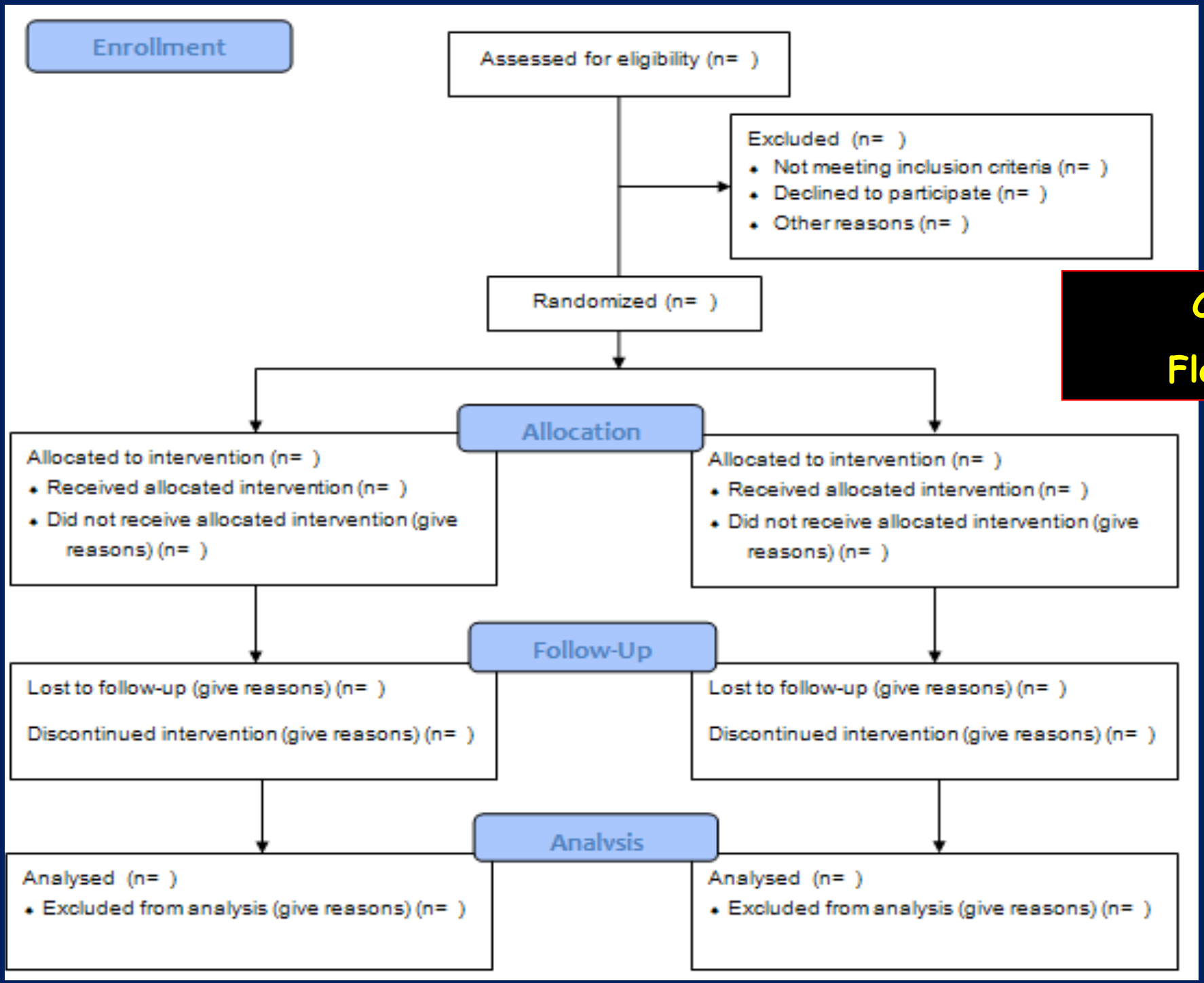
	Item No	Recommendation
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found
Introduction		
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported
Objectives	3	State specific objectives, including any prespecified hypotheses
Methods		
Study design	4	Present key elements of study design early in the paper
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants
		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there

CONSORT 2010 Statement: updated guidelines for reporting parallel group randomised trials

Kenneth F Schulz,[1] Douglas G Altman,[2] David Moher,[3] for the CONSORT Group

Section/topic	No	CONSORT 2025 checklist item description
Title and abstract		
Title and structured abstract	1a	Identification as a randomised trial
	1b	Structured summary of the trial design, methods, results, and conclusions
Open science		
Trial registration	2	Name of trial registry, identifying number (with URL) and date of registration
Protocol and statistical analysis plan	3	Where the trial protocol and statistical analysis plan can be accessed
Data sharing	4	Where and how the individual de-identified participant data (including data dictionary), statistical code and any other materials can be accessed
Funding and conflicts of interest	5a	Sources of funding and other support (eg, supply of drugs), and role of funders in the design, conduct, analysis and reporting of the trial
	5b	Financial and other conflicts of interest of the manuscript authors
Introduction		
Background and rationale	6	Scientific background and rationale
Objectives	7	Specific objectives related to benefits and harms
Methods		
Patient and public involvement	8	Details of patient or public involvement in the design, conduct and reporting of the trial
Trial design	9	Description of trial design including type of trial (eg, parallel group, crossover), allocation ratio, and framework (eg, superiority, equivalence, non-inferiority, exploratory)
Changes to trial protocol	10	Important changes to the trial after it commenced including any outcomes or analyses that were not prespecified, with reason
Trial setting	11	Settings (eg, community, hospital) and locations (eg, countries, sites) where the trial was conducted
Eligibility criteria	12a	Eligibility criteria for participants
	12b	If applicable, eligibility criteria for sites and for individuals delivering the interventions (eg, surgeons, physiotherapists)
Intervention and comparator	13	Intervention and comparator with sufficient details to allow replication. If relevant, where additional materials describing the intervention and comparator (eg, intervention manual) can be accessed
Outcomes	14	Prespecified primary and secondary outcomes, including the specific measurement variable (eg, systolic blood pressure), analysis metric (eg, change from baseline, final value, time to event), method of aggregation (eg, median, proportion), and time point for each outcome
Harms	15	How harms were defined and assessed (eg, systematically, non-systematically)
Sample size	16a	How sample size was determined, including all assumptions supporting the sample size calculation
	16b	Explanation of any interim analyses and stopping guidelines
Randomisation:		
Sequence generation	17a	Who generated the random allocation sequence and the method used
	17b	Type of randomisation and details of any restriction (eg, stratification, blocking and block size)

Checklists



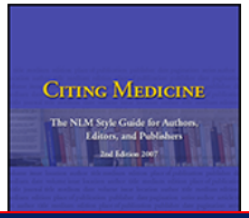
CONSORT Flow Diagram

Home > Toolkits

Toolkits

This section provides practical help and resources to support you in:

- Writing research
- Selecting the appropriate reporting guideline
- Peer reviewing research
- How to develop a reporting guideline
- Using guidelines in your journal



Citing Medicine, 2nd edition

The NLM Style Guide for Authors, Editors, and Publishers

Karen Patrias; Dan Wendling, Technical Editor.

Contributor Information and Affiliations

Bethesda (MD): National Library of Medicine (US); 2007-.

Home > Library > Reporting guideline

Search for reporting guidelines

Browse for reporting guidelines by selecting one or more of these drop-downs:

Study type: Please select...

and

Clinical area: Rehabilitation medicine

and

Section of report: Please select...

Search Reporting Guidelines

We recommend searching for reporting guidelines in English

Start again | Help

Displaying 8 reporting guidelines found.

Key reporting guidelines, shaded green, are displayed first. Show the most recently added records first.

1. Developing the TIDieR-Rehab checklist: a modified Delphi process to extend the Template for Intervention Description and Replication (TIDieR) for rehabilitation intervention reporting

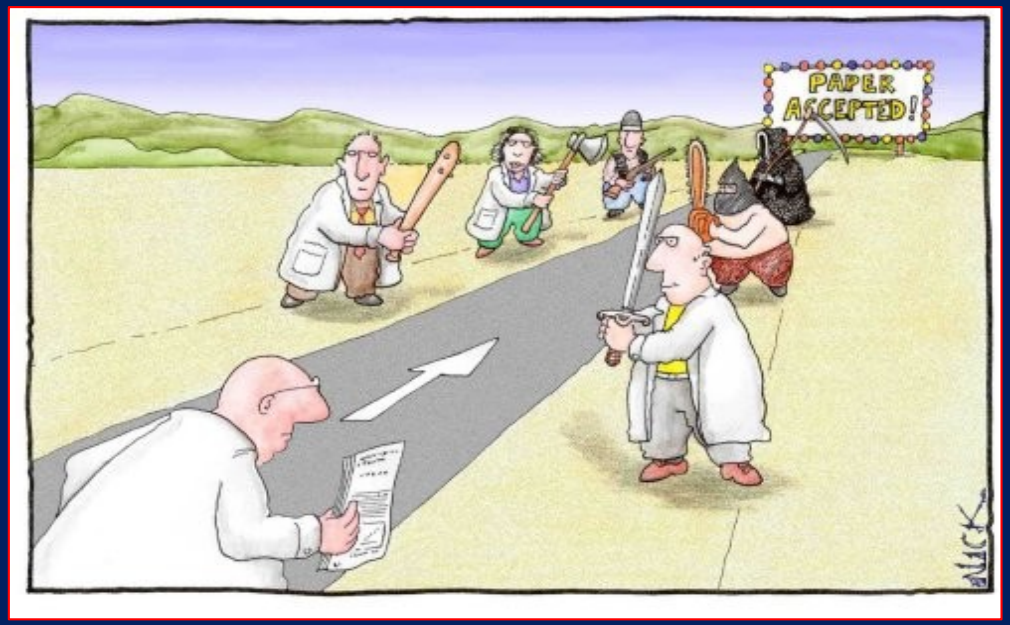
2. Systematic Development of Standards for Mixed Methods Reporting in Rehabilitation Health Sciences Research

3. Recommendations for the development, implementation, and reporting of control

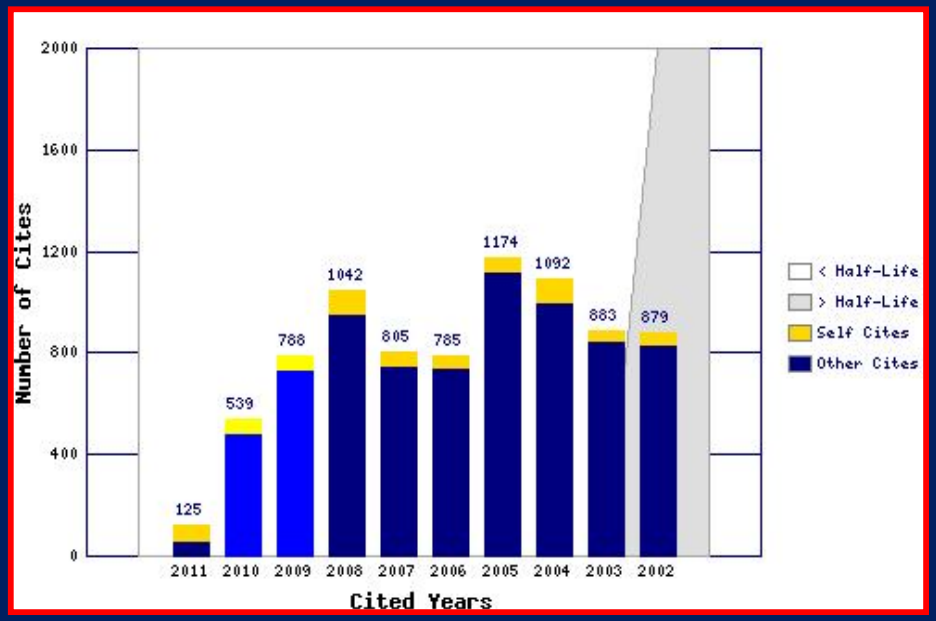
II/3D – Choosing the 'right' journal

Journal performance and reputation

QUALITY (peer review, expert opinion/consensus…)



SCIENTIFIC "IMPACT" (Bibliometric indexes)



Expert opinion & consensus

J Rehabil Med 2008; 40: 492–494

LETTER TO THE EDITOR

PUBLISHING IN PHYSICAL AND REHABILITATION MEDICINE: A EUROPEAN POINT OF VIEW

Sir,

We read with interest the paper by Frontera et al. (1) regarding the main issues relevant to the publication of research in Physical and Rehabilitation Medicine (PRM), including the peer review process, and the role of specialty journals. This kind of paper helps the target audience to understand better the mission and "philosophy" of these core journals in PRM and informs readers about which journals are most suitable for

rehabilitation interventions, from the acute
munity integration, etc.) (4, 5).

The Committee (many of whose members a
staff of one or more international journals) n
based on expert opinion corroborated by a seri
indices and evaluations, which it might be us
here. The peer assessment reviewed and cor

- the indexing of the 3 main international
biomedical field (in our specific category)

EUR J PHYS REHABIL MED 2013;49:711-4

Publishing in Physical and Rehabilitation Medicine. An update on the European point of view

F. FRANCHIGNONI [1], L. ÖZÇAKAR [2], X. MICHAIL [3], G. VANDERSTRAETEN [4, 5]
N. CHRISTODOULOU [6, 7], R. FRISCHKNECHT [8, 9]

EUR J PHYS REHABIL MED 2011;47:455-62

Bibliometric indicators: a snapshot of the scientific productivity of leading European PRM researchers

F. FRANCHIGNONI [1], S. MUÑOZ LASA [2], L. ÖZÇAKAR [3], M. OTTONELLO [4]

Choosing a scholarly journal during manuscript submission: the way how it rings true for physiatrists

L. ÖZÇAKAR [1], F. FRANCHIGNONI [2], M. KARA [3], S. MUÑOZ LASA [4]

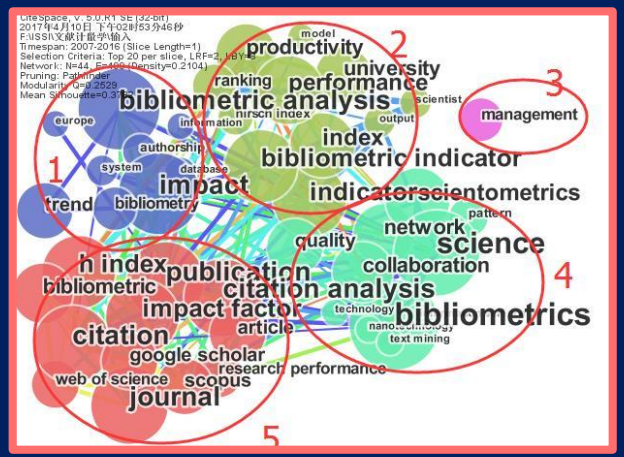
Bibliometric indices

J Rehabil Med 2011; 43: 471–476

SPECIAL REPORT

BIBLIOMETRIC INDICATORS AND CORE JOURNALS IN PHYSICAL AND REHABILITATION MEDICINE

Franco Franchignoni, MD[1] and Susana Muñoz Lasa, MD



European Journal of Physical and Rehabilitation Medicine 2018 October;54(5):792-6
DOI: 10.23736/S1973-9087.18.05462-X

SPECIAL ARTICLE

Basic bibliometrics for dummies and others: an overview of some journal-level indicators in physical and rehabilitation medicine

Franco FRANCHIGNONI [1] *, Levent ÖZÇAKAR [2], Stefano NEGRINI [3, 4]

TABLE I.—*Profile of the performance of 22 PRM Journals (simultaneously indexed in the three databases of Journal Citation Reports®: Medicine - Rehabilitation; Scopus®: Rehabilitation; and PubMed®), according to six widely used bibliometric indicators.*

	Bibliometric indicators					
Journal (in alphabetical order)	JIF[β]	CiteScore[β]	SJR[β,#]	AI[β,#]	EF[§, #]	SNIP[#, ¶]
American Journal of Physical Medicine and Rehabilitation	**	**	**	**	***	**
Archives of Physical Medicine and Rehabilitation	***	***	***	***	***	***
Brazilian Journal of Physical Therapy	*	***	***	*	**	***
Clinical Rehabilitation	***	***	***	***	***	***
Developmental Neurorehabilitation	*	**	**	*	*	**
Disability and Rehabilitation	**	***	***	**	***	***
European Journal of Physical and Rehabilitation Medicine	***	***	***	**	**	***
International Journal of Rehabilitation Research	*	**	**	*	*	*
Journal of Back and Musculoskeletal Rehabilitation	*	**	*	*	*	*
Journal of Geriatric Physical Therapy	***	**	**	*	*	**
Journal of Hand Therapy	*	**	**	*	*	**
Journal of Head Trauma Rehabilitation	***	***	***	***	**	***
Journal of NeuroEngineering and Rehabilitation	***	***	***	***	***	***
Journal of Neurologic Physical Therapy	***	***	***	*	*	***
Journal of Rehabilitation Medicine	**	***	***	**	***	***
Journal of Sport Rehabilitation	**	**	***	**	*	*
NeuroRehabilitation	**	***	***	**	**	**
Neurorehabilitation and Neural Repair	***	***	***	***	***	***
Physical and Occupational Therapy in Pediatrics	**	*	**	*	*	**
PM and R	**	**	***	**	***	**
Prosthetics and Orthotics International	*	**	**	**	*	**
Topics in Stroke Rehabilitation	**	***	**	**	**	**

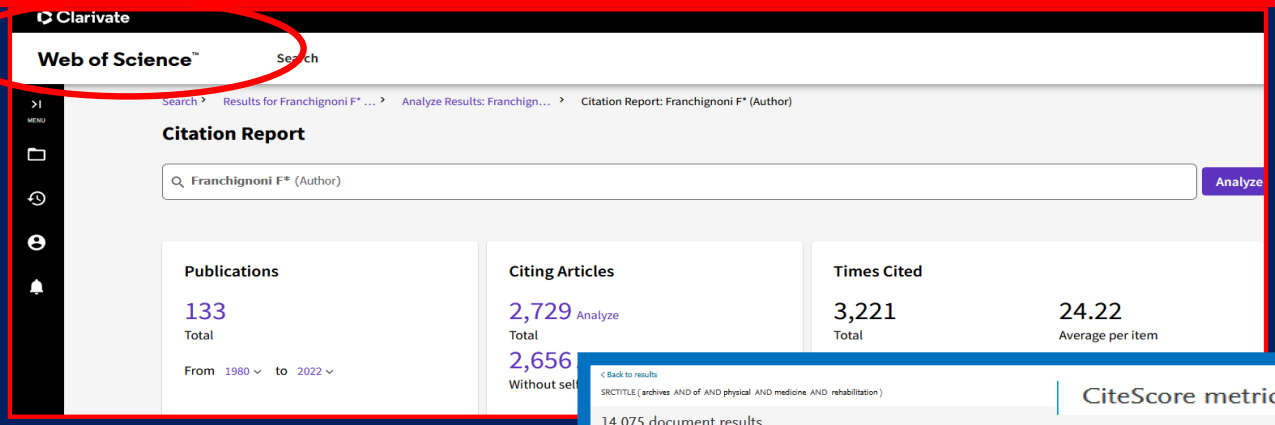
*** First quartile; ** Second quartile; * Under median

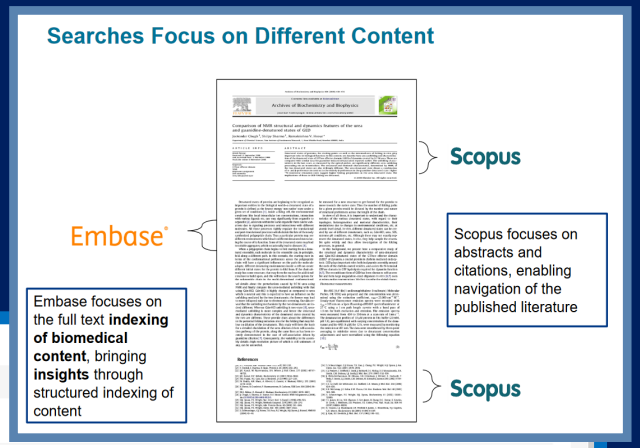
Bibliometric indices

InCites Journal Citation Reports

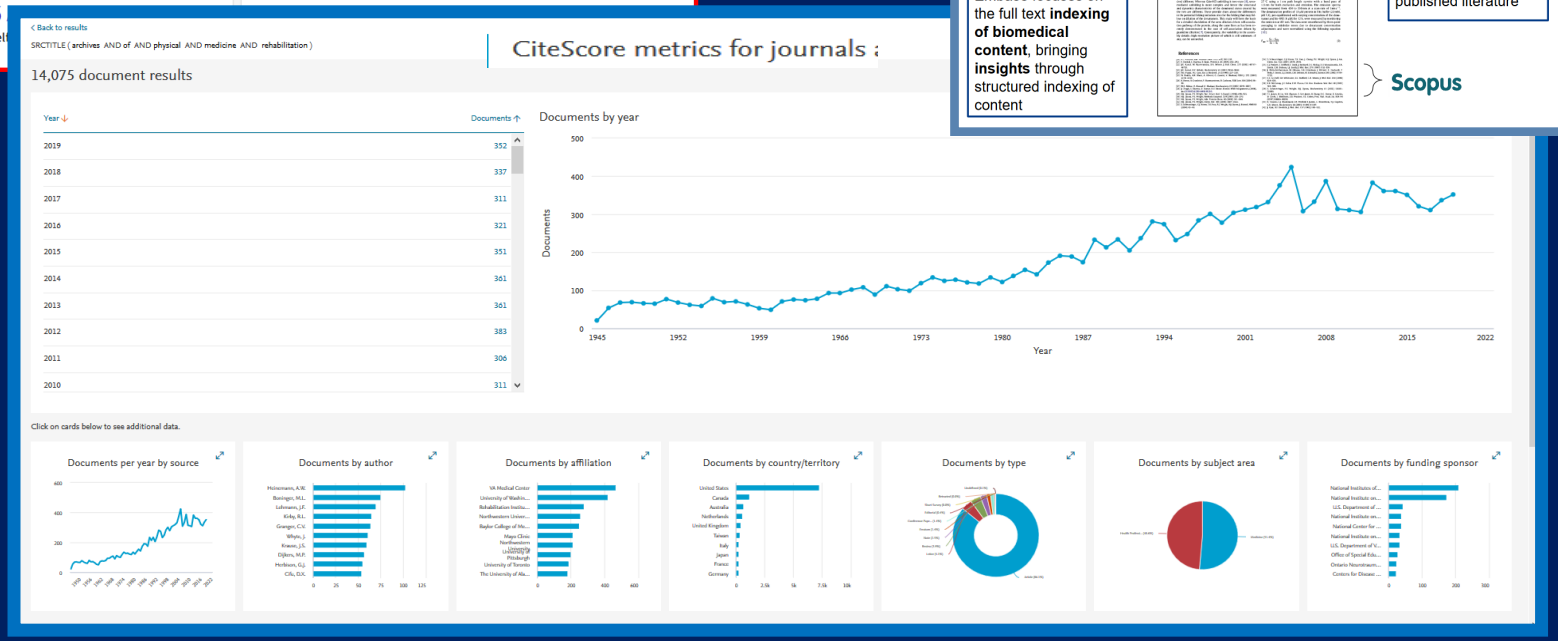
Clarivate Analytics

JCR Data						Eigenfactor® Metrics	
Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor® Score	Article Influence® Score
4086	4.035	4.700	1.194	98	5.4	0.01060	1.476





Scopus & Embase



The Impact Factor (IF)

The IF is a measure of the frequency with which the 'average article' in a journal has been cited in a particular period.

The 2024 Journal Citation Reports IF of a journal X is calculated by dividing:

- the number of all source journals' 2024 citations of articles that journal X published in 2022 and 2023

divided by

- the total number of source items that journal X published in 2022 & 2023.

N.B. - IFs are based entirely on citations appearing within two years of a paper being published. There are field effects at the discipline level.

Thus, comparing some bibliometric indices (e.g. IF) of different disciplines (and even sub-fields) would be unfair.

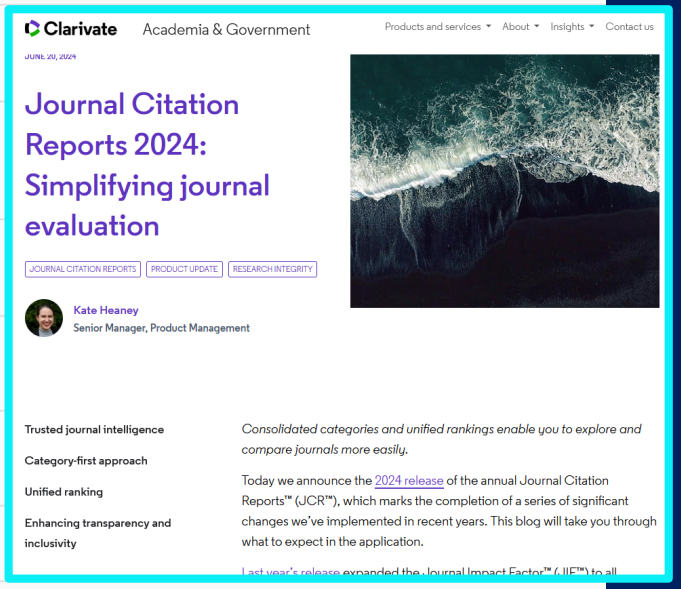
JCR - Bibliometric indices (Rehabilitation)

2022 – SCIE N= 68; Q1: N = 17

2024 – New N= 174; Q1: N = 46

REHABILITATION | JCR Year: 2024

Journal name	ISSN	eISSN	Category	Edition	Total Citations	2024 JIF
Journal of Physiotherapy	1836-9553	1836-9561	REHABILITATION	SCIE	3,342	9.4
Autism in Adulthood	2573-9581	2573-959X	REHABILITATION	SSCI	1,924	6.8
JOURNAL OF ORTHOPAEDIC & SPORTS PHYSICAL THERAPY	0190-6011	1938-1344	REHABILITATION	SCIE	10,490	5.8
IEEE TRANSACTIONS ON NEURAL SYSTEMS AND REHABILITATION ENGINEERING	1534-4320	1558-0210	REHABILITATION	SCIE	16,219	5.2
Journal of NeuroEngineering and Rehabilitation	N/A	1743-0003	REHABILITATION	SCIE	10,023	5.2
Annals of Physical and Rehabilitation Medicine	1877-0657	1877-0665	REHABILITATION	SCIE	3,435	4.6
EXCEPTIONAL CHILDREN	0014-4029	2163-5560	REHABILITATION	SSCI	2,932	4.3
Journal of Neurologic Physical Therapy	1557-0576	1557-0584	REHABILITATION	SCIE		
RESEARCH AND PRACTICE FOR PERSONS WITH SEVERE DISABILITIES	1540-7969	2169-2408	REHABILITATION	SSCI		
ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION	0003-9993	1532-821X	REHABILITATION	SCIE		
NEUROREHABILITATION AND NEURAL REPAIR	1545-9683	1552-6844	REHABILITATION	SCIE		
European Journal of Physical and Rehabilitation Medicine	1973-9087	1973-9095	REHABILITATION	SCIE		
Physical Therapy	0031-9023	1538-6724	REHABILITATION	SCIE		



Clarivate Academia & Government

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JUNE 20, 2024

Journal Citation Reports 2024: Simplifying journal evaluation

JOURNAL CITATION REPORTS | PRODUCT UPDATE | RESEARCH INTEGRITY

Kate Heaney
Senior Manager, Product Management

Trusted journal intelligence

Category-first approach

Unified ranking

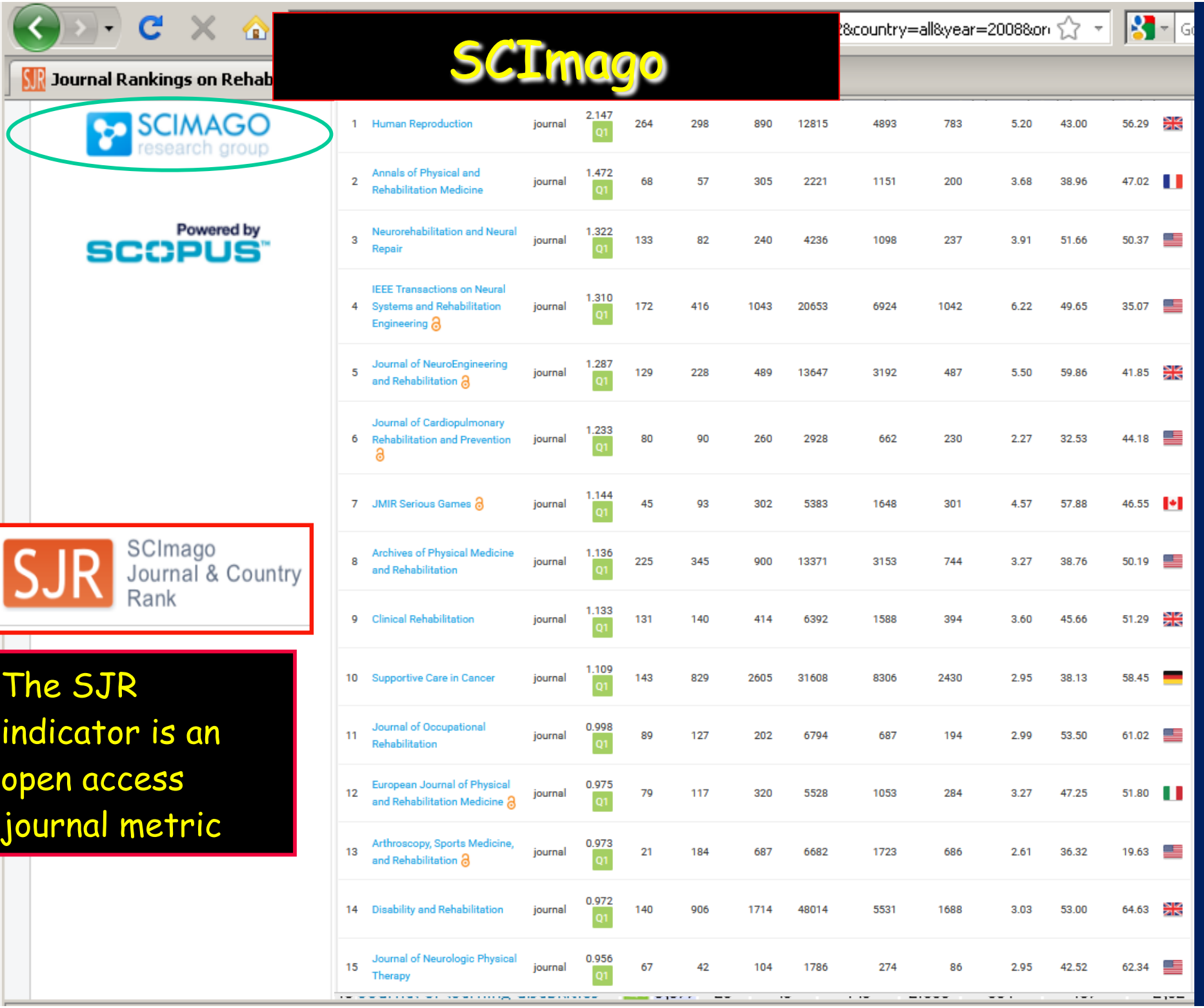
Enhancing transparency and inclusivity

Consolidated categories and unified rankings enable you to explore and compare journals more easily.

Today we announce the 2024 release of the annual Journal Citation Reports™ (JCR™), which marks the completion of a series of significant changes we've implemented in recent years. This blog will take you through what to expect in the application.

Last year's release expanded the Journal Impact Factor™ (JIF™) to all

SCImago



Journal Rankings on Rehab

&country=all&year=2008&or

SCIMAGO research group

Powered by SCOPUS

SJR SCImago Journal & Country Rank

1	Human Reproduction	journal	2.147 Q1	264	298	890	12815	4893	783	5.20	43.00	56.29
2	Annals of Physical and Rehabilitation Medicine	journal	1.472 Q1	68	57	305	2221	1151	200	3.68	38.96	47.02
3	Neurorehabilitation and Neural Repair	journal	1.322 Q1	133	82	240	4236	1098	237	3.91	51.66	50.37
4	IEEE Transactions on Neural Systems and Rehabilitation Engineering	journal	1.310 Q1	172	416	1043	20653	6924	1042	6.22	49.65	35.07
5	Journal of NeuroEngineering and Rehabilitation	journal	1.287 Q1	129	228	489	13647	3192	487	5.50	59.86	41.85
6	Journal of Cardiopulmonary Rehabilitation and Prevention	journal	1.233 Q1	80	90	260	2928	662	230	2.27	32.53	44.18
7	JMIR Serious Games	journal	1.144 Q1	45	93	302	5383	1648	301	4.57	57.88	46.55
8	Archives of Physical Medicine and Rehabilitation	journal	1.136 Q1	225	345	900	13371	3153	744	3.27	38.76	50.19
9	Clinical Rehabilitation	journal	1.133 Q1	131	140	414	6392	1588	394	3.60	45.66	51.29
10	Supportive Care in Cancer	journal	1.109 Q1	143	829	2605	31608	8306	2430	2.95	38.13	58.45
11	Journal of Occupational Rehabilitation	journal	0.998 Q1	89	127	202	6794	687	194	2.99	53.50	61.02
12	European Journal of Physical and Rehabilitation Medicine	journal	0.975 Q1	79	117	320	5528	1053	284	3.27	47.25	51.80
13	Arthroscopy, Sports Medicine, and Rehabilitation	journal	0.973 Q1	21	184	687	6682	1723	686	2.61	36.32	19.63
14	Disability and Rehabilitation	journal	0.972 Q1	140	906	1714	48014	5531	1688	3.03	53.00	64.63
15	Journal of Neurologic Physical Therapy	journal	0.956 Q1	67	42	104	1786	274	86	2.95	42.52	62.34

The SJR indicator is an open access journal metric

🔹 1. Impact Factor (IF)

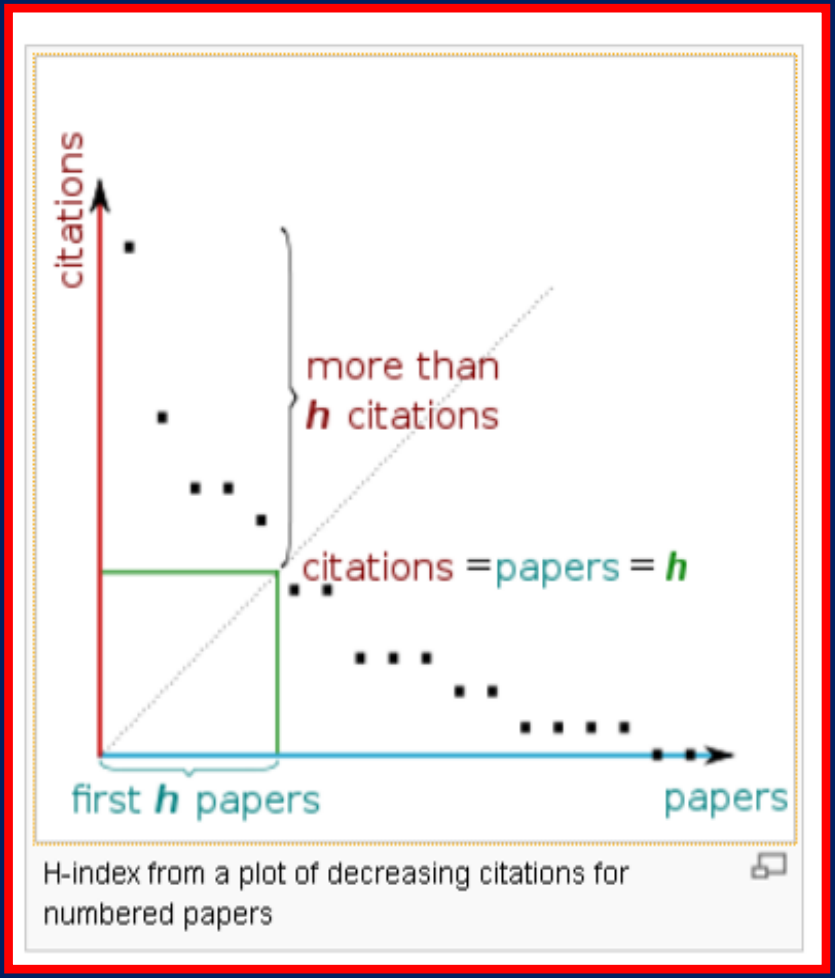
Definition: Measures the average number of citations received per paper published in a journal during the preceding two years.

⚠️ **Drawbacks:**

1. **Journal-Level, Not Article-Level**:
   - It reflects the average citation rate, not the quality or impact of individual articles. A few highly cited papers can skew the average.
2. **Citation Window Is Narrow**:
   - A two-year window misses citations that accumulate over longer periods, disadvantaging fields with slower citation dynamics.
3. **Field Differences**:
   - Different academic disciplines have varying citation behaviors, making IF comparisons across fields misleading.
4. **Susceptible to Manipulation**:
   - Some journals encourage self-citations or strategic publication of review articles to boost IF.
5. **Does Not Reflect Quality**:
   - Citations can occur for negative reasons (e.g., to criticize flawed research), and a high IF doesn't guarantee rigorous peer review.
6. **Encourages "Impact Factor Gaming"**:
   - Editors and institutions may prioritize publication in high-IF journals over scientific integrity or relevance.

The Hirsch index (h-index)

The index is based on the distribution of citations received by a given journal's (or researcher's) publications, in a given period.



H-index from a plot of decreasing citations for numbered papers

A journal (or a researcher) with an index of h = 10 has published 10 papers each of which has been cited by others at least 10 times.

h index	h=number of papers with citation number >h
m quotient	m=h/n, where n=number of years since first publication
g index	g=the number such that the top g papers have g^2 citations cumulatively
e index	e=(total number of citations in h core – $h^2)^{1/2}$
h^c index	h^c=number of papers with citation score (S^c) greater than h^c S^c=4 * citation count/n, where n=number of years since publication
i10 index	i10=number of papers with citation count >10

H-index modifications

🔹 2. h-index

Definition: A scholar has an h-index of *h* if they have *h* papers that have each been cited at least *h* times.

⚠️ **Drawbacks:**

1. **Ignores Highly Cited Papers Beyond h**:
   - Once a paper meets the threshold, additional citations don't increase the h-index, undervaluing standout publications.
2. **Favors Senior Researchers**:
   - The h-index increases with career length, disadvantaging early-career researchers.
3. **Field Dependence**:
   - Like IF, it varies significantly by discipline and is not normalized, making cross-field comparisons unfair.
4. **Not Sensitive to Authorship Contributions**:
   - Does not account for whether the researcher is the lead or co-author, or the significance of their contribution.
5. **Doesn't Decrease**:
   - The h-index can never go down, so it doesn't reflect declining performance or retractions.
6. **Can Be Manipulated**:
   - Self-citations or strategic co-authorships (e.g., "citation circles") can artificially inflate the metric.

Google Scholar

Categorie > Health & Medical Sciences > **Rehabilitation Therapy**

	Pubblicazione	h5-index	Mediana h5
1.	IEEE Transactions on Neural Systems and Rehabilitation Engineering	79	111
2.	Journal of NeuroEngineering and Rehabilitation	67	96
3.	Disability and Rehabilitation	67	87
4.	Archives of Physical Medicine and Rehabilitation	62	77
5.	Disability and Rehabilitation: Assistive Technology		
6.	Neurorehabilitation and Neural Repair		
7.	Clinical Rehabilitation		
8.	European Journal of Physical and Rehabilitation Medicine		
9.	Annals of Physical and Rehabilitation Medicine		
10.	American Journal of Physical Medicine & Rehabilitation		
11.	Neuropsychological Rehabilitation		
12.	PM&R		
13.	Journal of rehabilitation medicine		
14.	Spinal Cord		
15.	NeuroRehabilitation		

Google Scholar

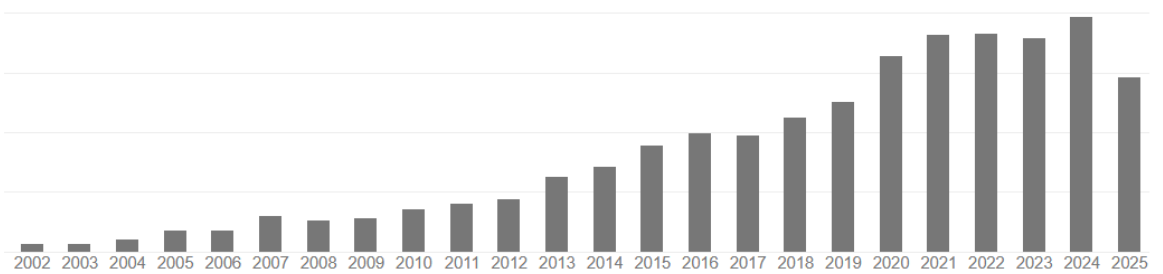
Franco Franchignoni

SEGUI

Physiatrist, Novara, Italy
Email verificata su icsmaugeri.it
Physical & Rehabilitation M…

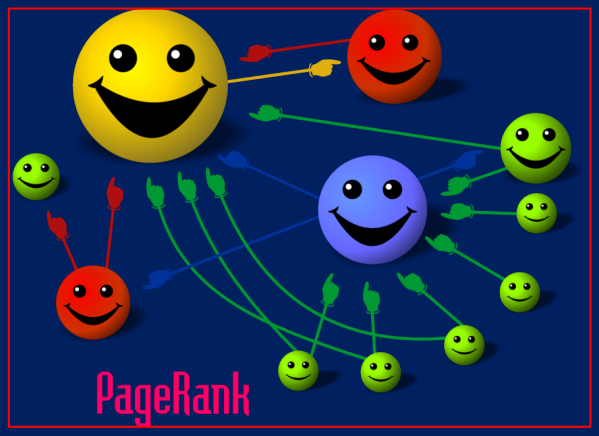
ARTICOLI | CITATA DA | ACCESSO PUBBLICO | COAUTORI

	Tutte	Dal 2020
Citazioni	9101	4739
Indice H	42	29
i10-index	107	72



Weighing vs. counting

(expert opinion vs. bibliometric indexes;
which bibliometric index should I use?)



The statement "citations should be weighed not just counted" means that a citation's value should depend on factors like the prestige of the citing source and the time elapsed, rather than just the raw number of times an article is cited. This "weighted citation" approach aims to better measure a work's influence and prestige, whereas simple counts can be misleading. For example, a single citation from a highly prestigious journal may be weighted more heavily than multiple citations from less impactful journals.

How weighting can be applied

- **Quality of citing journal:** A citation's weight can be increased if it comes from a highly-regarded or high-impact journal, like the Eigenfactor method which considers the journal that did the citing.
- **Time interval:** A citation can be given more weight if it is recent, or less weight if it is from a long time ago.
- **Context and content:** Text mining can analyze the context in which a citation is made, such as how often it's mentioned or whether it's favorable, to assign a more nuanced weight.
- **Frequency:** A paper cited frequently in the in-text references of a single article might be weighted more heavily than one that is just listed in the bibliography.

Goodhart's Law: "When a measure becomes a target, it ceases to be a good measure"

PART III

III/1 - What's new, what's next

The perfect storm

Researcher

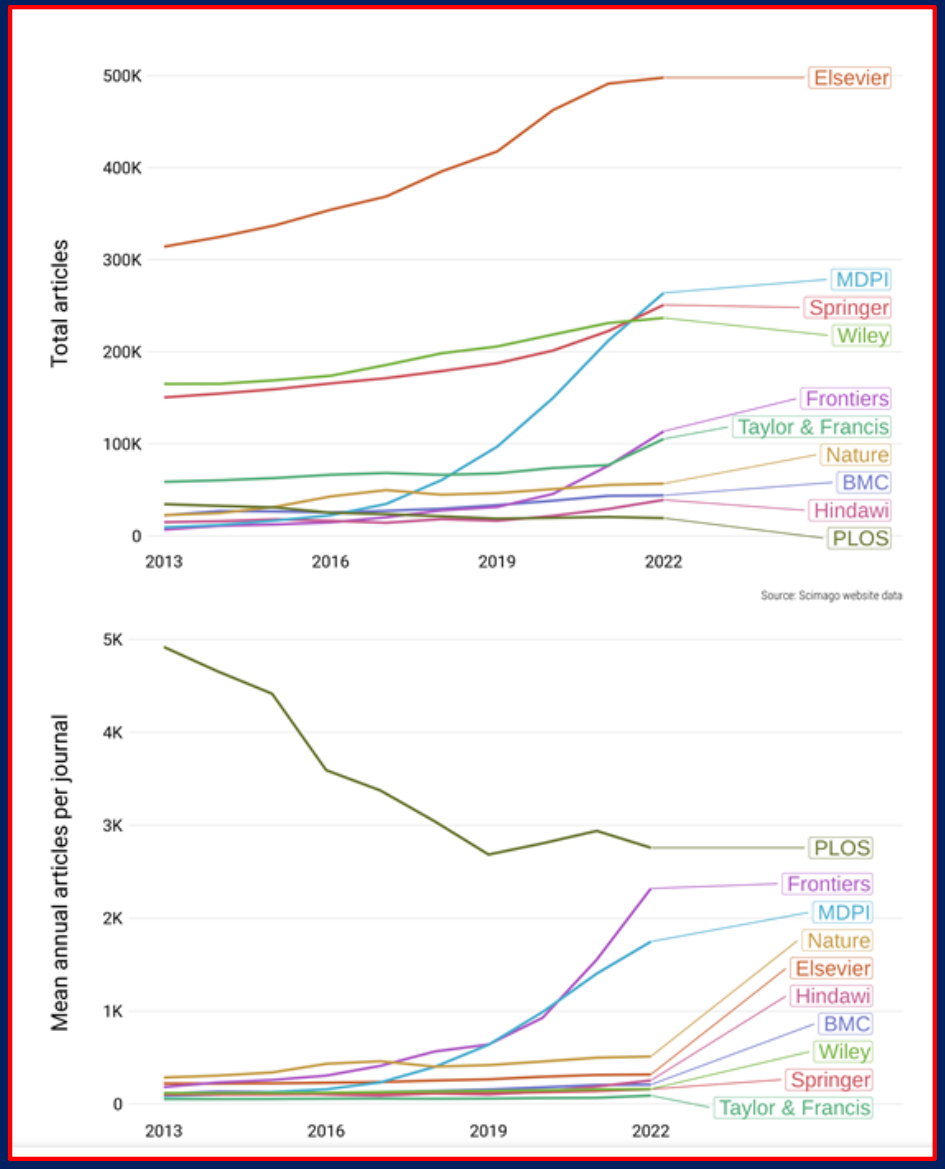
Publisher

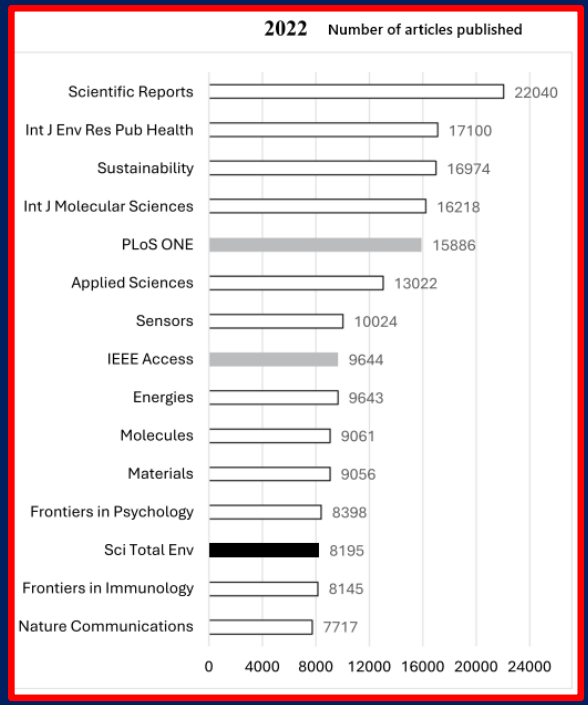
Alice: "Would you tell me, please, which way I ought to go from here?"

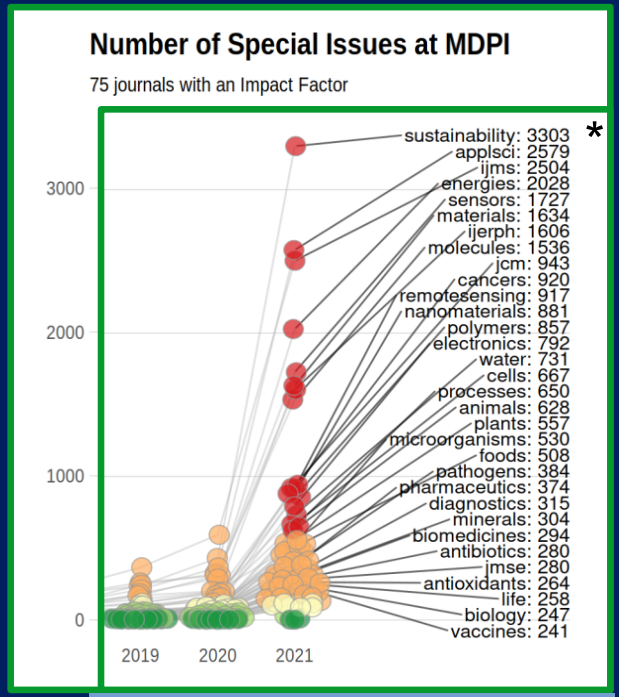
"That depends a good deal on where you want to get to." said the Cheshire Cat.

Lewis Carroll "Alice's Adventures in Wonderland"

Publishing companies and n. of published papers per year

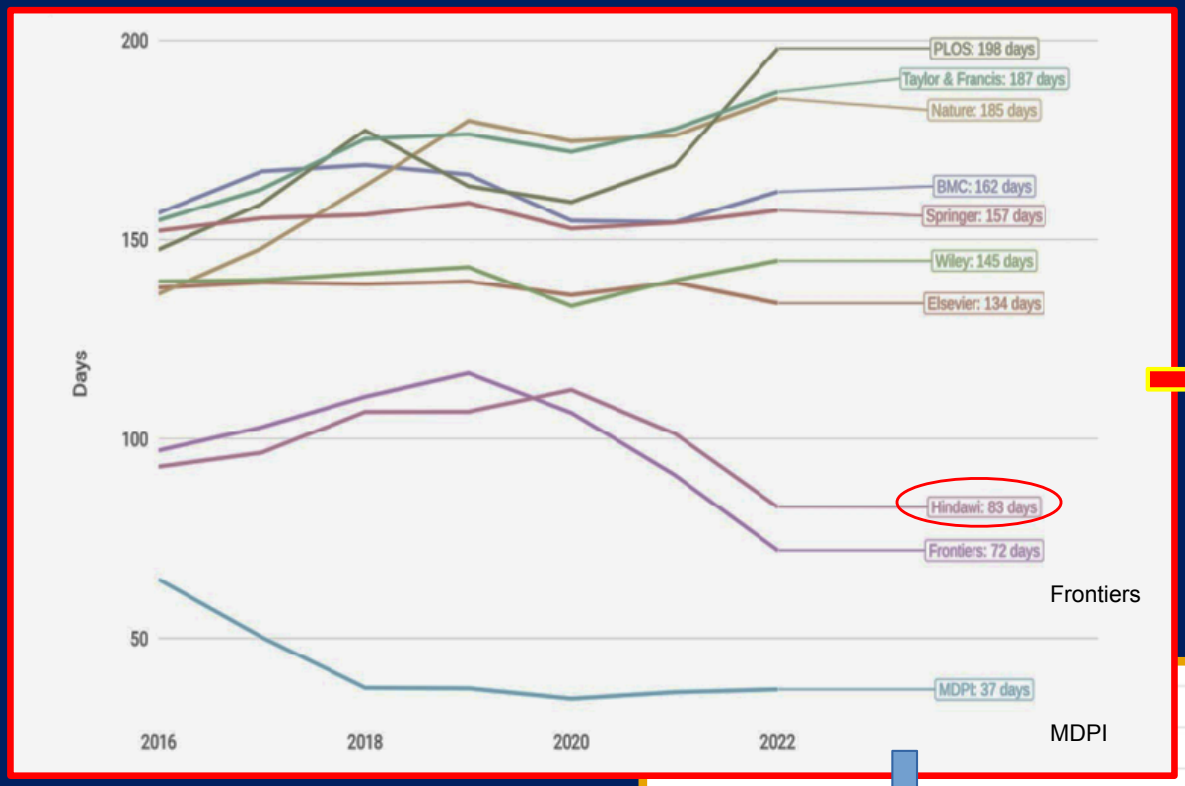






* Special issues in 2025: **N=2050**

Article turnaround times, but ...

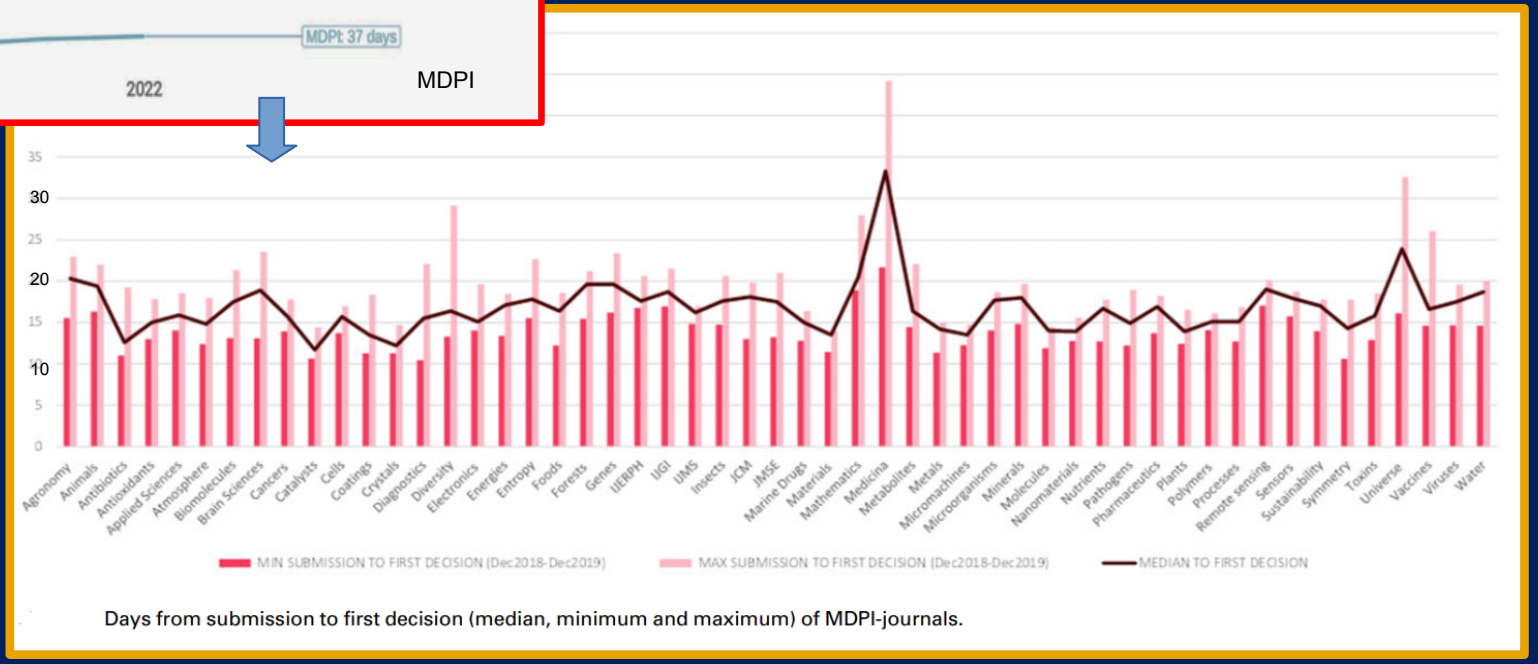


Wiley to stop using "Hindawi" name amid $18 million revenue decline

Wiley will cease using the beleaguered Hindawi brand name, the publisher announced on an earnings call Wednesday morning. Wiley plans to integrate Hindawi's approximately 200 journals into the rest of its portfolio by the middle of next year.

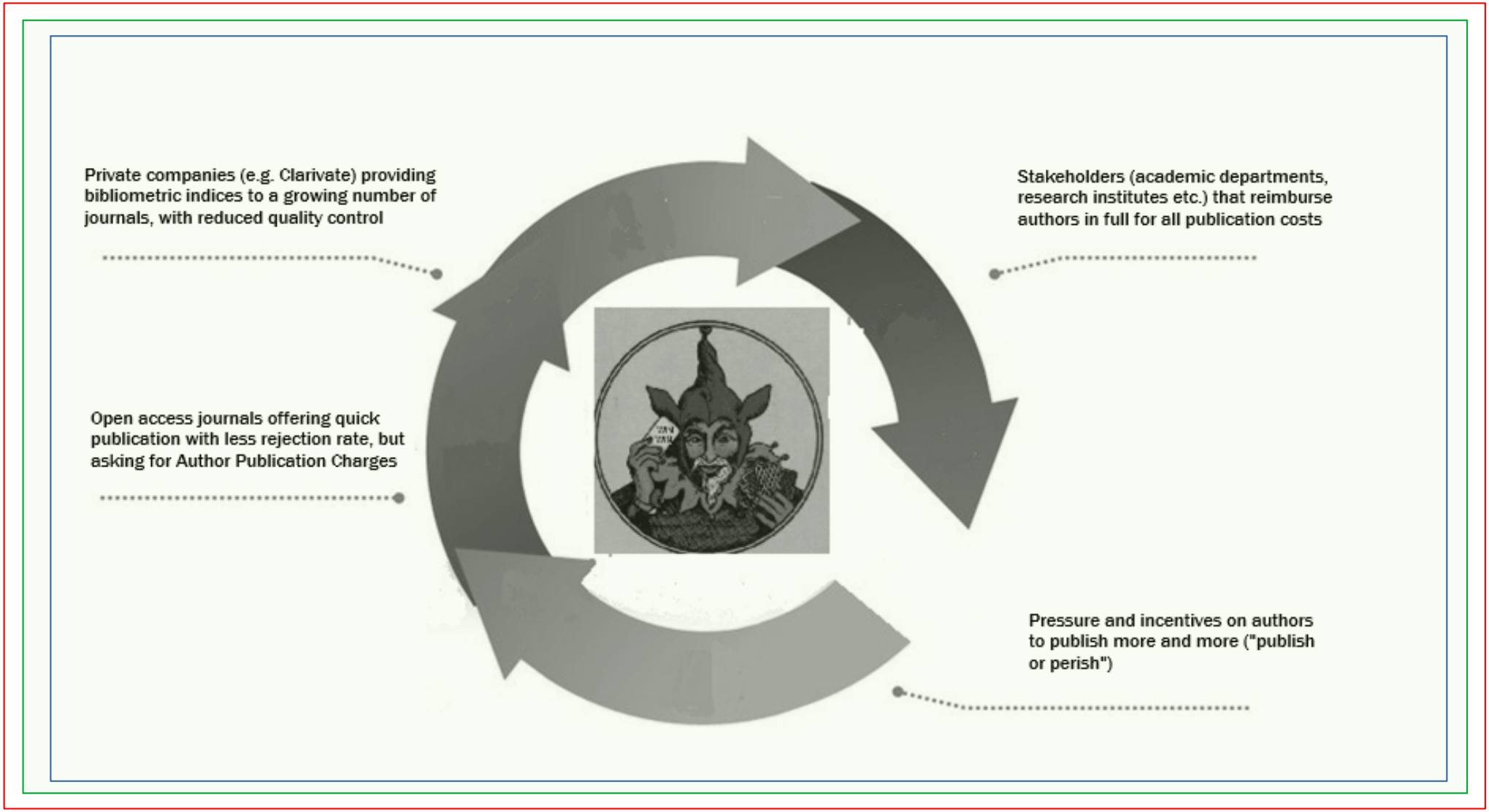
Problems with Hindawi, the open access publisher that Wiley acquired in 2021, have cost the company $18 million in revenue in its latest financial quarter compared to the same quarter of last year, Wiley also disclosed. Hindawi's journals have been overrun by paper mills and published "meaningless gobbledegook," in the words of one sleuth, leading to thousands of retractions, journal closures and a major index delisting several titles.

In the current fiscal year, Wiley expects $35-40 million in lost revenue from Hindawi as it works to turn around journals with issues and retract articles



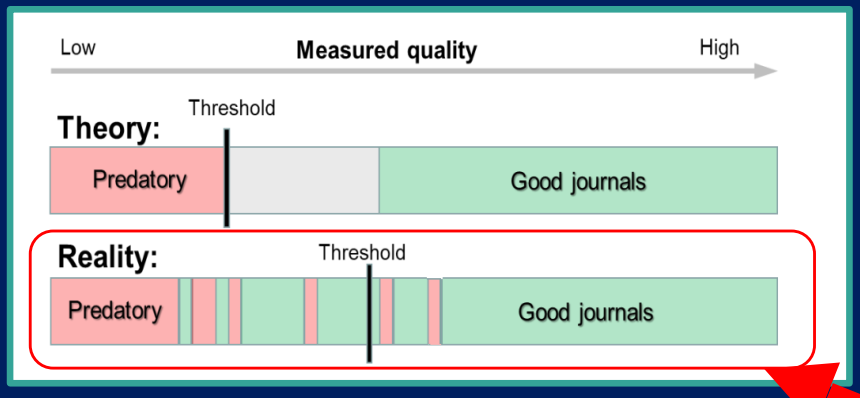
Days from submission to first decision (median, minimum and maximum) of MDPI-journals.

The vicious circle (the 'Publish or Perish' game)



Hot issues

The quality of scientific journals



The quality of peer review

HOW TO FIX PEER REVIEW

Journals and funders are trying to boost the effectiveness of systems under strain. By David Adam

Attached to the Very Large Telescope in Chile, the Multi Unit Spectroscopic Explorer (MUSE) allows researchers to probe the most distant galaxies. It's a popular instrument: for its next observing session, from October to April, scientists have applied for more than 3,000 hours of observation time. That's a problem. Even though it's dubbed a cosmic time machine, not even MUSE can squeeze 3?9 nights of work into just seven months.

The European Southern Observatory (ESO), which runs the Chile telescope, usually asks panels of experts to select the worthiest proposals. But as the number of requests has soared, so has the burden on the scientists asked to grade them.

"The load was simply unbearable," says

The AI in medicine: opportunities & challenges

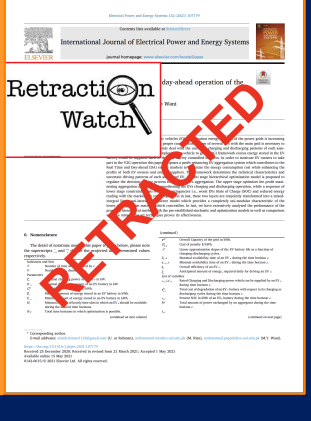
We need to rein in AI's gatekeeping of science

The academic community has looked at how artificial-intelligence tools help researchers to write papers, but not on how they distort the literature scientists choose to cite.

Artificial intelligence (AI) systems are consumi vast amounts of online content yet pointi few users to the articles' publishers. In ear 2025, US-based company OpenAI collecte around 250 pages of material for every visit it directed to a publisher's website. By mid-2025, that figu had soared to 1,500, according to Matthew Prince, chi executive of US-based Internet-security firm Cloudfla And the extraction rate of US-based AI start-up compa Anthropic climbed even higher over the same period: fro

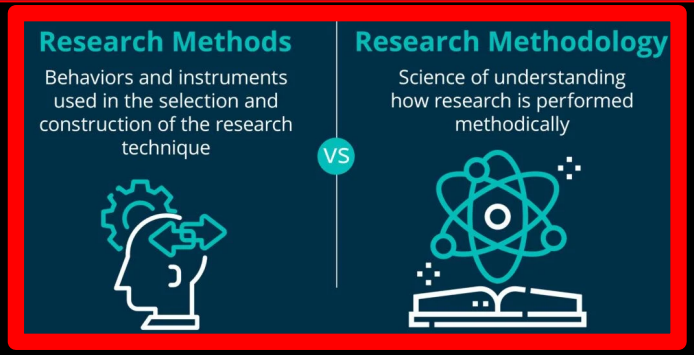
The quality and integrity of scientists

Prioritise quality over quantity!



PART IV

Take home messages

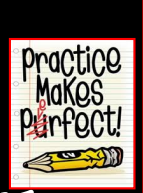


1. Research skills are "art + science": you can learn them;

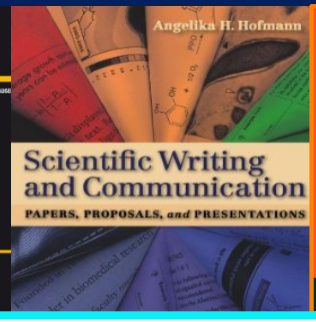
2. Carefully read published manuscripts and abstracts in major journals, focusing on technical details;

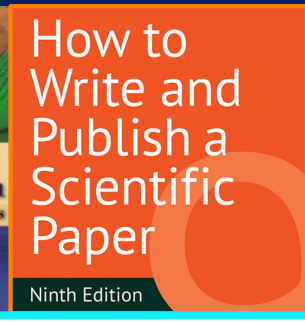
3. Read dedicated books and attend classes in writing skills and clinical research;

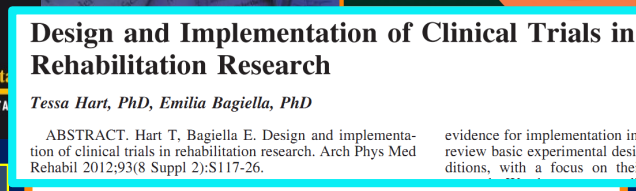
4. Practice, practice, and more practice!;

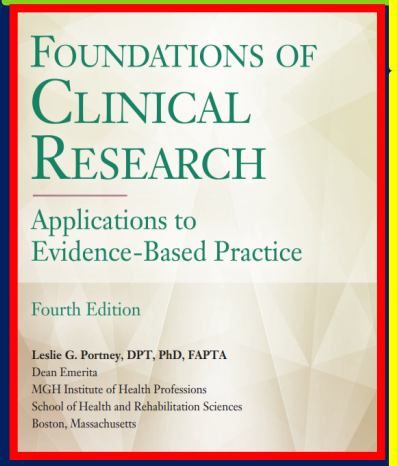


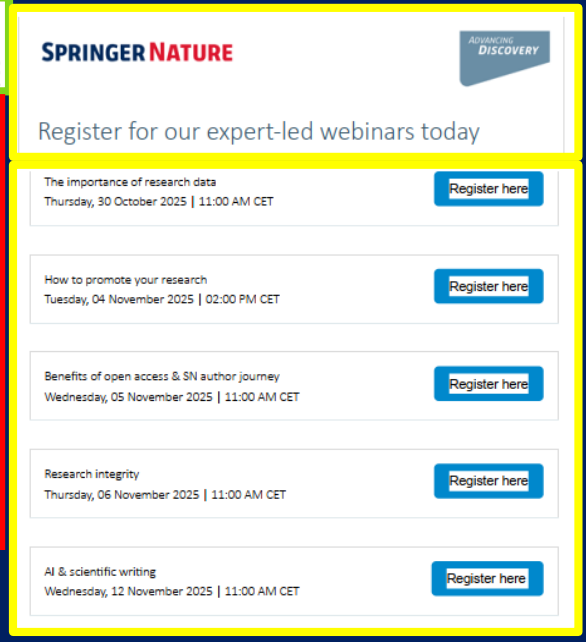
5. Intellectual support (from your mentors and senior colleagues).











Some useful career advice and tips

1. Actively attend **national** & international PRM congresses and other scientific events and support their organisation

2. Get involved in international PRM associations and research groups, with the aim of the quality improvement in your clinical practice and research.

ISPRM

ESPRM

Euro Mediterranean PRM School "Haim Ring"

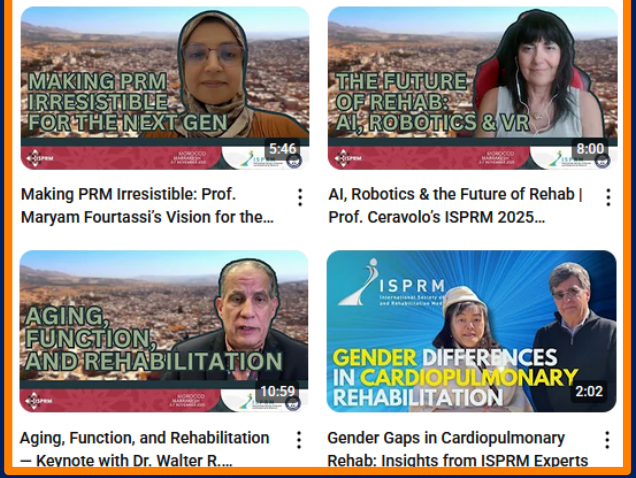
Cochrane Rehabilitation, Functioning, and Disability

Webinars

Each webinar has been accredited with one CME (ECMEC) by UEMS-EACCME.

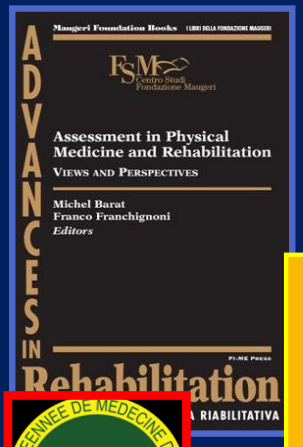
Attendance in the webinars is free, but registration is mandatory.

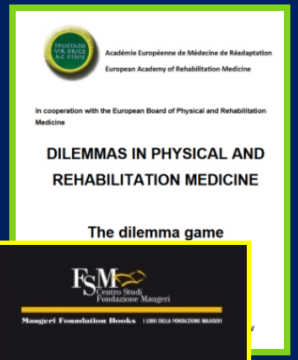
NO EXCUSES.
NEVER GIVE UP.
STAY HUMBLE.
WORK HARD.
BE POSITIVE.
STOP WISHING,
START DOING.
KEEP GOING.

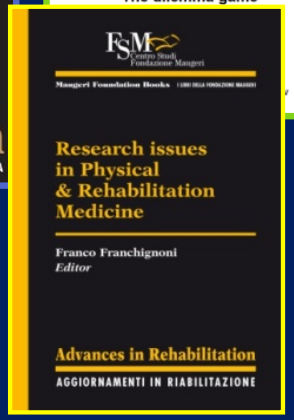


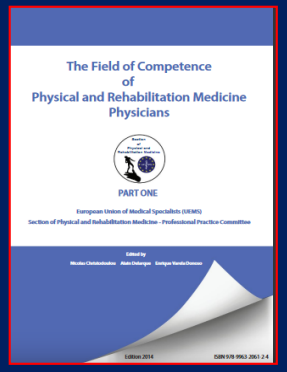
EURO-MUSCULUS/USPRM Basic Scanning Protocols: a practical guide for physiatrists

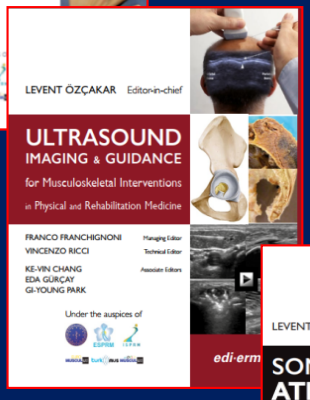
3. Be involved in editorial projects, e.g. aiming at producing and editing high-quality multi-authored educational material distributed for free (or at low cost) all over the PRM world

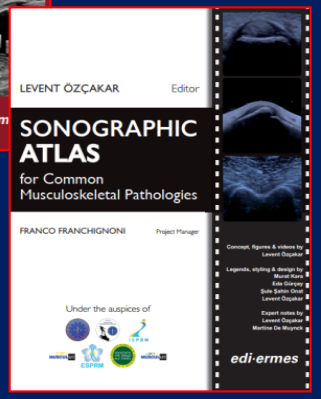










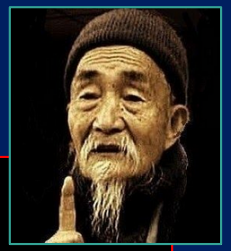


UEMS PRM Section & Board

Downloadable for free

4. Last but not least, have sincere friendships

- I am pleased and thankful for the many opportunities I have had –during my professional career- to meet, share opinions and collaborate with many outstanding colleagues who honoured me with their friendship.



- Be a good listener
- Be authentic
- Do not gossip
- Be available – every time
- Give far more than you take
- Respect confidentiality
- Offer advice upon request
- Show sincere respect
- Demonstrate empathy
- Laugh together

Keep YOUR THOUGHT positive because
your thought become YOUR WORDS
and your words become YOUR BEHAVIOR.
Keep your behavior positive because
your behavior becomes YOUR HABITS
and then YOUR VALUES
and your values become YOUR DESTINY
(Gandhi)

The future starts today, not tomorrow

The Young can walk faster,
but the Elder knows the road.

A gift for you !

(Ex-libris FF)

- FF
- Atlas of Amputations & Limb Deficiencies
- Biomechanical basis human movement_...
- Brunnstrom's Kinesiology_Houglum
- Clinical Disorders of Balance, Posture an...
- Diagnosis and treatment of pain of verte...
- Hand and Upper Extrem Rehabil_Saunders
- MEAS Bond Yan Heene_Applying-the-ras...
- MEAS Christensen Kreiner_Rasch models ...
- MEAS De Vet Terwee_Measurement in M...
- MEAS Fayers_QoL assess PRO 2016
- MEAS Streiner Norman_Health Measure...
- METHOD Carter Lubinsky_Rehabilitation ...
- METHOD Day & Gastel_How to Write an...
- METHOD Glasman_Science research writi...
- METHOD Portney 2020_Foundations of C...
- Motor Control_ Shumway-Cook Woollac...
- Peripheral Nerve Entrapments_Trescot 20...
- Phys Rehabil Injured Athlete_Andrews Ha...
- Physical Agents in Rehabil_Cameron
- Principles of Neural Science 5th Ed_Kand...
- Rheumatology Textbook_Kelley
- Sports_Medicine_Netter
- Therapeutic modalities for sports med_Pr...
- UEMS Board_PRM for Med Stud
- Willard and Spackman's Occup Ther 11th...
- z Cifu_Braddom's PMR 2020
- z DeLisa' PMR Frontera_5th 2010
- z Frontera - Essentials of PMR 2019
- z US ITA_Martino, Silvestri -Ecografia app...

Thank you for your attention