

# Critical appraisal

*In physiotherapy*

**Adrien Pallot**

MKDE, MSc, DUs



PT School ASSAS, CEERRF, IRFSS Limoges et Angoulême, La Musse, Meaux

University of Picardie Jules Verne - Master IRHPM

Director of Book Collection at Elsevier

« *Essentials in physiotherapy and physiotherapy* »

Member of the Publication Committee at Kiné, La Revue (Elsevier)

Member of the board of the French Society of Physiotherapy (SFP)

Member of the JFK 2025 Scientific Committee





# Context

**Adrien  
Pallot**

*Physiotherapist  
Lecturer  
Author*

**Critical  
appraisal in  
physiotherapy**

★ ★ ★ ★ ★  
**ENPHE** ★ ★ ★ ★ ★

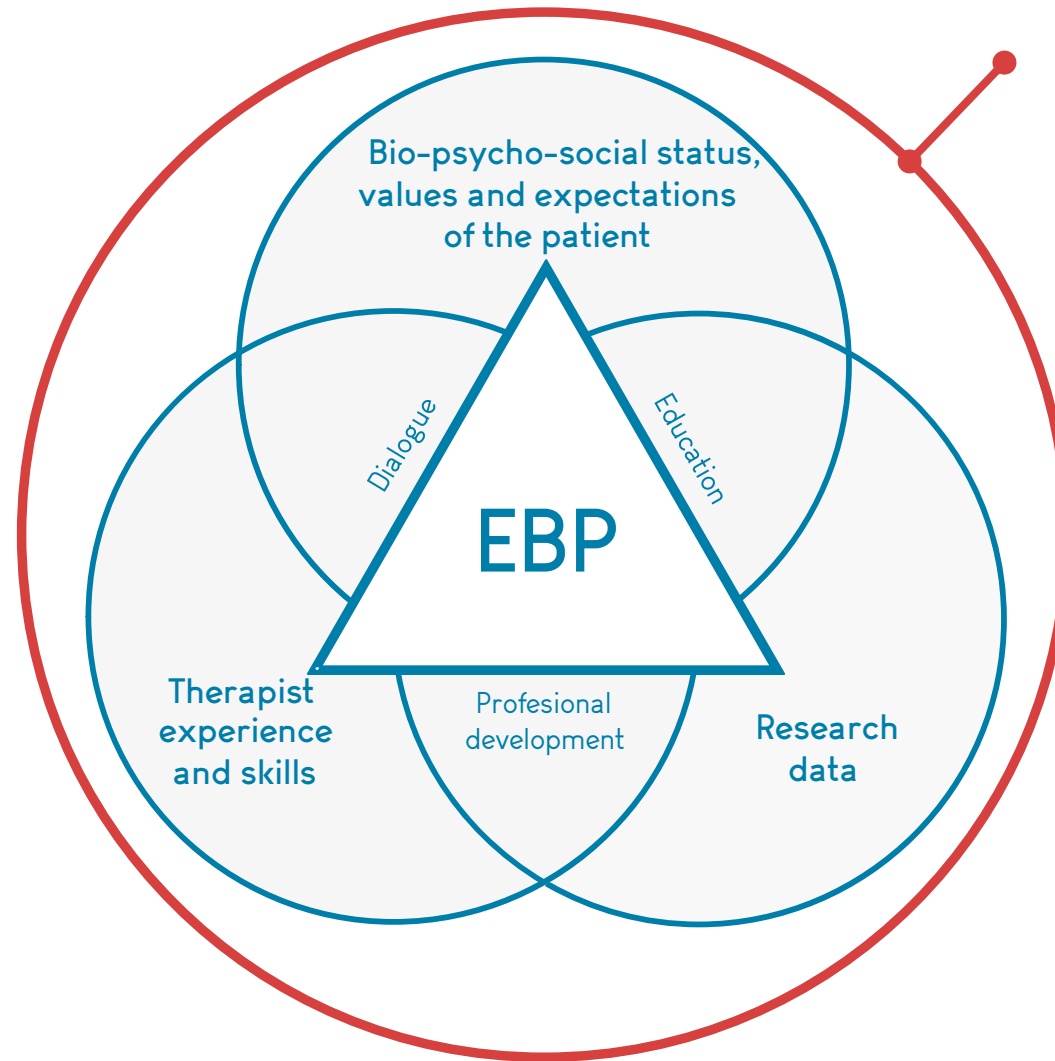
✉ pallot.adrien@gmail.com

🐦 @AdrienPallot

📷 @adrien\_pallot

23/10/2024

# Context



Deontology  
Public Health  
Resources  
Cultures  
Regulation

**EBP is the reasoned,  
individualized clinical  
application of the highest  
level of evidence possible in  
a unique multidimensional  
context of care**



**Why is it important ?**

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 [pallot.adrien@gmail.com](mailto:pallot.adrien@gmail.com)

 [@AdrienPallot](https://twitter.com/AdrienPallot)

 [@adrien\\_pallot](https://www.instagram.com/adrien_pallot)

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# Why is it important ?

- Being able to identify « good evidence »
- Increase your critical thinking
- Update your knowledge
- Reduce the lag between publication and integration

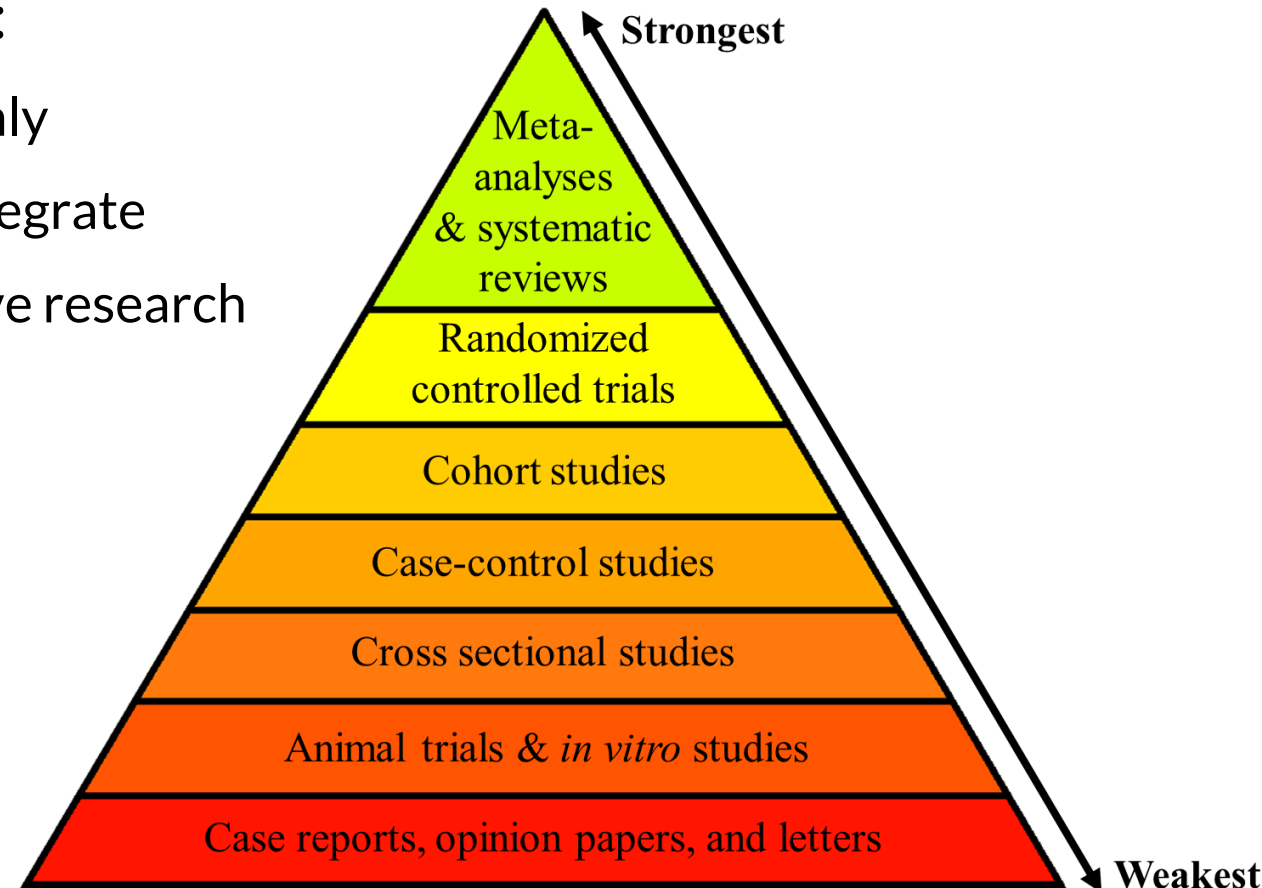


# Limits

# Limits

- Pyramide of evidence :
  - Initially helpful...
  - ... but very reductive :
    - Therapeutic question only
    - Contextualization to integrate
    - Not suitable for inductive research

## Hierarchy of Scientific Evidence





# **Levels of evidence**



# | Types of clinical questions

- Etiological :
  - Are hormonal variations of the menstrual cycle risk factors for ACL rupture in sportswomen?
- Diagnostic :
  - Is the ATRS questionnaire a reliable tool for the evaluation of patients who have suffered an acute rupture of the Achilles tendon?

# I Types of clinical questions

- Therapeutic :
  - Does early rehabilitation in a patient who had a mastectomy for breast cancer influence the occurrence of secondary lymphedema?
  
- Pronostic :
  - Do psychotic disorders influence the evolution of the disease of a patient with multiple sclerosis?

## Clinical questions types

### Levels of Evidence

#### Therapeutic / Intervention

#### Diagnostic

(reliability and validity but  
excluding predictive criteria  
validity)

#### Etiological

#### Prognostic / Predictive criteria validity

Pallot A, Davergne T, Gallois M, Guémann M, Martin S, Morichon A, Osinski T, Raynal G, Rostagno S. (2019). [Evidence-based practice in rehabilitation - Approach for a reasoned practice], Issy-les-Moulineaux : Elsevier Masson SAS

#### Level 1

- Meta-analysis of Level 2 studies
- Well-conducted systematic reviews of Level 2 studies

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#### Level 2

- Well-conducted randomized controlled trials of high power

- Good quality cross-sectional studies

- Well-conducted prospective cohort studies

- Well-conducted prospective cohort studies

#### Level 3

- Well-conducted cohort studies
- Non-randomized or quasi-randomized controlled trials
- Low-quality randomized controlled trials

- Low-quality cross-sectional studies

- Low-quality prospective cohort studies
- Well-conducted retrospective cohort studies

- Low-quality prospective cohort studies
- Well-conducted retrospective cohort studies

#### Level 4

- Low-quality cohort studies
- Case-control studies
- Cross-sectional studies
- Case series

- Cohort study
- Case-control studies

- Low-quality retrospective cohort studies
- Case-control studies
- Cross-sectional studies
- Case series

- Low-quality retrospective cohort studies
- Case-control studies
- Cross-sectional studies
- Case series

#### Level 5

- Expert opinion
- Deductive reasoning based on physiopathology

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- Expert opinion
- Deductive reasoning based on physiopathology

I'm lost, how to identify them?  
Don't worry, it's coming!



# **ACA protocol**

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 pallot.adrien@gmail.com

 @AdrienPallot

 @adrien\_pallot

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# Article Critical Appraisal (ACA) protocol

External validity

Methodological quality

Statistical quality

External consistency

Clinical relevance

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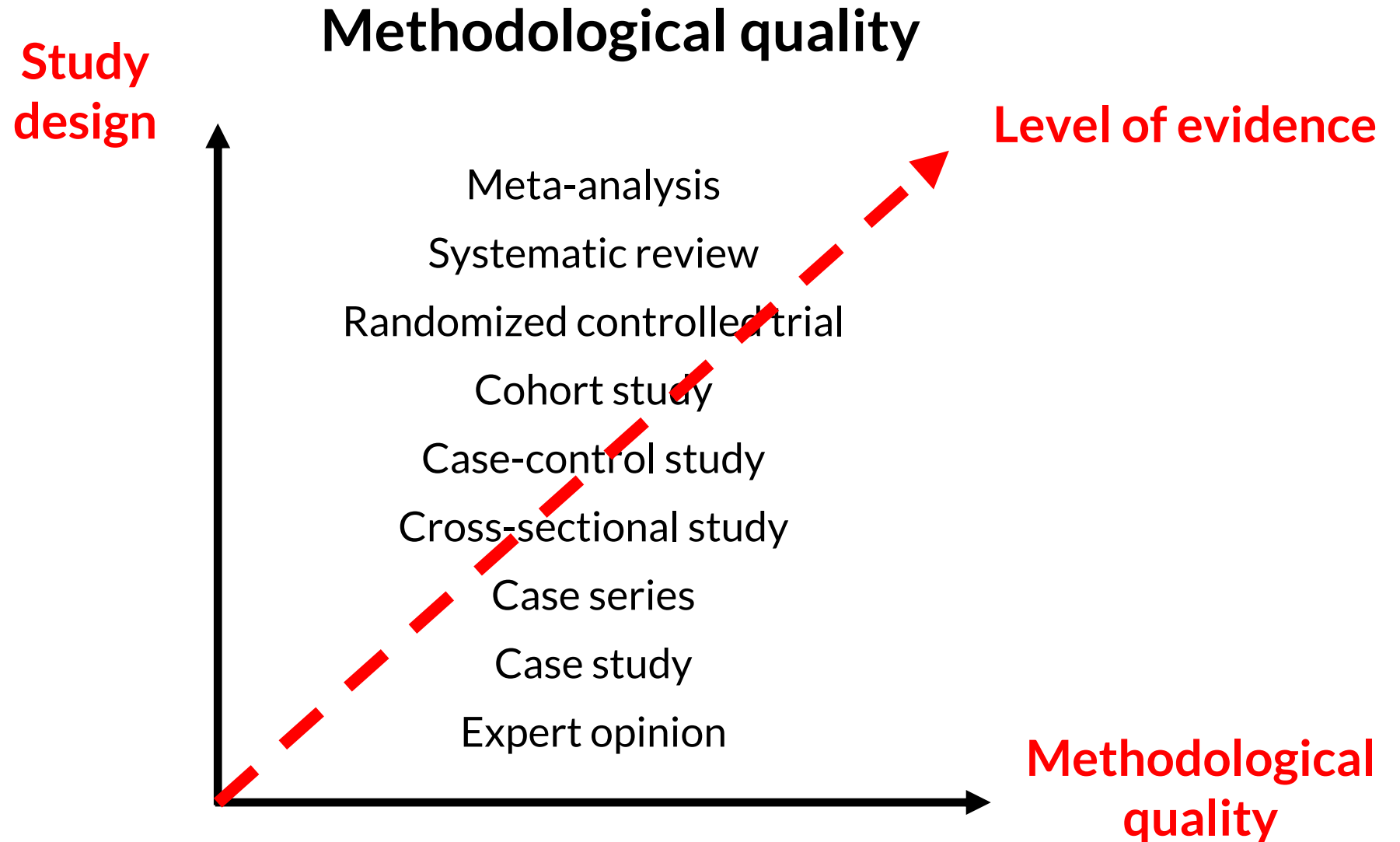
pallot.adrien@gmail.com

@AdrienPallot

@adrien\_pallot

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# Article Critical Appraisal (ACA) protocol



*Only for therapeutic questions*

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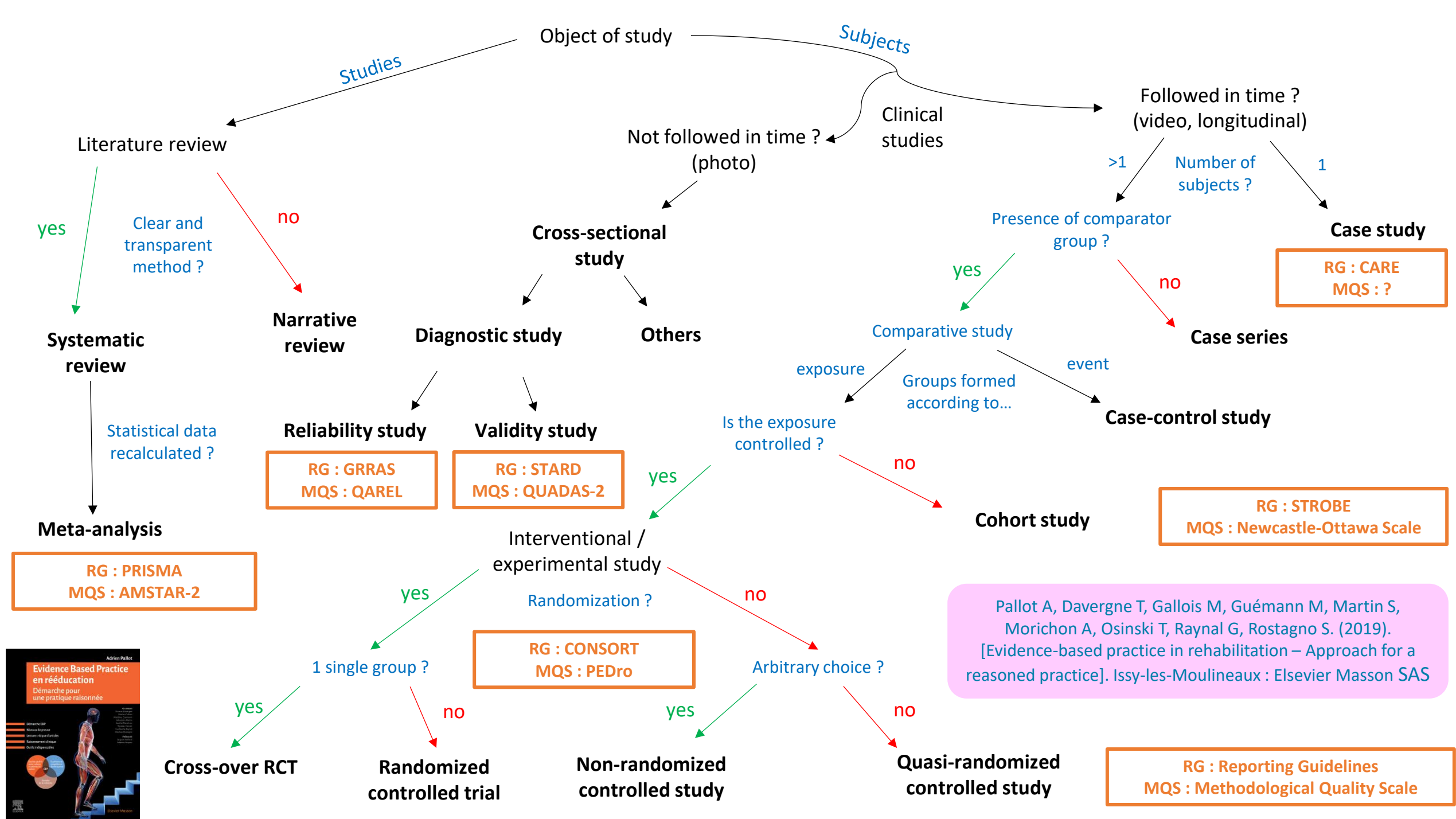
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# **| Article Critical Appraisal (ACA) protocol**

## **Methodological quality**

(a.k.a internal validity)

**Importance of knowing how to identify study designs in order to use specific scales to assess their methodological quality**





# THANKS FOR COMING

*Hope you enjoyed the presentation!*



[pallot.adrien@gmail.com](mailto:pallot.adrien@gmail.com)



[@AdrienPallot](https://twitter.com/AdrienPallot)



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