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Introduction

- Methodological **biases** and **insufficient transparency** remain present in some **RCTs** in neuropsychology (1,2,3)
- It raises concerns about the robustness of available evidence and its **integration into clinical practice**
- Neuropsychologists must therefore engage in careful **critical appraisal of scientific publications**

Objective

- * To investigate the **scientific reading habits** and **critical appraisal skills** of clinical **neuropsychologists** (Cli-Npsy)
- * To compare their perceptions of scientific articles, particularly regarding **bias identification** and **reproducibility**, with those of **researchers** (Res-Npsy)

Methods

- French-speaking Cli-Npsy and Res-Npsy
- **Cli-Npsy**
 - **Online questionnaire** assessing scientific reading habits (N=52)
 - **Reading an RCT** (a **high-** or **low-quality** version of an RCT)
 - Evaluation of the **methodological quality** of the RCT, **confidence** in its findings, and perceived **replicability** (N=26)
- **Res-Npsy**
 - **Reading the high-quality** version of the **RCT**
 - Evaluation of the **methodological quality** of the RCT, **confidence** in its findings, and perceived **replicability** (N=24)

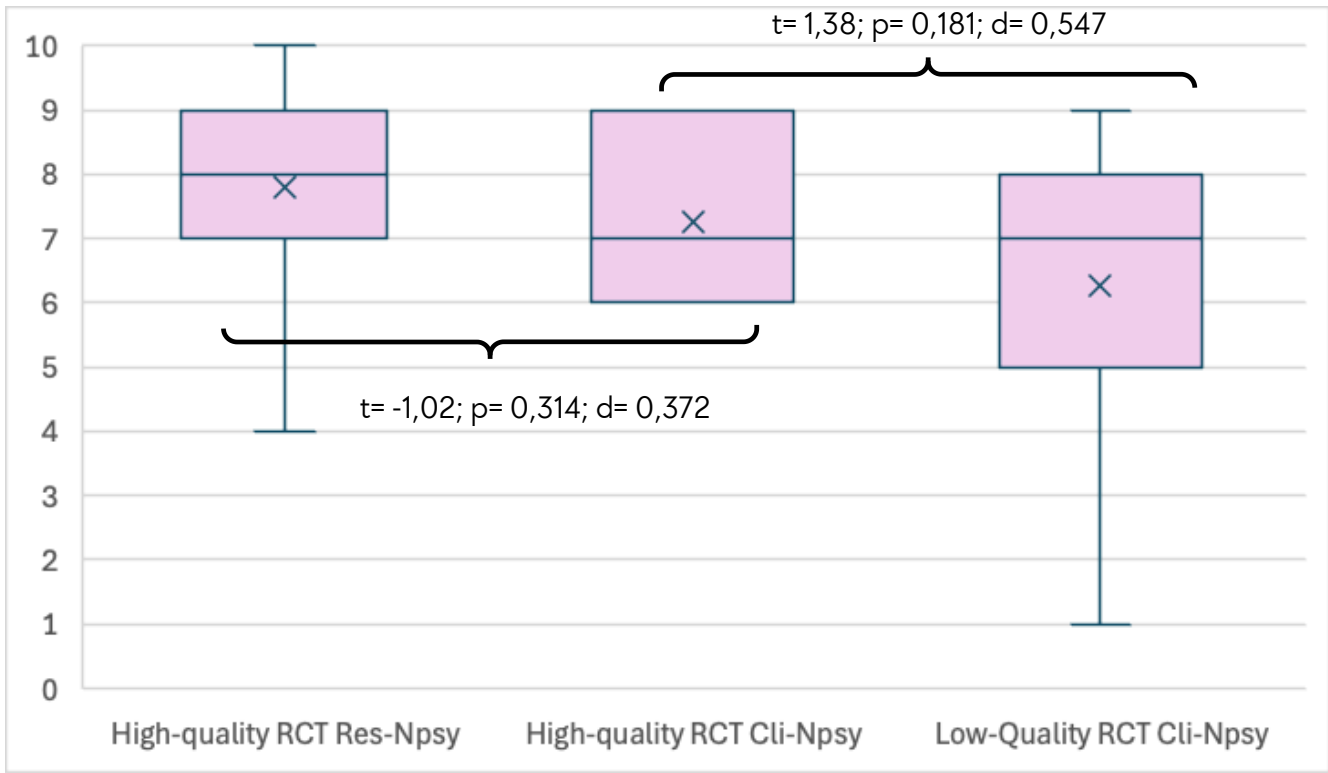
Results

- **Reading habits**
 - Most Cli-Npsy reported reading at least one intervention-related article per trimester (69%), yet only **27% read articles in full**
 - The sections reported as the most read:
 - abstract (92%)
 - discussion (74%)
 - and conclusion (95%)
- **Reading A RCT**
 - **Quality judgments** relied mainly on **publication characteristics** (journal, author, date) rather than methodological content
 - **Bias detection was limited** (Table 1)
 - Only 55% of Cli-Npsy considered the intervention of **high-quality RCT replicable**, compared with 88% of Res-Npsy (Table 1)
 - Confidence in findings did not differ significantly between the high- and low-quality article conditions for Cli-Npsy and did not differ between Cli-Npsy and Res-Npsy for the high-quality article (Figure 1)

Table 1— Perceived bias and transparency Bias: Percentage of participants who identified biases in the article; Replicability :Percentage of participants who believe the article provides enough information to replicate the intervention in clinical practice

	Cli-Npsy		Res-Npsy
	High-quality (N=11)	Low-quality (N=15)	High-quality (N=24)
Bias	36%	27%	42%
Replicability	55%	33%	88%

Figure 1 — Differences in the level of confidence Level of confidence: Confidence in the RCT findings (the cross indicates the mean, the central line represents the median, the box represents the interquartile range [IQR], and the whiskers indicate the data range).



Conclusion

- Clinical neuropsychologists engage with scientific literature
- Their **reading strategies** - which focus on certain summary sections- **and critical appraisal skills** may **limit their ability to detect methodological weaknesses**
- The low bias detection rate and the relatively high confidence levels, even for articles with a high-risk of bias, highlight the need
 - to **strengthen training in evidence assessment** on the part of clinicians
 - to **increase the accessibility and quality of research** on the part of researchers in order to support **evidence-based clinical practice**
- The discrepancy between Cli-Npsy and Res-Npsy regarding on replicability may stem from an **underestimation** by researcher of the **information useful** for implementing an intervention

1, Blause, S. D., Léonard, F., Willems, S., & Tirelli, E. (2025). Can research findings be used in clinical neuropsychology? Analysis of randomized controlled trials of working memory intervention for children. Archives of Clinical Neuropsychology, 40(7), 1388-1398. <https://doi.org/10.1093/arclin/afaf048>; 2, Bezeau, S., & Graves, R. (2001). Statistical power and effect sizes of clinical neuropsychology research. Journal of Clinical and Experimental Neuropsychology, 23(3), 399-406. <https://doi.org/10.1076/jcen.23.3.399.1181>; 3, Ioannidis, J. P. A. (2005). Why most published research findings are false. PLoS Medicine, 2(8), e124. <https://doi.org/10.1371/journal.pmed.0020124>