Assessment Scores for Patients with Central Neurological Conditions in Rehabilitation: a Systematic Review

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INTRODUCTION

- ***Rehabilitation is a multidimensional process***, and capturing all relevant aspects is essential to design individualized and effective care pathways
- The ***growing volume and variety of patient data*** is often overwhelming for clinicians during decision-making [1–2]
- ***Digitally-derived indexes*** provide a meaningful synthesis of complex data [3–4]
- Such indexes remain scarce in rehabilitation, and existing ones have been developed through heterogeneous and non-standardized approaches [5–8]

AIM

- Systematically review all available ***indexes*** for the assessment of patients after central neurological disorders/ injury
- Highlight ***strength and gaps*** in the field to ***guide future research***

METHODS

Index: *a computationally derived combination of multiple measures or scores to create a synthetic representation of a more complex concept*

POPULATION:
- Adult participants (age≥18 years)
- Central neurological disorder or injury
- Rehabilitation setting (inpatient or outpatient setting)

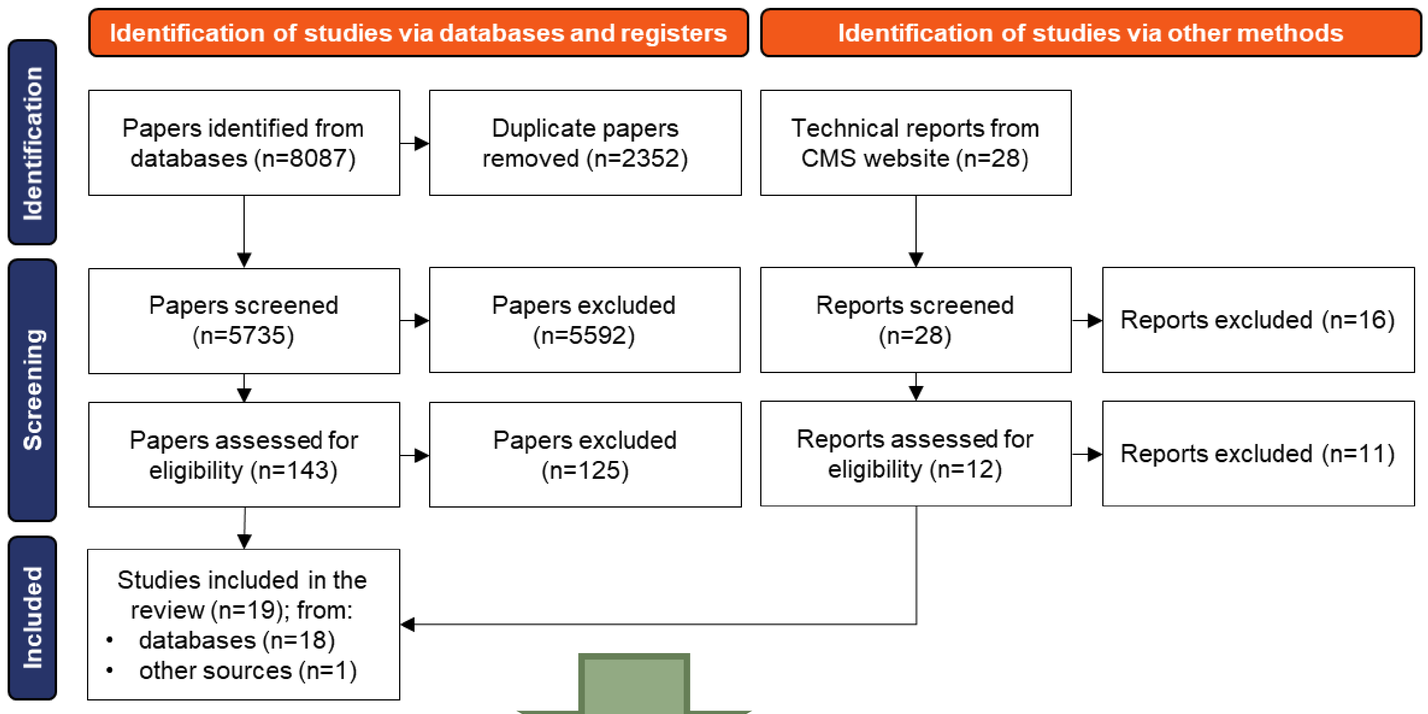
INTERVENTION:
- Development and validation of patient indexes

TYPE of STUDIES:
- Primary studies

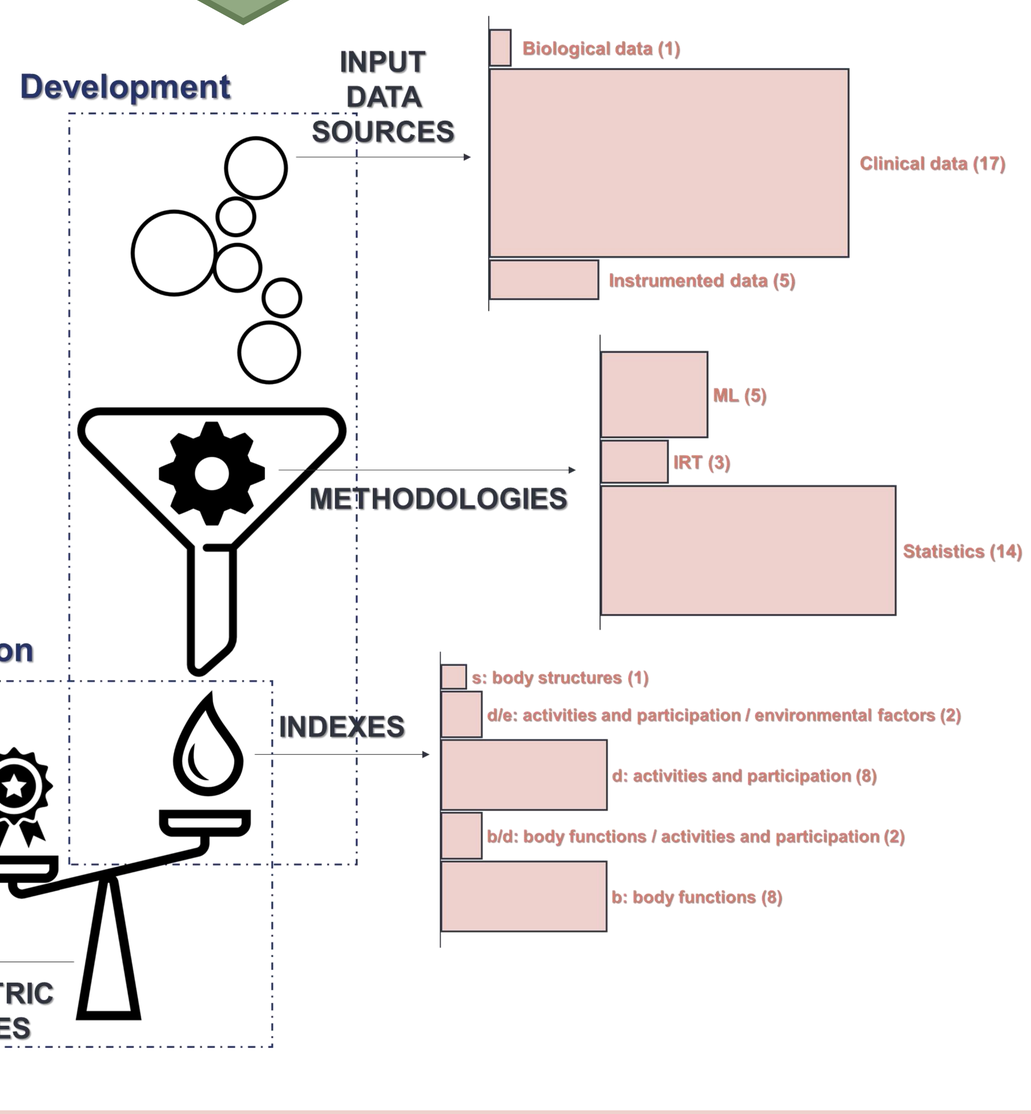
- Databases
- Public Reporting section of the Centers for Medicare & Medicaid Services

RESULTS

1. The diverse terminology prompted a broad search and led to a limited number of final results



2. The index types and methodologies were highly heterogeneous, with validation primarily focused on assessing validity



3. We developed a set of best practices for future research

INDEX DEVELOPMENT
1. Determine the goal of the index
2. Select the input variables
3. Compute the index
INDEX VALIDATION
4. Select the psychometric properties
5. Select the reference standard
6. Assess the psychometric properties
7. Report

CONCLUSIONS

- The development of indexes in the rehabilitation field is still an ***emerging*** *area*, with ***limited amount deployed into clinical practice***
- Based on our analyses, we propose a set of ***best practices*** to serve as guidelines for future research
- ***Multiple methods and data subsets*** are suggested to maximize the indexes properties

REFERENCES

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