

Sensory Deficits in Stroke: A Hidden Challenge for Rehabilitation

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Introduction

- **Environment exploration & participation are related with both movement & sensation**
- **Up to 90% of the Stroke survivors experience sensory deficits on the affected side**

Objective

The present review will focus on evidences in Stroke for –

- **Somatosensory impairment**
- **Influence on motor recovery**
- **Assessment & Management**

Methods

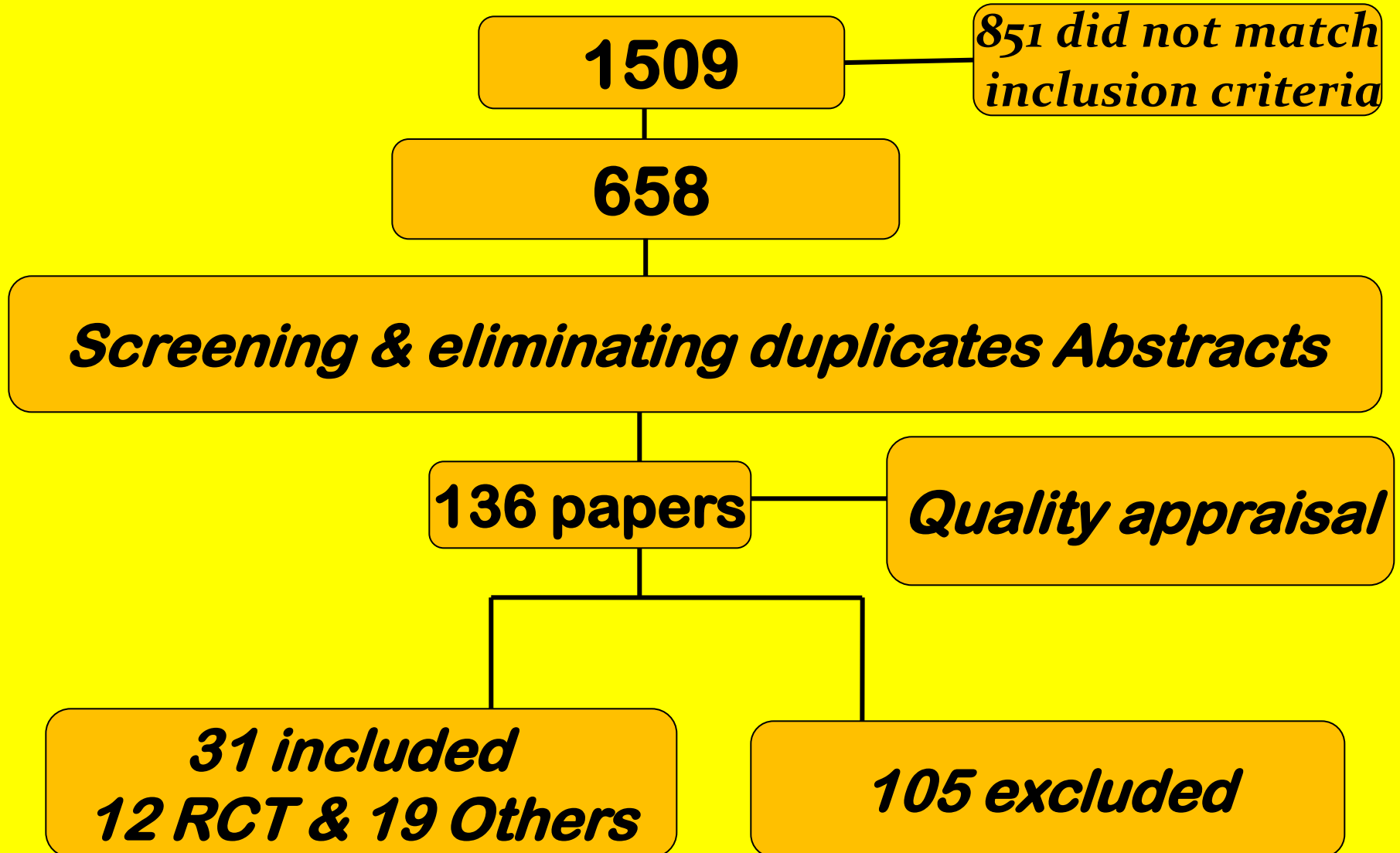
Design: Non-Systematic Review

Inclusion criteria of the Studies:

- **Participant: Acute to Chronic Stroke**
- **Outcome measure: Somatosensor-, Motor-, & Functional recovery**
- **Design: Meta-analysis, Systematic reviews, Reviews & RCTs**
- **Time of publication: Up to October 2019 (English)**

Key data source : Pubmed, TRIP Database, Cochrane Library

Study Selection Process



Results

- **Sensory deficits in Stroke**

- Tactile,
- Proprioception,
- Vibration
- Stereognosis
- 2-Point discrimination



- **Sensory impairment affecting motor recovery**

- Hand functions & dexterity are related to somatosensory function
- Proprioception & light touch is associated with quality of upper limb movements

- **Sensory Assessment methods**
 - Fugl-Meyer Sensory Scale
 - Nottingham Sensory Assessment & modified version
 - Thumb localization test
- **Sensory-based strategies to enhance post-stroke motor recovery**
 - Most rehabilitation research & treatment is focused on motor-based therapies
 - Motor-based therapy does not improve somatosensory dysfunction & results in poorer outcomes

Conclusion

- **Motor function after stroke is worsened by somatosensory deficits**
- **Sensory function has not been given due consideration**
- **There is scarce evidence supporting the value of sensory-based approaches**
- **Sensory therapy as an adjunct to motor rehabilitation is needed to be explored**

Reference

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