

## INTRODUCTION

- Aphasia can cause various communication difficulties, including **sentence production deficits (SPD)**<sup>1</sup>:
  - Grammatical morpheme omissions (e.g., “You are sleep”)
  - Verb retrieval difficulties (i.e., anomia)
  - Thematic roles assignment difficulties (e.g., “The money will give the man”)

\*Thematic roles → who did what to whom

  - Lack of complex verbs (e.g., *put* instead of *hang*)
- Various treatments for SPD have been developed, however their efficacy is not measured homogenously from a study to another
  - What to choose as a clinician for our patients?

### Type of treatments in the literature

#### Treatments on verbs

- Aim:** improve the semantic representation of verbs
- Verb naming in isolation (e.g., Semantic Feature Analysis<sup>2</sup>)
- Verb and argument production in active sentences (e.g., Verb Network Strengthening Treatment<sup>3</sup>)

#### Treatments on sentence structures

- Aim:** production of various sentence structures without explicitly discussing lexical difficulties
- Strengthening the associations between the meaning and the structure of the sentence (e.g., Mapping Therapy<sup>4</sup>)
- Treating complex structures to improve similar simpler structures (e.g., Treatment of Underlying Form<sup>5</sup>)
- Conversational abilities training through script training (e.g., HELPSS/SAPPA<sup>6</sup>)

#### Treatments on morphology

- Aim:** focus on verb tenses and aspectual markings
- Strengthening the association between the verb tense with its meaning (e.g., Faroqi-Shah, 2008<sup>7</sup>)
- Using icons to express verb tenses (e.g., C-VIC<sup>8</sup>)

### Main goal of this study

To analyse the efficacy of these interventions in terms of **gains on trained items, generalization to untrained items, transfer to other contexts, and maintenance**

## METHODS

- Systematic literature review
- Databases: PubMed, CINHAL, LLBA, Google Scholar
- Methodological quality assessed with the SCED<sup>9</sup> → half of the articles was read by two reviewers

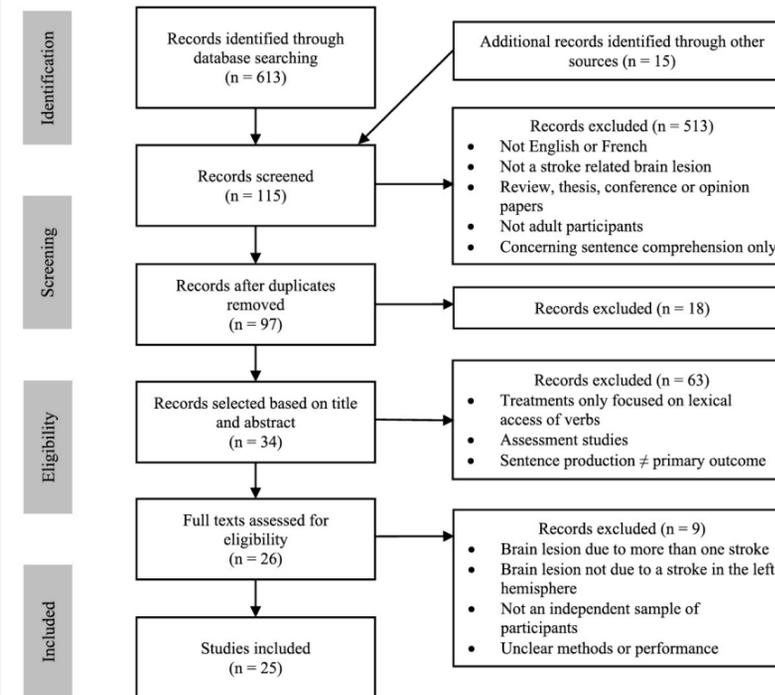


Figure 1. Flow diagram of the review process. Baseline research: April 2020

## RESULTS

- 25 included articles, regrouping 11 different treatments and 84 participants with post-stroke aphasia
- Methodological quality: average of 83.6 %

### Treatment efficacy

Article	Type de traitement	Sous-type de traitement	Gains	Generalisation	Transfer	Maintenance
Edmonds & Babb (2011)	Verbs	Verb Network Strengthening Treatment (VNeST)	12/16	11/16	9/16	12/15
Edmonds et al. (2014)			4/4	4/4	-	-
Edmons et al. (2015)			1/1	0/1	1/1	-
Thompson et al. (2013)			4/4	4/4	-	-
Webster et al. (2005)	Sentence structure	Treatment of Underlying Form (TUF)	32/32	27/32	18/23	16/18
Ballard & Thompson (1999)			15/16	15/16	9/13	11/13
Dickey & Thompson (2007)			1/1	1/1	1/1	1/1
Jacobs & Thompson (2000)			4/4	4/4	4/4	-
Murray et al. (2004)			4/4	4/4	-	1/1
Thompson, Choy et al. (2010)			4/4	4/4	-	-
Thompson, Den Ouden et al. (2010)			4/4	4/4	-	-
Thompson, Shapiro, & Roberts (1993)			4/4	4/4	-	-
Thompson et al. (1997)			1/1	1/1	-	1/1
Thompson et al. (1996)			1/1	1/1	-	-
Byng et al. (1994)	Morphology	C-VIC	4/4	4/4	-	1/1
Carragher et al. (2015)			4/4	4/4	-	-
Marshall et al. (1993)			4/4	4/4	-	-
Rochon et al. (2005)	Other	Story-telling	1/1	1/1	-	1/1
Lee & Man (2017)			1/1	1/1	1/1	-
Fink et al. (1995)	Other	Discourse Connective	1/1	1/1	-	-
Weinrich et al. (1997)			1/1	1/1	1/1	-
Boser et al. (2000)						
Faroqi-Shah (2008)						
Peach & Wong (2004)						
Hickin et al. (2015)						
<b>Total</b>			<b>79/84</b>	<b>72/84</b>	<b>43/59</b>	<b>42/49</b>

\* The fractions refer to the number of participants that showed improvements against the number of participants for which the efficacy measure was performed

## CONCLUSION & FUTURE STUDIES

- Various treatments for SPD have shown efficacy
  - Some measures should be taken into account more often (transfer and maintenance)
- Intra-individual variables had a significant effect on efficacy, such as severity of aphasia and time post-stroke
- Future studies:
  - Measure the efficacy of a treatment for SPD in French
  - Analyse inter/intra-individual factors contributing to generalisation to be able to replicate it on further studies and in clinical settings

## REFERENCES

For further information concerning this literature review: Poirier, S.-E., Fossard, M. & Monetta, L. (2021): The efficacy of treatments for sentence production deficits in aphasia: a systematic review, *Aphasiology*, DOI: 10.1080/02687038.2021.1983152

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Thanks to the FRQS for the financial support

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