

## PEER REVIEW HISTORY

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## ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Outcome Measures for Children with Speech Sound Disorder: An Umbrella Review
<b>AUTHORS</b>	Harding, Sam; Burr, Sam; Cleland, Joanne; Stringer, Helen; Wren, Yvonne

## VERSION 1 – REVIEW

<b>REVIEWER</b>	Huang, Jia Fujian University of Traditional Chinese Medicine
<b>REVIEW RETURNED</b>	02-Jan-2024

<b>GENERAL COMMENTS</b>	<p>1. The results section of the abstract is too rough and does not refer to the results of the interventions, assessment, and outcome measurement that were the focus of this study.</p> <p>2. There is no indication in the introduction as to why the focus was on speech and language therapy and why only studies where the intervention was SLT were included, after all, there were other treatments (Non-speech oral motor treatment, etc.) available for SSD.</p> <p>3. "The context for included reviews was left open in that we considered reviews that retained studies which took place in any setting (e.g., home, clinic, school) and geographical location (including outside of UK)", however, Table 1. restricts the studies to those published in English, and the Supplementary 4. assessment section also restricts the inclusion of only those assessments that are available in English? Is there any differences of interventions, assessment, and outcome measurement for children with SSD due to the different language characteristics?</p> <p>3. The literature search database didn't contain PubMed, the Web of Science?</p> <p>4. Figure 1. PRISMA flowchart, the number of reviews which is the total number of reviews initially retrieved removed duplicate records, doesn't match the number of reviews in the first step of Screening (n=6231). For the rest of the Figure 1, sometimes the top-left frame minus top-right frame equals bottom-left frame, sometimes the top-left frame minus bottom-right frame equals bottom-left frame, and some of the quantities don't match up at all.</p> <p>5. Does the age of the child in the inclusion criteria need to be specifically defined?</p> <p>6. The complete search strategy in Medline is given in Supplementary Information 1, and there is a statement that the search strategy has been appropriately adapted to each selected database. Is it necessary to "Please provide details search terms in supplementary documents. Please attach syntax used in each database as supplementary"?</p>
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	7.First, the minimum publication year was set as 2010 (01/01/2010) during searching, and papers published prior to 2000 were then removed; in this case, do the Meta and systematic reviews issued during the period of 2000-2010, which were excluded, contain relevant literature published after 2000?
<b>REVIEWER</b>	Liégeois, Frédérique UCL GOS Institute of Child Health
<b>REVIEW RETURNED</b>	16-Feb-2024
<b>GENERAL COMMENTS</b>	<p>Thank you for giving me the opportunity to review this manuscript. I found it clearly written and relevant to the UK setting. This umbrella review addresses an important gap in current clinical practice in my opinion. The authors examined published reviews since 2010 with the aim to list assessments, interventions, and outcome measures for children with SSD. The introduction provides a strong rationale in the UK context, and the methods are following a registered protocol. The Methods provides inclusion and exclusion criteria for articles. Results are clearly summarized and present critical appraisal scores. The conclusion states that there are numerous measures.</p> <p>1. Introduction: To increase relevance to international readership, it would be useful to add a brief statement about clinical guidelines in other English-speaking countries (e.g. Australia, USA) or even others.</p> <p>2. Methods: Age range: apologies if I missed this, were “children” defined as up to 16 or 18 years?</p> <p>3. Results.</p> <p>3.1. Prisma: Can the authors check how they went from having 6,886 papers (step 1) to 6,231</p> <p>3.2. Table 3: I see the DEAP is listed as not assessing phonology, yet the P stands for Phonology. The authors may need to justify/modify.</p> <p>3.3. Table 3: It would be useful to indicate which assessments are standardized. Similarly, review types (e.g. systematic, narrative, meta-analysis) could be listed in a Table to allow a quick overview.</p> <p>4. Discussion. It would be great to see the authors’ evaluation in this section. There is little mention of the quality of studies reported (most being poor according to AMSTAR), which means tools are collated but given equal consideration, irrespective of study quality. Regarding CAS, it would be useful to refer to the RCSLT 2023 position paper, where recommendations for assessments and interventions are listed.</p> <p><a href="https://www.rcslt.org/wp-content/uploads/2023/08/Childhood-Apraxia-of-speech-Draft-Position-Paper-2023_for-consultation.pdf">https://www.rcslt.org/wp-content/uploads/2023/08/Childhood-Apraxia-of-speech-Draft-Position-Paper-2023_for-consultation.pdf</a></p>

#### VERSION 1 – AUTHOR RESPONSE

<b>Reviewer: 1</b>	
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1. The results section of the abstract is too rough and does not refer to the results of the interventions, assessment, and outcome measurement that were the focus of this study.	<p>The outcomes i.e., measurements of ability and effectiveness, of the assessments, interventions and outcomes were not the focus of this review.</p> <p>This umbrella review was scoping in nature, in order to identify these elements. It is for this reason that a synthesis of the 'results' is not given in the abstract.</p>
2. There is no indication in the introduction as to why the focus was on speech and language therapy and why only studies where the intervention was SLT were included, after all, there were other treatments (Non-speech oral motor treatment, etc.) available for SSD.	Our search criteria actually include all treatments/interventions for SSD. Table 6, for example, includes oro-motor treatment. However, given previous systematic reviews have shown that only interventions which focus on speech are effective it makes sense to focus our introduction on these.
3. "The context for included reviews was left open in that we considered reviews that retained studies which took place in any setting (e.g., home, clinic, school) and geographical location (including outside of UK)", however, Table 1. restricts the studies to those published in English, and the Supplementary 4. assessment section also restricts the inclusion of only those assessments that are available in English?	While we considered reviews which retained studies outside of the UK, our inclusion criterion was that the studies should be published in English because, as stated in the next section, limitation in resources which meant we could not fund the translation of papers which had been written in languages other than English. The additional criterion of including only assessments available in English was because of the overarching aim of this work, as stated in the introduction, which was to compare outcomes for different UK NHS care pathways for children with SSD. Therefore, the tools must be available in English for them to be able to be used in the UK.
Is there any differences of interventions, assessment, and outcome measurement for children with SSD due to the different language characteristics?	<p>This is an interesting question but beyond the remit of this work.</p> <p>The objective of this umbrella review paper is to provide a list of assessments, interventions, and outcomes which target SSD in children.</p>
3. The literature search database didn't contain PubMed, the Web of Science?	<p>Pubmed is a sub database covered by Medline.</p> <p>Web of Science database covers: Science Citation Index, Social Sciences Citation Index, Arts &amp; Humanities Citation Index, Conference Proceedings Citation Index, Book Citation Index, Emerging Sources Citation Index, Index Chemicus, Current Chemical Reactions, &amp; Preprint Citation Index. As such we judged that the selected databases provided an appropriate coverage of medical, clinical, educational and psychosocial references.</p>
4. Figure 1. PRISMA flowchart, the number of reviews which is the total number of reviews initially retrieved removed duplicate records, doesn't match the number of reviews in the first step of Screening (n=6231).	Thank you for picking this up, an error was made in the number of references retrieved from the PsycInfo database. This has now been corrected.

For the rest of the Figure 1, sometimes the top-left frame minus top-right frame equals bottom-left frame, sometimes the top-left frame minus bottom-right frame equals bottom-left frame, and some of the quantities don't match up at all.	Figure 1 has been fully checked and where required a figure has been amended
5.Does the age of the child in the inclusion criteria need to be specifically defined?	Table 2 provides the inclusion criteria of 'Children at any age'
6.The complete search strategy in Medline is given in Supplementary Information 1, and there is a statement that the search strategy has been appropriately adapted to each selected database. Is it necessary to "Please provide details search terms in supplementary documents. Please attach syntax used in each database as supplementary"?	All search strategies have now been included in this supplementary material.
7.First, the minimum publication year was set as 2010 (01/01/2010) during searching, and papers published prior to 2000 were then removed; in this case, do the Meta and systematic reviews issued during the period of 2000-2010, which were excluded, contain relevant literature published after 2000?	One of the rationales for undertaking this review was to collate lists that could be used in the process of forming a core outcome set, as stated in the discussion. We wanted to collate assessments, interventions and outcomes used in current practice. It was for this reason that the 2010 data was placed on the retention of the review articles.