

Supplemental Material S1. Description of typical listening tasks used to assess spoken language processing in children and classification into SPADE dimensions.

Speech perception	
Task type	Task description
Phonologic discrimination (Klatte et al., 2007; Morsomme et al., 2011; Nakeva von Mentzer et al., 2018)	Children listen to similar sounding (non-) words and have to discriminate them.
Odd one out (Zhang et al., 2019)	Children listen to phonologically similar (non-) words and have to pick up on the odd word (e.g., <i>fan</i> , <i>fell</i> , <i>book</i> → <i>book</i>).
Repetition of (non-)words (Howard et al., 2010; McCreery & Stelmachowicz, 2013; Picou et al., 2019), or sentences (Crandell & Smaldino, 1996; Peng et al., 2016; Yacullo & Hawkins, 1987)	Children listen to (non-)words or sentences and have to repeat what they have heard. Picou et al. (2019) combined this task with a secondary (visual) task, thereby increasing working memory demands. Prodi, Visentin, Borella, et al., (2019) tested non-verbal repetition: children reconstructed sentences by combining written words.
Word-picture matching (Bradley & Sato, 2008; Jamieson et al., 2004; Klatte et al., 2007; Nelson et al., 2005; Prodi, Visentin, Peretti, et al., 2019)	Children listen to words and have to match them to corresponding pictures in <i>n</i> -alternative forced-choice designs.
Word-word matching (Peng & Jiang, 2016; Peng et al., 2016; Peng & Wu, 2018)	Children listen to words and have to match them to the corresponding written word in <i>n</i> -alternative forced-choice designs.

Listening comprehension	
Task type	Task description
Acceptability/veracity judgments (Brännström, Kastberg, et al., 2018; Osman & Sullivan, 2014)	Children listen to sentences and have to judge their semantic acceptability or veracity.
Sentence-picture matching (Lyberg-Åhlander, Haake, et al., 2015; Lyberg-Åhlander, Holm, et al., 2015; Sahlén et al., 2017; Prodi, Visentin, Borella, et al., 2019)	Children listen to sentences and have to match them to corresponding pictures in <i>n</i> -alternative forced-choice designs.
Passage comprehension (Brännström, von Lochow, et al., 2018; Chui & Ma, 2018; Morsomme et al., 2011; Morton & Watson, 2001; Nirme et al., 2019; Rogerson & Dodd, 2005; Sullivan et al., 2015; von Lochow et al., 2018)	Children listen to passages and have to answer questions (multiple-choice or open question) assessing their comprehension.
Execution of oral instructions (Klatte et al., 2007)	Children listen to oral instructions and have to perform the respective actions.

Auditory working memory

Task type	Task description
Backward digit recall (Osman & Sullivan, 2014; Sullivan et al., 2015)	Children listen to digits and have to recall the sequence in reversed order after a fixed time span.
Forward digit recall (Osman & Sullivan, 2014)	Children listen to digits and have to recall the sequence in the correct order after a fixed time span.
Odd one out with retention interval (Klatte et al., 2007)	Children listen to phonologically similar (non-)words. After a fixed time span, they have to recall the position of the odd word.
Word recall (Brännström, Kastberg, et al., 2018; Hurtig et al., 2016; McGarrigle et al., 2017; Morton & Watson, 2001; Osman & Sullivan, 2014; Sullivan et al., 2015)	Children listen to words presented in isolation, in sentences, or in passages and have to recall them after a fixed time span.

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