

Dosage specifications for a new intervention for pre-school children with developmental language disorder and speech sound disorder: insights from research and clinical expertise

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Abstract

Background: Pre-school children with co-occurring features of developmental language disorder (DLD) and speech sound disorder (SSD) regularly present within clinical services (Broomfield and Dodd, 2004), yet there are limited interventions to address this profile (Rodgers et al., 2022). The aim of this Wellcome-funded research is to develop a new intervention for these children. This includes identifying key aspects of intervention dosage for integration into the intervention protocol. For example, number of times a technique should be used within an activity, or number of intervention sessions (known as dose frequency).

Aim: To identify what dosage characteristics should be specified within the protocol for a new intervention for pre-school children with co-occurring features of DLD/SSD.

Methods: Systematic review to identify key dosage characteristics of intervention techniques for interventions for DLD (outcome: oral vocabulary) or SSD (outcome: speech comprehensibility), and an online survey of current (UK) clinical practice. Data extraction and survey questions were informed by the dosage specification work of Warren et al. (2007) and Frizelle and McKean (2022).

Findings: Following double screening of 2,047 papers, 24 were included within the review (18 for language, 6 for speech). Reporting of dosage was inconsistent; dose frequency of intervention sessions was the most reported (17 language and 5 speech studies), with dose frequency of intervention techniques the least reported (1 language and 2 speech studies). Survey findings from 108 respondents showed that 82% of clinicians would aim for at least 1 aspect of dosage within their practice. Specifically, 79% would consider dose frequency of intervention sessions. However, frequency of technique dosage within a session would also be considered by 78% of respondents.

Conclusion/implication: The findings highlight that although technique-related dosage is seldom reported in research, it is important to clinicians. Therefore, specifying technique-related dosage within the protocol for this new intervention would facilitate future translation to clinical practice (Nilsen et al., 2019). However, as technique dosage is often dependent on wider factors outside of researcher and clinician control, such as child personality and response in therapy (McGregor et al., 2021), further consideration should be given to flexibility required within dosage specifications.