**BACKGROUND:**

90% of 2nd graders cannot read a single word of Chichewa text.

**RESEARCH QUESTION:**

“Do children with deficits in both phonological awareness and rapid automatic naming (RAN) in Chichewa experience more difficulty with reading growth than children with single or no deficits?”

**METHODS**

- Included with monitoring, 4 time points during 2015-2016 school year. October, January, March, June
- Participants n=3,901 students in 33 governmental schools in 1st, 2nd, 3rd grade resampled each timepoint
- Data collected using Tangerine software

**NEW MEASURE: INITIAL SYLLABLES**

- 10 items with common beginning Chichewa syllables
- Child sees images as they are identified by the assessor and identifies the word with the same beginning syllable as the target word

**NEW MEASURE: RAPID AUTOMATIC NAMING (RAN)**

- 5 objects common to Malawi repeated in a grid of 50
- Verified that child knew objects before proceeding
- Avoids the need to know letters, numbers, or colours
- Child names items, from left to right, top to bottom
- Total seconds taken noted

**TEST RESULTS**

Minimal growth from Time 1 to Time 4 in the Double Deficit group compared to the No Deficit group. Rarely does the Double Deficit group at Time 4 reach the score of the No Deficit group at Time 1.

Single Deficit and Double Deficit groups have similar average scores at Time 1; by Time 3 and Time 4, the Single Deficit group pulls away, more than doubling the average score of counterparts at Time 4.

**LIMITATIONS & RECOMMENDATIONS**

- Need a longitudinal design following individual children instead of cohort samples.
- Need to examine relationship of PA and RAN to non-word (pseudoword) reading.
- Need to examine Double Deficit category with other Phonological Awareness measures.
- Consider including naming of overlearned stimuli in similar contexts as a screener.
- Instruction needs to be differentiated for children with a Double Deficit profile.

**REFERENCES**


Furnes, B. & Samuelsson, S. (2011). Phonological awareness and rapid automatized naming (RAN) in Chichewa experience more difficulty with reading growth than children with single or no deficits.

**OTHER EXISTING MEASURES:**

- Familiar Words: read 50 individual words, timed
- Oral Reading Fluency: read connected text, timed
- Initial Sounds
- Syllable Sounds

**NEW MEASURE: INITIAL SYLLABLES**

PA deficit = below the grade level mean, at that time point

**NEW MEASURE: RAPID AUTOMATIC NAMING (RAN)**

RAN deficit = longer to finish the task than the average student in their grade, at that time point