European Portuguese Children’s Test of Nonword Repetition in School-Age Children
with and without Language Impairment

Introduction

- Nonword Repetition ability appears to be a sensitive marker of children at risk for language and reading impairments (Dollaghan & Campbell, 1998; EllisWeismer et al., 2005).
- Since the CNRep Test was developed in accordance with the phonotactic rules of English language (Gathercole & Baddeley, 1996) and the stress and pattern of the syllables in Portuguese words are different, neither the NRT or the CNRep are not suitable for non-English speakers.

Purpose

- To develop a European Portuguese Children’s Test of Nonword Repetition (EPCNRep).
- To compare European Portuguese children’s performance with and without language impairment (LI).

Development of the EPCNRep

Subjective estimates of the wordlikeness of a list of 100 nonwords were obtained, according to Gathercole & Baddeley’s research (1994). Twenty adult graduate native Portuguese rated each of the two, three, four, five and six syllable lengths, and the mean ratings of wordlikeness were calculated. After this procedure, 40 nonwords were divided into sets of eight at each syllable length (from two to six), representing the EPCNRep.

Each set has four nonwords rated high wordlikeness and four rated low wordlikeness. At each of the five nonword syllable lengths, four of the nonwords contain single consonants and four contain nonwords with one or more consonant clusters.

High and Low Wordlikeness Nonwords

<table>
<thead>
<tr>
<th>High Wordlikeness Nonwords</th>
<th>Low Wordlikeness Nonwords</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-syllable</td>
<td>2-syllable</td>
</tr>
<tr>
<td>3-syllable</td>
<td>3-syllable</td>
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<tr>
<td>4-syllable</td>
<td>4-syllable</td>
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<tr>
<td>5-syllable</td>
<td>5-syllable</td>
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<tr>
<td>6-syllable</td>
<td>6-syllable</td>
</tr>
</tbody>
</table>

Participants

- Children (75 language impaired children and 75 age, gender and SES-matched peers), aged 7 - 11, from 2nd to 5th grade.
- All participants came from 72 state funded schools (rural, suburban and urban environments) in Northern Portugal.
- Participants consisted of 108 boys (72%) and 42 girls (28%).
- All had intelligible articulation and nonverbal IQ scores > 80 (WISC III).

Results

Results indicate that children with LI show significant lower accuracy in their nonword repetition ability as compared with their age matched peers.

Conclusions

- EPCNRep sensitivity and specificity analysis demonstrate that this nonword repetition measure may have reliable clinical/educational usefulness in identifying European Portuguese speaking children with language impairment.
- EPCNRep LH ratio analysis for Total Percent Words (TOTWords) correct was comparable to the results of English speaking children using Total Percent Phonemes Correct (TOTPPC). (Dollaghan & Campbell, 1998; Ellis Weismer et al., 2000; Gathercole & Baddeley, 1994).
- Further research needs to determine if LH ratio’s for EPCNRep TOTWords and TOTPPC are comparable. If yes, then scoring may need to be done only at the 1/0 Word correct level for identification of children at risk for language learning impairments.

References


Abstract

Research suggests nonword repetition ability to be an excellent marker for language and reading impairments and phonological short-term memory deficits. The objective of this study was to develop the European Portuguese Children’s Test of Nonword Repetition (EPCNRep) as a Portuguese-language version and compare performance of children with and without language impairment (LI).

Subjective estimates of the wordlikeness of a list of 100 nonwords were obtained following Gathercole & Baddeley’s (1994). Forty nonwords in sets of eight for each number of syllables (from two to six) were chosen to represent the EPCNRep. The EPCNRep was administered to 350 children (75 with LI and 75 randomized age-matched typical peers), aged 7 - 11, in Northern Portugal. Results indicate that the children with LI show significantly lower accuracy in nonword repetition as compared to their peers. The sensitivity/specificity analyses demonstrate that this measure may have reliable clinical utility in identifying children with LI.

Participants

- Children (75 language impaired children and 75 age, gender and SES-matched peers), aged 7 - 11, from 2nd to 5th grade.
- All participants came from 17 state funded schools (rural, suburban and urban environments) in Northern Portugal.
- Participants consisted of 108 boys (72%) and 42 girls (28%).
- All had intelligible articulation and nonverbal IQ scores > 80 (WISC III).

Results

Results indicate that children with LI show significant lower accuracy in their nonword repetition ability as compared with their age matched peers.

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- EPCNRep sensitivity and specificity analysis demonstrate that this nonword repetition measure may have reliable clinical/educational usefulness in identifying European Portuguese speaking children with language impairment.
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- Further research needs to determine if LH ratio’s for EPCNRep TOTWords and TOTPPC are comparable. If yes, then scoring may need to be done only at the 1/0 Word correct level for identification of children at risk for language learning impairments.

References