
Recall tasks in monolingual and bilingual children: what do they tell us about the nature of bilingualism and SLI

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Abstract

Recall tasks underpin verbal working memory which is an area of weakness in children with Specific Language Impairment (SLI).[1,2] Non-word repetition (NWR) and sentence repetition (SRep) have proven to be reliable markers for screening monolingual children with SLI.[3,4] This study investigated (a) separate effects of bilingualism and SLI on NWR and SRep; (b) the extent to which SLI is associated with a memory deficit and vocabulary size; and (c) predictive validity of recall tasks for diagnosing SLI among bilingual and monolingual children.

A total of 236 preschool children aged 5;2-7;1 participated in the study: 150 Russian-Hebrew bilingual speaking children (27 SLI), 52 Hebrew monolinguals (14 SLI) and 34 Russian monolinguals (14 SLI). The two bilingual groups had similar length of exposure to L2/Hebrew. Children's language proficiency (LP) was determined in Russian[5] and in Hebrew[6]. All children met the exclusionary criteria for SLI [7] and had non-verbal IQ within the normal range.[8] Children with SLI had parental concerns about language milestones, or reported history of SLI and LP score below the cut-off point. Children with bilingual SLI (biSLI) had low LP in both languages (using bilingual norms).

The following tests were administered in Russian and in Hebrew (bilingual children were tested in both languages): expressive vocabulary (LP subtests), Forward Digit Span (FWD-S), NWR and SRep (see Tables 1 and 2 for descriptive statistics).

The analysis of background information using a 2 (Language Ability: SLI, TLD) x 2 (Bilingual Status: monolingual, bilingual) ANOVA in Russian and Hebrew separately confirmed that children with SLI had a memory deficit (as measured by FWD-S), while bilingualism did not show an aggravating effect on storage. Vocabulary scores were negatively associated with both bilingualism and SLI.

NWR and SRep were further analyzed using a 2 (Language Ability: SLI, TLD) x 2 (Bilingual Status: monolingual, bilingual) ANCOVA in each language separately controlling for verbal working memory capacity (FWD-S) and vocabulary size. SLI effect was robust in both languages even when the VWM and vocabulary size were controlled. Bilingualism effect was associated with poorer performance on SRep, but not NWR. Yet, when the vocabulary size

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is controlled, there was no effect of bilingualism, and a bilingual advantage was observed for NWR in L1/Russian.

NWR and SRep provided fair to good sensitivity and specificity values for monolingual and bilingual children using the same cut-off points: NWR (Russian: 80% and 84%; Hebrew: 80% and 78%) and SRep (Russian: 80% and 80%; Hebrew: 92% and 83%).

Our results suggest that while SLI is associated with verbal memory limitation, this deficit is not enough to account for poor performance on NWR and SRep. As for bilingualism, our study brings evidence that verbal memory capacity is not affected by bilingualism, while lower performance on recall tasks might be linked to vocabulary scores.