Perceived sense of effort and dual-task performance for fluent and nonfluent individuals with aphasia

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Attention deficits in aphasia have been explained as an inability to appropriately allocate attentional resources, or a reduction in available resources [1]. Inaccurate sense of effort (SOE) has also been speculated as a source for decreased performance on divided attention tasks, as SOE reflects, and may influence, the amount of cognitive resources expended [2, 3].

While it is thought that the attention deficits are due to damage of a “common” attention network [4], there is little information regarding how aphasia type influences perceived task demand and subsequent performance. IWA (fluent=4, nonfluent=3) were assessed for SOE on a dual-task procedure (card sorting with tone identification) [5]. Results (Figures 1 and 2) indicate significant group differences in the mean percentage of tones identified correctly. Nonfluent individuals demonstrated greater performance \(F(1, 5) = 16.15, p = 0.01, \eta^2 = 0.764\), \(M= 87.52\%\) (nonfluent), 38.10\% (fluent). There were no other significant group differences.

Findings suggest that task evaluation and attention allocation may differ between fluent and nonfluent IWA. Results conflict with previous findings of similar performance between aphasia type [4]. It is possible that the attention system is in fact disrupted differently in individuals with fluent and nonfluent aphasia, or that perception of task demand influences dual-task performance differently in these populations.

Figure 1.

Figure 2.