

Numerosity and number signs in Deaf Nicaraguan adults

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Because Nicaragua did not have a sign language until 25 years ago, many older deaf Nicaraguans did not learn a language or counting sequence until adulthood. This study examines the relationship between the acquisition of number words and their sequence (i.e., counting) and the ability to mentally represent exact quantities and to perform mental operations on them. Adults and adolescents performed one-to-one matching with objects (checkers) and ephemeral events (shoulder taps) for small (1-4) and large quantities (5-13), and counted to 130 (if able). Performance was markedly worse with ephemeral events than objects, both in receiving and producing quantities, across groups. Counting ability predicted performance on the ephemeral tasks. These data suggest that number words, in a memorized sequence, are applied to the task of encoding and producing precise quantities, and that the unconventionalized signs available in the 1970s were as effective as modern conventionalized signs to enable this learning.

Words: 150