

Back to Africa: Tracing Dyslexia Genes in East Africa

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[Reading and Writing](#) volume 20, pages 27–49(2007)

Abstract

A sample of Swahili-speaking probands with reading difficulties was identified from a large representative sample of 1,500 school children in the rural areas of Tanzania. Families of these probands ($n = 88$) were invited to participate in the study. The proband and his/her siblings received a battery of reading-related tasks and performance on these tasks was recorded and treated as phenotypic data. Molecular-genetic analyses were carried out with 47 highly polymorphic markers spanning three previously identified regions of interest harboring susceptibility loci for reading difficulties: 2p, 6p, and 15q (DYX1–DYX3). The analyses revealed the involvement of these regions in the development of reading difficulties in Swahili. The linkage signals are especially pronounced for time (compared with error) indicators of reading difficulties. These findings are easily interpretable because in transparent languages such as Swahili deficits in reading are more related to the rate/speed of reading and reading-related processes than to the number of errors made. In short, the study incrementally advances the field by adding an understudied language and an understudied population to the variety of languages and populations in the field of molecular-genetic studies of reading difficulties.