



In the English-speaking world, dyslexia is a familiar learning disorder. Most people are likely to have known someone who found reading and writing trickier than their peers.

In fact, more than one in 10 people that grew up with English as their [first language](#) are said to have dyslexia, with wide consensus pointing toward a person's genetic history as the leading cause. One, it would appear, is either born dyslexic or not.

But there is also a phenomenon in which some people who speak both English and another language can be dyslexic in one, but not the other. The reason, it seems, is hidden in the characteristics of a language and its writing system.

"The English writing system is so irregular—print to sound or sound to print translation is not always one-to-one," says Brunel University London's Professor of Cognitive Neuroscience Taeko Wydell in a BBC radio documentary, "[Dyslexia: Language and Childhood](#)."

"This irregularity or inconsistency makes it especially difficult for dyslexic individuals to master reading and writing in English," she says.

So, for example, "mint," "lint" and "hint" – all "int" words—are pronounced differently to the word "pint." And the words "through," "though" and "tough" all sound different, despite looking on the page like they should sound similar. This makes English a so-called "opaque" [language](#). The only way one knows the individual pronunciations, is to learn and remember each exception, such as "pint" or "yacht," individually.

"This kind of irregularity doesn't happen in other languages such as Italian, Spanish or Finnish," said Prof Wydell, pointing to so-called "transparent" languages where combinations of letters are always

pronounced the same, with some rare exceptions. As such, studies have shown Italian speakers are only half as likely to show signs of dyslexia than English speakers.

Levels of dyslexia can also be far lower in countries with a symbol-based writing system, such as Japanese or Chinese, because of how those writing systems are taught in schools.

When children learn to write Japanese Kanji or Chinese characters, they consistently repeat the order of strokes required to draw each character whilst speaking aloud the corresponding word. This helps the motor sequence—the combination of small movements required to write each word or sound—get "wired in" to their brains.

"So when the child is asked to write later on, the child's hands almost automatically write down the character from memory," said Prof Wydell.

It's therefore possible for people who learn to read and write in Chinese or Japanese to have no idea they have dyslexia until they later begin to learn English and are forced into reading and writing in a totally different way.

So low is the prevalence of diagnosed dyslexia in [primary schools](#) in Japan—as low as 1.4% when writing with syllabic Kana characters and 6.9% when writing with Kanji characters—that it wasn't until 2006 that Prof Wydell published STRAW-I, the first and only standardized and systematic screening test for identifying dyslexia in Japanese primary school children.

The test has since been extended, with the new standardized test—STRAW-R—now being suitable for children up to 15 years old, significantly increasing the chance that [young people](#) in Japan will



receive a timely diagnosis for [dyslexia](#) and be able to access to the right support throughout their schooling.

**More information:** Taeko N. Wydell. Developmental Dyslexia in Japanese, *Developmental Dyslexia across Languages and Writing Systems* (2019). [DOI: 10.1017/9781108553377.009](https://doi.org/10.1017/9781108553377.009)

Taeko N.. Cross-Cultural/Linguistic Differences in the Prevalence of Developmental Dyslexia and the Hypothesis of Granularity and Transparency, *Dyslexia - A Comprehensive and International Approach* (2012). [DOI: 10.5772/31499](https://doi.org/10.5772/31499)

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