

## Word Accentuation Test

The Word Accentuation Test (WAT), also known as the Test de Acentuación de Palabras, was developed by Del Ser et al. (1997) as a measure of premorbid cognitive functioning. It is a Spanish language equivalent of the National Adult Reading Test and related assessment tools that are used in English. These notes are for the version that can be downloaded from [www.gpluck.co.uk](http://www.gpluck.co.uk), and has validity and reliability data published in Pluck et al. (2017). That article is written in Spanish and provides lots of information about the WAT.

The WAT can be used to assess premorbid cognitive ability because it is very resistant to psychiatric and neurological disorders, it is therefore considered to be a 'hold' test, i.e. performance holds even when it is used for clinical assessments. In healthy individuals the WAT is highly correlated with intelligence test scores. Therefore, when administered to cognitively impaired individuals it still gives a good idea of the premorbid cognitive level.

As it correlates so well with intelligence test scores it can also be used as a rapid and simple measure of intelligence. Or even as a fast and easy measure of reading ability.

Administration is quite simple. The participant is shown the word list page in which none of the words have accent marks shown. However, they are all words that do require irregular accentuation in order to conform to the normal accepted pronunciation for the words. The participant is told to read the words aloud, one word at a time, and to pronounce them correctly for normal (Castilian) Spanish. They should be aware that the accent marks have not been given to them.

The experimenter simply listens to the speech of the participant and grades each response as either correct (1) or incorrect (0). Correct means that the stress (accent) was placed at the correct point in the word. The total score (maximum 30) is simply the number of words pronounced correctly. Note that the participant must attempt to pronounce the words, it is wrong to ask participants to specify the stress point, e.g. 'where is the stress point in this word', similarly showing the words and asking them to write or mark the stress points is completely wrong. The participant must be reading the words aloud and in a natural manner. If they are putting too much emphasis on the stress and completely over stressing the words, tell them to start again and read naturally.

This is a relatively effortless task for most participants. If they have sufficient literacy to read single words, they can attempt the test and even if they do not recognise the words, they should still be able to complete the test. In fact, many participants will read the words so quickly that it is difficult for the experimenter to record accuracy. If that happens, you should ask the participant to slow down. In illiterate participants this test cannot be used to assess premorbid intelligence, however, it could potentially be used to measure their basic reading ability.

This test is provided for research use. It can be used in research to compare different groups, in which case it is particularly useful for demonstrating that patient and control groups are well matched for premorbid ability. WAT scores are also useful for correlational studies. It is notable that WAT scores are a strong indicator of an individual's educational background, but scores do not change over the adult life span, so there is no need in most cases to use age-normed data.

No normative data is supplied here. However, I have provided tables for interpreting scores from my validation of the test in Ecuador (Pluck et al. 2017). For use in other countries, either use the raw scores, or for researchers interested in test development to local conditions, it is a relatively simple procedure to develop a regression equation to estimate intelligence test scores. That procedure requires collecting data on the WAT and an established test of intelligence on a sample of >50 participants from a range of educational backgrounds. See Pluck et al. 2017 for guidance.

### *Reliability and validity information for the WAT (as used in Ecuador)*

Good internal consistency, Cronbach's alpha = .841 (Pluck et al., 2017)

Excellent test-retest reliability,  $r = .908$  (Pluck et al., 2017)

Very good convergent validity as a measure of language ability, correlation with a test of semantic access was  $r = .520$ , (Pluck, 2018)

Excellent convergent validity as a measure of intelligence, correlation of the WAIS-IV was  $r = .827$  (Pluck et al., 2017).

Good predictive validity as a measure of intelligence, correlation with GPA in university students was  $r = .400$  (Pluck, 2018).

Please contact me if you have any questions about using the WAT. If you use this test in any published research you should cite it to Pluck et al. (2017) and Pluck (2018).

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### *References*

Del Ser, T., González-Montalvo, J. I., Martínez-Espinosa, S., Delgado-Villapalos, C., & Bermejo, F. (1997). Estimation of premorbid intelligence in Spanish people with the Word Accentuation Test and its application to the diagnosis of dementia. *Brain and Cognition*, 33(3), 343-356.

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Pluck, G., Almeida-Meza, P., Gonzalez-Lorza, A., Muñoz-Ycaza, R. A., & Trueba, A. F. (2017). Estimación de la función cognitiva premórbida con el Test de Acentuación de Palabras. *Revista Ecuatoriana de Neurología*, 26(3), 226-234.