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Intelligibility of German digit triplets for non-native German listeners

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The aim of this study was to investigate the German digit triplets test (Wagener et al, 2006) with non-native listeners. The test was developed as a screening test for speech intelligibility in noise and measures the speech reception threshold (SRT) of digit triplets in noise. The test can be used in a broadband version via headphones or as a telephone test. 35 normal-hearing international students who spent a few months at Oldenburg University took part in this experiment. The subjects differed in German verbal skills. Each subject measured 7 lists consisting of 27 triplets each: 2 lists via headphones using an adaptive procedure, 2 lists via telephone using an adaptive procedure and 3 lists via headphones at three different fixed signal-to-noise ratios. In an additional experiment, the German Oldenburg sentence test (OLSA, Wagener et al, 1999) was also used with some of the participating subjects.

The mean SRT results of the digit triplets test of non-native listeners showed no significant difference to the SRT reference values of German listeners, as far as measurements via headphones are concerned. Poorer speech perception in noise and significant differences between subjects can be observed in telephone measurements with the digit triplets test and in the OLSA test which requires larger verbal skills compared to the digit triplets test.

Literatur:

Wagener, K., Brand, T., Kollmeier, B. (1999) "Entwicklung und Evaluation eines Satztests für die deutsche Sprache I-III: Design, Optimierung und Evaluation des Oldenburger Satztests". Zeitschrift für Audiologie, 38(1-3), 4-15, 44-56, 86-95

Wagener, K.C., Bräcker, T., Brand, T., Kollmeier, B. (2006) „Evaluation des Ziffern-Tripel-Tests über Kopfhörer und Telefon". DGA 9. Jahrestagung Köln 2006, TagungsCD

