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COGNITION
LISTENING EFFORT

# Normative values for test of central auditory processing disorder in children aged from 6 to 12 years old

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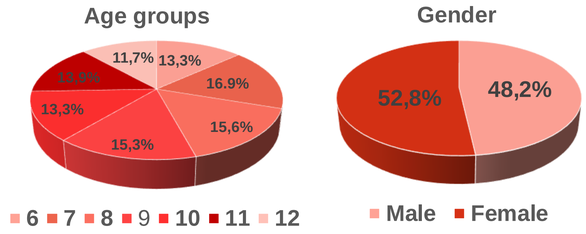
## Abstract

**Central auditory processing disorders (CAPD)** can significantly affect the daily functioning of a child, and the first step in determining whether rehabilitation procedures are required is a proper diagnosis. Different guidelines for making diagnoses have been published in the literature, and in various centers normative values for psychoacoustic tests of CAPD have been used internally.

**The aim of this study is to present normative values for tests assessing CAPD in children aged 6 to 12 years, divided by age at last birthday.**

## Objectifs

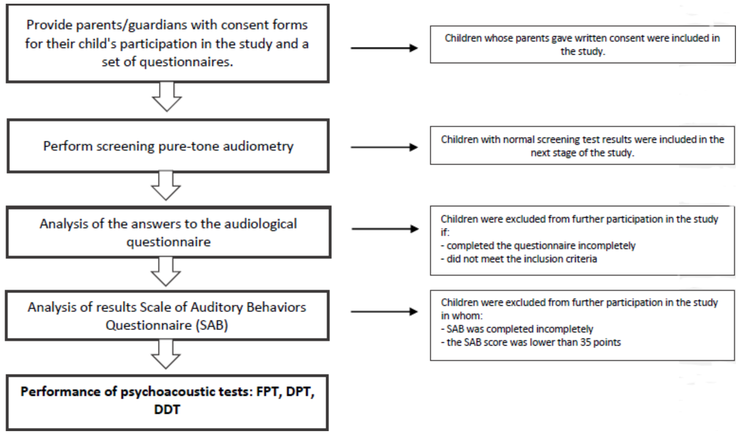
We tested 1037 children aged 6 to 12 years who were attending primary schools and kindergartens. The criteria for inclusion were: normal audiogram, intellectually normal, no developmental problems, and no difficulties in auditory processing.







## Méthodes et Matériels




## Résultats

The results allowed us to determine normative values for FPT, DPT, and DDT in seven different age groups. We developed a new approach, based on quantile-based norms, to determine normative values in each group. Three categories – average, below-average, and above-average – allow for a broader but more realistic interpretation than those used previously. We compare our results with published standards.

**Table 1.** Reference values for FPT, DPT, DDT RE, DDT LE tests results for children aged 6 to 12.

| | Age (years) | Below average result | Average score | Above average score |
|---|---|---|---|---|
| FPT | 6 | to 12,5% | 13–35% | over 35% |
| | 7 | to 20% | 20,5–45% | over 45% |
| | 8 | to 31,5% | 32–57,5% | over 57,5% |
| | 9 | to 35% | 35,5–70% | over 70% |
| | 10 | to 42,5% | 43–80% | over 80% |
| | 11 | to 43,5% | 44–80% | over 80% |
| | 12 | to o 56% | 56,5–87,5% | over 87,5% |
| DPT | 6 | to 14% | 14,5–40% | over 40% |
| | 7 | to 25% | 25,5–65% | over 65% |
| | 8 | to o 37,5% | 38–75% | over 75% |
| | 9 | to 52,5% | 53–85% | over 85% |
| | 10 | to 61,5% | 62–90% | over 90% |
| | 11 | to 63,5% | 64–92,5% | over 92,5% |
| | 12 | to 75% | 75,5–95% | over 95% |
| DDT RE | 6 | to 52,5% | 53 –73% | over 73% |
| | 7 | to 62,5% | 63–82,5% | over 82,5% |
| | 8 | to 70% | 70,5–87,5% | over 87,5% |
| | 9 | to 77,5% | 78–90% | over 90% |
| | 10 | to 72,5% | 73–92,5% | over 92,5% |
| | 11 | to 77,5% | 78–92,5% | over 92,5% |
| | 12 | to 82,5% | 83–95% | over 95% |
| DDT LE | 6 | to 40% | 40,5–60% | over 60% |
| | 7 | to 47,5% | 48–70% | over 70% |
| | 8 | to 60% | 60,5–77,5% | over 77,5% |
| | 9 | to 65% | 65,5–80% | over 80% |
| | 10 | to 62,5% | 63–85,5% | over 85,5% |
| | 11 | to 72,5% | 73–90% | over 90% |
| | 12 | to 75% | 75,5–90% | over 90% |

## Conclusion

Our study is the largest normative database published to date for CAPD testing, setting a standard for each child by age in years. We used the Senses Examination Platform, a universal tool, to unify standards for the classification of CAPD.

**Our study can serve as a basis for the development of a Polish model for the diagnosis of CAPD**.

## Références

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