

Is ACT ready for paediatric audiology?

Preliminary normative evidence in school-aged children with normal hearing

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BRITISH ACADEMY
OF AUDIOLOGY



@laaaefob



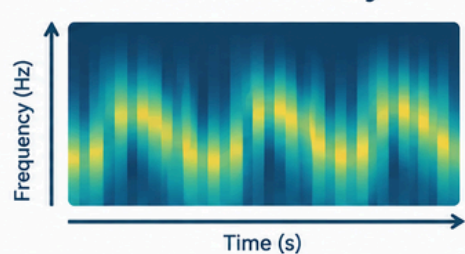
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ACT™

Language-independent
measure



Spectrotemporal
contrast sensitivity



Estimates suprathreshold
hearing ability relevant to
speech understanding in noise



Adult reference
values available

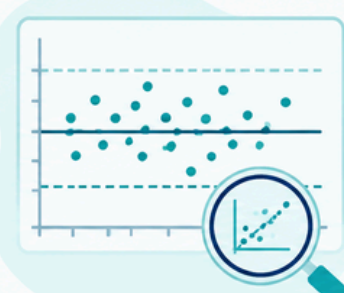


Paediatric
reference values
remain limited



ANALYSIS

Age group and session effects were assessed with generalised estimating equations (GEE). Bland-Altman analysis examined test-retest agreement.



ETHICS

Approved by the Institutional Ethics Committee (IEP), Bauru School of Dentistry, University of São Paulo, Brazil.

Approval No. 7.885.111.



RESULTS

OVERALL ACT THRESHOLD



-1.29 ± 1.66
dB nCL

96.3%

52/54
children
achieved
≤ 4 dB nCL
within the
available adult
reference range



TEST-RETEST

No systematic bias



Age group, session,
and their interaction
showed **no significant**
effects.

METHODS

54 children with normal hearing

6–7 years
n = 18

8–10 years
n = 18

11–12 years
n = 18



Otoscopy



Tympanometry



TEOAEs



Pure-tone
audiometry



ACT test



ACT retest

PAEDIATRIC TEST ADAPTATION

The Firefighter Game

The modulated sound was linked to a siren within a playful task to support task understanding and sustain attention during testing.



WATCH THE
VIDEO HERE



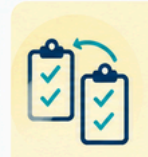
CONCLUSION

ACT thresholds in **Brazilian school-aged children** were **largely within the available adult reference range**, with **96.3% achieving ≤ 4 dB nCL** and **no systematic test-retest bias**. These findings support further paediatric validation, including children with hearing loss.



96.3%

52/54
children
achieved
≤ 4 dB nCL
within the available
adult reference range



TEST-RETEST
No systematic
bias



**FURTHER
VALIDATION**
Including children
with hearing loss



REFERENCES

Scan the QR code
to access the full
reference list.

INSTITUTIONAL & FUNDING SUPPORT

