

BINAURAL FUSION TEST IN KANNADA FOR CHILDREN

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Preface

BINAURAL FUSION TEST IN KANNADA FOR CHILDREN by Ms Tammanna Khurana, in part-fulfilment of her Master's dissertation under the guidance of **Dr. Vijayalakshmi Basavaraj**. The present study aimed at developing a Binaural fusion test in Kannada language and establishing the normative data for the test across the 5 age groups of 7-7.11 years, 8-8.11 years, 9-9.11 years, 10-10.11 years and 11- 11.11 years.

Introduction

Comprehensive evaluation of individuals with CAPD is a challenging task. As CAPD represents a heterogeneous group of auditory deficits, it is important that a test battery approach be used so that different underlying processes, as well as different levels of functioning within the central auditory nervous system can be assessed. There are numerous tests of central auditory processing that have been developed over the years. However, not all of these tests are equal in their ability to identify auditory processing disorders. Therefore, a battery of tests needs to be developed for assessing the different auditory processes. Binaural fusion test has been found to be sensitive tool to identify auditory processing problems in children. It has been used to study subtle auditory processing disorder in children. As it has been reported that binaural fusion test is sensitive in identifying APD in children suspected to have processing problems the need to develop such a test arises.

The test material was developed using a corpora of 360 CVCV words which were taken from age appropriate Kannada textbooks and 50 words which were familiar to all

the children. They were then randomly grouped into 2 phonetically balanced lists, containing 25 words each. List I was picturizable and list II was non picturizable.

The lists were then filtered using a low pass band of 500 to 700 Hz and a high band pass of 1800 to 2000 Hz with the help of Goldwave digital audio editor software and presented at 40 dBSL (with reference to pure tone average) to one hundred children who participated in the study and normative data was collected.

The data obtained was analysed for the presence of age and gender effect. The results showed that there was an improvement in the scores for both List I and List II with an increase in age. This increase in age has been attributed to the neuromaturation that takes place in central auditory nervous system till the age of 11-12 years. The scores for males and females were comparable for both List I and List II, which reflected that there was no gender effect.

Thus, the Binaural Fusion Test in Kannada developed in the study can be used to assess children from 7-12 years of age for the presence of any auditory processing disorder. It can be used clinically as an assessment tool for auditory processing disorder in Kannada speaking children.

Test Material

APPENDIX

LIST I

ಗೋಡೆ
ಸರ
ಗಿಡ
ದೋಸೆ
ಕುರಿ
ನೂರು
ಕೋತಿ
ಜಡೆ
ಟೋಪಿ
ರಾಜ
ತುಟಿ
ಹಸು
ಮೇಕೆ
ಬಿಳಿ
ಚಾಕು
ಮೂರು
ಮೂಗು

LIST II

ತಗೋ
ಕೋಪ
ದಿನ
ಕುಡಿ
ತಡಿ
ರಸ
ಜಾಣೆ
ದೂರ
ಕೆರೆ
ಗೂಬೆ
ತೂಕ
ನೀನು
ಸೂಜಿ
ಶೀತ
ಹಣ
ಮರ
ಮಾತು

ಜನ

ಪಾಪು

ಮೀನು

ಸೇಬು

ನೀರು

ರಜೆ

ಮರಿ

ಸೊಳ್ಳೆ

ಹಾಡು

ಬಡಿ

ಬಿಸಿ

ನೋಡು

ಸಾರು

ಚಾಕು

ನಾನು

ಕಾಸು



APPENDIX B

A SAMPLE OF THE TEST PICTURE PLATE



Rhyming word-



Random word-



Target word-



Word from the same
lexical category-

Normative scores

Mean and Standard deviation (S.D) of Binaural fusion test scores for List I & II for males and females across all age groups.

Age (years)	Gender	List I		List II	
		Max. score:25		Max. score:25	
		Mean	SD	Mean	SD
7+ to 8	Male	17.70	1.76	18.40	1.07
	Female	18.40	1.42	18.30	1.49
8+ to 9	Male	19.20	1.03	20.10	1.59
	Female	20.20	1.54	19.90	1.44
9+ to 10	Male	20.90	0.73	20.30	0.82
	Female	20.80	1.22	20.50	1.43
10+ to 11	Male	21.40	0.51	21.80	0.42
	Female	21.60	0.51	21.40	0.96
11+ to 12	Male	22.30	0.67	21.80	0.63
	Female	22.70	1.05	22.10	0.56

AIISH: GENESIS AND GROWTH

The All India Institute of Speech and Hearing is a premier Institute in the country imparting training in the field of Speech & Hearing. Established on 9th of August 1965 as an autonomous organization, AIISH caters to manpower generation in the field, promoting research and providing rehabilitation services in the area. The Institute is located on a sprawling area of 39 acres (two campuses) in Mysore. The Institute registered as a Society under the Societies Registration Act XXI of 1860 (Punjab Amendment Act, 1957) and its functioning as an autonomous body under the aegis of the Union Ministry of Health & Family Welfare. Established primarily as training institute, it started training programs at postgraduate level in 1967 followed by B.Sc (Speech and Hearing) in 1968. The institute now offers three Diploma programs: Diploma in Hearing Aids and Ear mould technology, Diploma in training the Young Hearing Impaired, Diploma in Hearing, Language and Speech through distance mode; two graduate programs: Bachelors in Audiology, Speech and Language Pathology (B. ASLP) and B. S. Ed (Hearing Impairment); three Master Programs (M.Sc. in Audiology, M.Sc. in Speech- Language Pathology and M.S.Ed. in Hearing Impairment); two PG Diploma courses (PG Diploma in Forensic Sciences and Technology, Clinical Linguistics for SLPS); two doctoral programs (Ph.D. in Audiology and Speech-Language Pathology); and Post-Doctoral Fellowships. The institute also conducts short- term training and orientation programs for professionals in allied specialties.

The institute has been recognized as a Centre of Excellence in the area of deafness (WHO), as a centre for advanced research (UGC) and as a Science and Technology Institute (DST). The institute is affiliated to the University of Mysore for the award of degrees. The academic programs of the institute have the recognition of the Rehabilitation Council of India. The institute has also been recognized as a Nodal Center for the implementation of the National Program for Prevention and Control of Deafness, Ministry of Health and Family Welfare, Government of India as well as for generating manpower for the same. Owing to its academic and research excellence, the institute has been assessed and accredited by NAAC with 'A' grade . Also, it is an ISO 9001:2015 certified organization for its brilliance of quality. Furthermore, it has been recognized as College with Potential for Excellence by the UGC, and as a Collaborative Organization for the Rashtriya Bal Swasthya Karyakram (RBSK), a Govt. of India scheme under the Ministry of Health & Family Welfare. Also, the Institute is a Centre of Excellence in Communication Disorders and a Govt. of India recognized Disability Certification Centre.

The functioning of the institute is under the direction of the Executive Council with Hon'ble Union Minister for Health and Family Welfare as the Chairman and the Hon'ble Minister of Health and Family Welfare, Government of Karnataka as Vice- Chairman. The other statutory bodies of the Institute are the Finance Committee and the Academic Sub Committee.



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