

AIISH Tests & Therapy Resources Series

DICHOTIC RHYME TEST IN TELUGU



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All India Institute of Speech and Hearing

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This work is compiled as a part of an AIISH Funded Research Project on **Product Development of Useful Products of Research carried out at AIISH** by a research team comprising:

1. Dr. Prashanth Prabhu P., Assistant Professor in Audiology as Principal Investigator,
2. Dr. Priya M.B., Lecturer in Speech Sciences as Principal Investigator,
3. Dr. Shijith Kumar C., Library and Information Officer as Co-Investigator
4. Ms. Merin Susan Mathew and Ms. Rekha D., as Research Officers

PREFACE

The All India Institute of Speech and Hearing (AIISH) is a premier organization in the country mandated for human resource development, research, clinical care and public education in the field of communication disorders. The institute promotes research by giving particular emphasis to clinically relevant applied research on causes, control and prevention of communication disorders, assessment and treatment issues as well as the testing and refinement of new technologies for the speech, language and hearing disorders. A considerable number of tests, word lists and therapy materials are being created as by-products of such research works carried out as postgraduate and funded research. However, these valuable resources are mostly unused as they are not readily accessible for use in the clinical settings. Hence, a project has been initiated to identify, reorganise into suitable formats and publish clinically useful research works carried out at AIISH as independent books, and make them useful for the practicing audiologists and speech-language pathologists working across the country in different setups for the evaluation and management of communication disorders.

All the tests/ therapy materials that are prepared under this project are published under a series titled “*AIISH Tests & Therapy Resources*”. The project team comprises: Dr. Prashanth Prabhu P., Assistant Professor in Audiology (Principal Investigator), Dr. Priya M.B., Lecturer in Speech Sciences (Principal Investigator), Dr. Shijith Kumar C., Library and Information Officer (Co-Investigator) and Ms. Merin Susan Mathew and Ms. Rekha D (Research Officers).

This book titled **Dichotic Rhyme Test in Telugu** is an outcome of the effort in the above direction. It was originally developed by **Mr. Kishore T.**, in partial fulfilment of his Master's dissertation under the guidance of **Prof. K. Rajalakshmi**.

Dr. M. Pushpavathi
Director, AIISH

Introduction

Central Auditory Processing Disorder (CAPD) refers to difficulties in processing auditory information in the central nervous system, as demonstrated by poor performance in one or more of the following skills: sound localization and lateralization; auditory discrimination; auditory pattern recognition; temporal aspects of audition, including temporal integration, temporal discrimination (e.g., temporal gap detection), temporal ordering, and temporal masking; auditory performance in competing acoustic signals (including dichotic listening); and auditory performance with degraded acoustic signals.

Conclusive diagnosis of CAPD cannot be made until specialized auditory testing is completed and other etiologies have been ruled out. Tests used for assessing central auditory functions fall under two major categories: behavioral and electrophysiological. The behavioral tests include monaural low-redundancy speech tests, dichotic speech tests, temporal patterning tests, and binaural interaction tests. Dichotic listening tasks utilizing sentences, words, digits, and syllables have been useful in predicting cerebral dominance for speech.

Brief description about the test

Dichotic Rhyme Test in Telugu assesses the binaural integration phenomenon in Telugu speaking individuals and can be used as an assessment tool for CAPD. The test was developed and validated by administering it on 50 native Telugu speaking normal hearing adults (25 males and 25 females) between the age range of 18 and 30 years.

The test consists of 18 pairs of commonly spoken, rhyming, bi-syllabic words in Telugu (Appendix A). These words start with plosives (/p/, /t/, /k/, /b/, /d/, and /g/) and the two words in each pair differed only in the initial consonant. These word pairs are dichotically presented to the subjects at an intensity level of 60 dB HL. The task of the subject will be to write down the words heard in each ear after each presentation in a response sheet (Appendix B). The responses will be scored in terms of single correct scores, double correct score, and ear correct scores.

Scoring

The responses are scored as follows:

Single Correct Scores (SCS): Total number of correct responses to stimuli presented in the right ear or the total number of correct responses to stimuli presented in the left ear.

Double Correct Score (DCS): Total number of correct responses to stimuli presented in both ears.

Ear Correct Scores (ECS): Double Correct Score + Single Correct Score of respective ear.

Results

There exists a significant right ear advantage for the dichotic stimuli. The double correct scores were lower than the ear correct scores. The mean double correct scores as well as ear correct scores for both right and left ears were greater in females compared to males. It is recommended to consider ear correct scores rather than double correct scores in clinical practice owing to the high variability observed in double correct scores.

Interpretation

The scores obtained by an individual can be calculated and compared with the scores obtained from the study (Appendix C) to infer the results.

Appendix A

Word List I

Sl. No.		Right Ear		Left Ear
1.	గుడి	/gʊdɪ/	కుడి	/kʊdɪ/
2.	దండ	/d̪and̪a/	బండ	/bʌnd̪a/
3.	దాత	/d̪āta/	తాత	/t̪āta/
4.	కాలు	/kālʊ/	పాలు	/pālʊ/
5.	గడి	/gʌdɪ/	బడి	/bʌdɪ/
6.	బాట	/bāta/	పాట	/pāta/
7.	తడి	/t̪adɪ/	పడి	/padɪ/
8.	గాటు	/gātʊ/	దాటు	/d̪ātʊ/
9.	కల	/kəla/	తల	/t̪əla/
10.	కొట	/kōta/	తోట	/t̪ōta/
11.	తాడు	/t̪ādʊ/	పాడు	/pādʊ/
12.	గుడ్డి	/gʊd̪dɪ/	బుడ్డి	/bʊd̪dɪ/
13.	గాలం	/gāləɱ/	కాలం	/kāləɱ/
14.	బుట్ట	/bʊtt̪a/	పుట్ట	/pʊtt̪a/
15.	దంటు	/d̪ant̪ʊ/	బంటు	/bʌnt̪ʊ/
16.	కన్ను	/kənnʊ/	పన్ను	/pənnʊ/
17.	దుమ్ము	/d̪ʊmmʊ/	తుమ్ము	/t̪ʊmmʊ/
18.	గానం	/gānəɱ/	దానం	/d̪ānəɱ/

Word List II

Sl. No.		Right Ear		Left Ear
1.	పాట	/pāṭa/	బాట	/bāṭa/
2.	కుడి	/kuḍi/	గుడి	/guḍi/
3.	తాత	/tāṭa/	దాత	/dāṭa/
4.	బడి	/baḍi/	గడి	/gaḍi/
5.	బండ	/baṇḍa/	దండ	/daṇḍa/
6.	తల	/tala/	కల	/kala/
7.	దాటు	/dāṭu/	గాటు	/gāṭu/
8.	పాలు	/pālu/	కాలు	/kālu/
9.	పడి	/paḍi/	తడి	/tāḍi/
10.	బంటు	/baṅṭu/	దంటు	/daṅṭu/
11.	బుడ్డి	/buḍḍi/	గుడ్డి	/guḍḍi/
12.	తోట	/tōṭa/	కొట	/kōṭa/
13.	తుమ్ము	/tummu/	దుమ్ము	/dummu/
14.	దానం	/dāṇam/	గానం	/gāṇam/
15.	పుట్ట	/putṭa/	బుట్ట	/butṭa/
16.	పన్ను	/paṇṇu/	కన్ను	/kaṇṇu/
17.	కాలం	/kālam/	గాలం	/gālam/
18.	పాడు	/pāḍu/	తాడు	/tāḍu/

Appendix B

RESPONSE SHEET

Name:

Date:

Age/Sex:

Native Language:

Responses:

Word List:

Sl. No.	Right Ear	Left Ear	SCS(✓/✗)		DCS ✓/✗
			Right Ear	Left Ear	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
Total					

	Right Ear	Left Ear
SCS		
DCS		
ECS		

Interpretation:

Appendix C

Scores

	Male		Female	
	Mean	SD	Mean	SD
Double Correct Score	8.88	7.92	4.08	6.25
Ear Correct Score				
Right	24.46	6.18	19.96	3.66
Left	19.52	5.61	19.64	4.34

Appendix D

Sample Response Sheet - I

Name: XXX

Date: xx/xx/xxxx

Age/Sex: 27 years/Male

Native Language: Kann 

Responses:

Word List: I

Sl. No.	Right Ear	Left Ear	SCS(✓/✗)		DCS ✓/✗
			Right Ear	Left Ear	
1.	/gʊɖɪ/	/kʊɖɪ/	✓	✓	✓
2.	/ɖəŋɖa/	/ɖəŋɖa/	✓	✗	✗
3.	NR	/t̪āta/	✗	✓	✗
4.	NR	NR	✗	✗	✗
5.	/gəɖɪ/	/bəɖɪ/	✓	✓	✓
6.	/bāta/	/pāta/	✓	✓	✓
7.	/t̪əɖɪ/	/t̪əɖɪ/	✓	✗	✗
8.	/gāɽʊ/	/ɖāɽʊ/	✓	✓	✓
9.	/kəla/	/t̪əla/	✓	✓	✓
10.	/kōta/	/t̪ōta/	✓	✓	✓
11.	/t̪āɖʊ/	/pāɖʊ/	✓	✓	✓
12.	/gʊɖɖɪ/	/gʊɖɖɪ/	✓	✗	✗
13.	/gāləm/	/kāləm/	✓	✓	✓
14.	/buɽta/	/puɽta/	✓	✓	✓
15.	/ɖəŋɽʊ/	/bəŋɽʊ/	✓	✓	✓
16.	NR	NR	✗	✗	✗
17.	/ɖʊmmʊ/	NR	✓	✗	✗
18.	/gānəm/	/ɖānəm/	✓	✓	✓
Total			15	12	11

Scoring:

	Subject scores	
	Right Ear	Left Ear
SCS	15	12
DCS		11
ECS	15+11=26	12+11=23

Interpretation: Indication of Normal Binaural Integration

Appendix D

Sample Response Sheet - II

Name: XXX

Date: xx/xx/xxxx

Age/Sex: 29 years/Male

Native Language: Kanna 

Responses:

Word List: I

Sl. No.	Right Ear	Left Ear	SCS(✓/✗)		DCS ✓/✗
			Right Ear	Left Ear	
1.	/gudɪ/	/gudɪ/	✓	✗	✗
2.	/d̪əŋɖa/	NR	✓	✗	✗
3.	NR	/t̪āɖa/	✗	✓	✗
4.	/kālɔ/	/kālɔ/	✓	✗	✗
5.	NR	NR	✗	✗	✗
6.	/bāɖa/	/pāɖa/	✓	✓	✓
7.	NR	/pəɖɪ/	✗	✓	✗
8.	/gātɔ/	/d̪ātɔ/	✓	✓	✓
9.	/əla/	/kəla/	✗	✗	✗
10.	NR	NR	✗	✗	✗
11.	/t̪āɖɔ/	/pāɖɔ/	✓	✓	✓
12.	/bɔɖɖɪ/	NR	✗	✗	✗
13.	/gāləm/	NR	✓	✗	✗
14.	/ɔtt̪a/	/bɔtt̪a/	✗	✗	✗
15.	/d̪əŋɖɔ/	/bəŋɖɔ/	✓	✓	✓
16.	NR	NR	✗	✗	✗
17.	/t̪ummɔ/	NR	✗	✗	✗
18.	/gānəm/	/d̪ānəm/	✓	✓	✓
Total			9	7	5

Scoring:

	Subject scores	
	Right Ear	Left Ear
SCS	9	7
DCS	5	
ECS	9+5=16	7+5=12

*Note: Double correct scores are not considered for interpretation due to high variability; interpretation is based on Ear Correct scores.

Interpretation: Indication of Poor Binaural Integration.

