

AIISH Tests & Therapy Resources Series

**HIGH
FREQUENCY
SPEECH
IDENTIFICATION
TEST IN TELUGU**



**Vijaya Ratnakar Y.
Mamatha N. M.**



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 **High Frequency Speech Identification Test in Telugu** is an outcome of the effort in the above direction. It was originally developed by **Mr. Vijaya Ratnakar Y.**, in partial fulfilment of his Master's dissertation under the guidance of **Dr. Mamatha N. M.**

Dr. M. Pushpavathi
Director, AIISH

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Introduction

An individual with a hearing loss is bound to have difficulty in the perception of speech depending on the degree and type of hearing loss and the configuration of the audiogram. Depending on the pattern of audiogram, the speech perception ability of an individual varies. Individuals with sloping high frequency hearing loss would have greater difficulty in hearing speech sounds that have energy concentration in the high frequency region. The high frequency speech identification test will meet the needs of individuals with a sloping high frequency hearing loss in both diagnosis and selection of hearing aids. It is highly possible that a person with a sloping high frequency hearing loss may get maximum scores if a regular speech identification test is used, thereby overestimating the speech perception abilities in such individuals. Hence, speech identification scores obtained for high frequency word list is a better estimate for such individuals.

Brief description about the test

- **High Frequency Speech Identification Test (HFSIT) in Telugu** assesses the speech perception difficulties faced by individuals having high frequency hearing loss in Telugu language.
- The test was developed and validated on 100 normal hearing native Telugu speakers and five individuals with bilateral sloping hearing loss aged 19 - 35 years.
- The test comprises of two bisyllabic lists of 25 words each and one trisyllabic list of 25 words (Appendix A) with phonemes /k/, /g/, /h/, /s/, /p/, /t̪/, /t/, /ʃ/ & /ʒ/ and vowels /ɪ/ & /ε/.

Presentation Level: 40 dB SL ref. Speech Recognition Threshold (SRT)

Instructions: "Listen to the words carefully and repeat them or write them down on the response sheet (Appendix B)".

Scoring

Score '1' for each correct response and '0' for each incorrect or missed response. The Speech Identification Score (in percentage) is computed as follows:

$$\text{Speech Identification Score (\%)} = \frac{\text{Number of correct responses}}{\text{Total number of words presented}} \times 100$$

Interpretation

Results have to be correlated with the Pure Tone Average (PTA) of 500 Hz, 1 kHz, 2 kHz and 4 kHz of the respective individual to understand if there is significant difficulty in perception of high frequency speech sounds.

Appendix I

Bisyllabic Word Lists

Sl. No.	List I	Sl. No.	List II		
1.	చేప	/tʃɛpa/	1.	పాట	/pāṭa/
2.	సూది	/sūḍi/	2.	కాకి	/kāki/
3.	గీత	/gīṭa/	3.	పైస	/pəisa/
4.	తోట	/tōṭa/	4.	చాట	/tʃāṭa/
5.	పొగ	/poga/	5.	సేవ	/sēva/
6.	నంత	/santṭa/	6.	గంట	/gaṅṭa/
7.	కోతి	/kōṭi/	7.	తోక	/tōka/
8.	చాప	/tʃāpa/	8.	చెవి	/tʃɛvi/
9.	సీసా	/sīsā/	9.	ఆట	/āṭa/
10.	కొంగ	/koṅga/	10.	సింహం	/simhəm/
11.	శిల	/ʃila/	11.	తీపి	/tīpi/
12.	గంప	/gaṃpa/	12.	పంట	/paṅṭa/
13.	కోడి	/kōḍi/	13.	సంచి	/saṅtʃi/
14.	చాకు	/tʃākʌ/	14.	టోపి	/tōpi/
15.	పాత	/pāṭa/	15.	చీమ	/tʃīma/
16.	కోపం	/kōpəm/	16.	తూకం	/tūkəm/
17.	సాకు	/sākʌ/	17.	కేక	/kēka/
18.	తీగ	/tīga/	18.	పాము	/pāmu/
19.	చంక	/tʃaṅka/	19.	వంట	/vaṅṭa/
20.	హంస	/həmsa/	20.	సొంతం	/soṅṭəm/
21.	పూస	/pūsa/	21.	కోటి	/kōṭi/
22.	సొంటి	/soṅṭi/	22.	కసి	/kasi/
23.	చలి	/tʃali/	23.	చీల	/tʃīla/
24.	సీసం	/sīsəm/	24.	ఈక	/īka/
25.	పాక	/pāka/	25.	విషం	/viṣəm/

Appendix I

Trisyllabic Word List

Sl. No.	Word List	
1.	కొడుకు	/koḍuku/
2.	టమాట	/ṭamāṭa/
3.	కిటికి	/kiṭiki/
4.	చినుకు	/tʃinuku/
5.	తులసి	/tʊlasi/
6.	ఆకాశం	/ākāʃam/
7.	తెలుగు	/tʃelugu/
8.	పలక	/palaka/
9.	సపాట	/sapōṭa/
10.	పెరుగు	/perugu/
11.	కానుక	/kānuka/
12.	తుపాకి	/tʊpāki/
13.	చెమట	/tʃeməṭa/
14.	పసుపు	/pasupu/
15.	గుడిసె	/gudise/
16.	చాకలి	/tʃākali/
17.	గెలుపు	/gelupu/
18.	ఒకటి	/okəṭi/
19.	సాహసం	/sāhasam/
20.	తలుపు	/tʃalupu/
21.	చిలుక	/tʃiluka/
22.	పోలీసు	/pōlisu/
23.	కాటుక	/kāṭuka/
24.	గొలుసు	/golusu/
25.	పరుపు	/parupu/

Appendix B

Response Sheet

Name:

Date:

Age/Sex:

Contact No.:

Responses:

Word list:

Sl. No.	Right Ear	Score	Left Ear	Score
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
Total			Total	

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.



All India Institute of Speech and Hearing



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