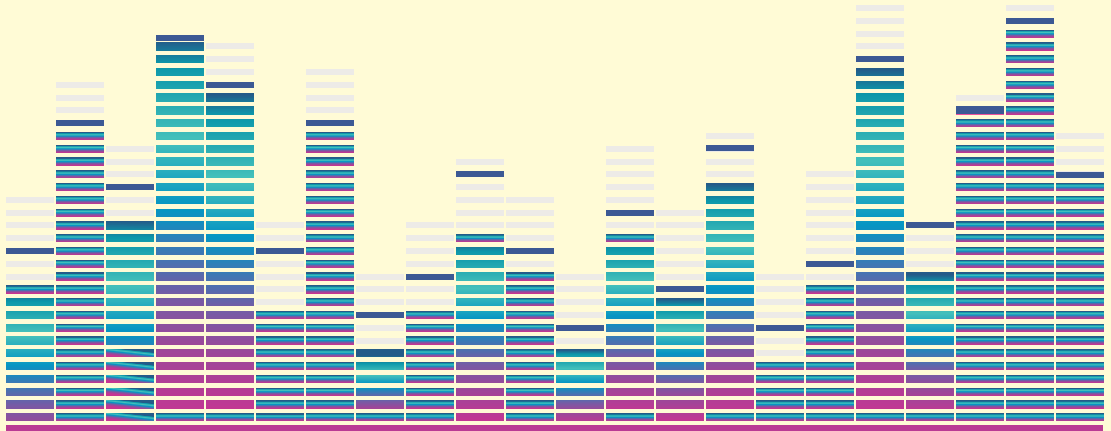


AIISH Tests & Therapy Resources Series



HIGH FREQUENCY SPEECH IDENTIFICATION TEST IN TAMIL

Sinthiya K.

Sandeep 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 Tamil** is an outcome of the effort in the above direction. It was originally developed by **Ms. Sinthiya K.**, in partial fulfilment of her Master's dissertation under the guidance of **Dr. Sandeep M.**

Dr. M. Pushpavathi
Director, AIISH

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 having 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 Tamil** assesses the speech perception difficulties faced by individuals having high frequency hearing loss in ~~Tamil language~~.
- The test was developed and validated on 100 normal hearing native Tamil speakers aged 19 - 25 years.
- The test comprises of two bisyllabic and one trisyllabic word list (Appendix A) with phonemes /k/, /t/, /s/, /d/, /r/, /dʒ/, /d/ & /l/ and vowels /i/ & /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 A

Bisyllabic Word Lists

Sl. No.	List 1	Sl. No.	List 2
1.	இன்ஜி /indʒi/	1.	இறகு /iragu/
2.	செவல் /seval/	2.	சிறை /sirai/
3.	தடை /t̪ad̪ai/	3.	தரை /t̪arai/
4.	சாலை /sālai/	4.	சொத்து /sottu/
5.	கைதி /kaidi/	5.	காசு /kāsu/
6.	தெங்காய் /t̪eŋkāj̪i/	6.	தென்னை /t̪ennai/
7.	சிற்பி /sirpi/	7.	சிலை /silai/
8.	இசை /isai/	8.	தேசம் /t̪ēs̪əm/
9.	குயில் /kujil/	9.	கத்தி /kattu/
10.	தேதி /t̪ēdi/	10.	தரை /t̪arai/
11.	ஜன்னல் /dʒannal/	11.	ஜாதி /dʒādi/
12.	கற்கள் /karkal/	12.	தெற்கு /t̪erku/
13.	இடை /idai/	13.	இருள் /iru/
14.	செய்தி /seit̪i/	14.	சந்தை /sandai/
15.	இடம் /idam/	15.	யானை /jānai/
16.	செடி /sed̪i/	16.	சுண்டல் /sundal/
17.	கொடி /kodi/	17.	கிளி /kili/
18.	மேற்கு /mēрку/	18.	தொப்பி /t̪oppi/
19.	கல்வி /kalvi/	19.	கோழி /kōɻi/
20.	கத்ரி /katt̪ri/	20.	கடை /kadai/
21.	கப்பல் /kappal/	21.	கட்டில் /kattu/
22.	காவல் /kāval/	22.	ரேகை /reka/
23.	ஈரல் /īral/	23.	இதழ் /id̪aɻ/
24.	காபி /kāpi/	24.	கஞ்சி /kandʒi/
25.	தோசை /t̪ōsai/	25.	திசை /t̪isai/

Appendix I

Trisyllabic Words

Sl. No.	Word	Word
1.	காகிதம்	/kākiḍam/
2.	குருவி	/kuruvi/
3.	கெசரி	/kesari/
4.	வாரிசு	/vārisu/
5.	கடிதம்	/kaḍiḍam/
6.	இயற்கை	/iyarkai/
7.	தராசு	/ṭarāsu/
8.	சர்கரை	/sarkarai/
9.	கடலை	/kaḍalai/
10.	கதவு	/kaḍavu/
11.	இளமை	/iḷamai/
12.	கடிதம்	/kaḍiḍam/
13.	அரசன்	/arasan/
14.	அரசி	/arasi/
15.	தலைவி	/ṭalaiivi/
16.	அரிசி	/arisi/
17.	சிறகு	/siragu/
18.	தக்காளி	/ṭakkāḷi/
19.	குடிசை	/guḍisai/
20.	வருஷம்	/varuṣam/
21.	வைகாசி	/vaikāsi/
22.	கல்லூரி	/kallūri/
23.	கிருமி	/kirmi/
24.	கரடி	/karaḍi/
25.	சில்லறை	/silḷarai/

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	

