

AIISH Tests & Therapy Resources Series

HIGH FREQUENCY  
**SPEECH**  
IDENTIFICATION  
TEST IN MANIPURI

Margaret Hmangte

Geetha C.



All India Institute of Speech and Hearing

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## All India Institute of Speech and Hearing

Manasagangothri, Mysuru, India-570 006

E-mail: directoraiish@gmail.com

Website: www.aiishpress.ac.in

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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 Manipuri** is an outcome of the effort in the above direction. It was originally developed by **Ms. Margaret Hmangte**, in partial fulfilment of her Master's dissertation under the guidance of **Dr. Geetha C.**

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 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 Manipuri** was developed to assess the speech perception difficulties in individuals with high frequency hearing loss in Manipuri language.
- The test was developed and validated on 60 normal hearing native Manipuri speakers between the age range of 18-30 years.
- The test includes two lists of 25 monosyllabic words each (Appendix A) that majorly contained consonants /k/, /k<sup>h</sup>/, /h/, /s/, /p/, /p<sup>h</sup>/, /t/, /t<sup>h</sup>/, /c/ and vowels /i/ and /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:

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

## **Interpretation**

Results have to be correlated with the Pure Tone Average (PTA) of 500Hz, 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

### Word Lists

Sl. No.	List 1	List 2
1.	/cəi/	/sɛ/
2.	/si/	/ki/
3.	/dzo:i/	/sin/
4.	/pi/	/cɛ/
5.	/cen/	/k <sup>h</sup> ik/
6.	/kəi/	/t <sup>h</sup> ɛk/
7.	/cæŋ/	/ciŋ/
8.	/cik/	/t <sup>h</sup> əi/
9.	/t <sup>h</sup> əi/	/cɛt/
10.	/t <sup>h</sup> iŋ/	/t <sup>h</sup> it/
11.	/cit/	/t <sup>h</sup> ɛŋ/
12.	/hui/	/həi/
13.	/t <sup>h</sup> in/	/cin/
14.	/pik/	/p <sup>h</sup> i/
15.	/k <sup>h</sup> iŋ/	/pəi/
16.	/p <sup>h</sup> əi/	/sen/
17.	/sɛŋ/	/k <sup>h</sup> əi/
18.	/sɛt/	/sit/
19.	/k <sup>h</sup> i/	/k <sup>h</sup> ɛt/
20.	/sik/	/siŋ/
21.	/ke/	/sɛm/
22.	/hip/	/hi/
23.	/t <sup>h</sup> ɛt/	/t <sup>h</sup> ɛm/
24.	/hɛn/	/hɛk/
25.	/hik/	/hiŋ/



## 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.				
<b>Total</b>			<b>Total</b>	

