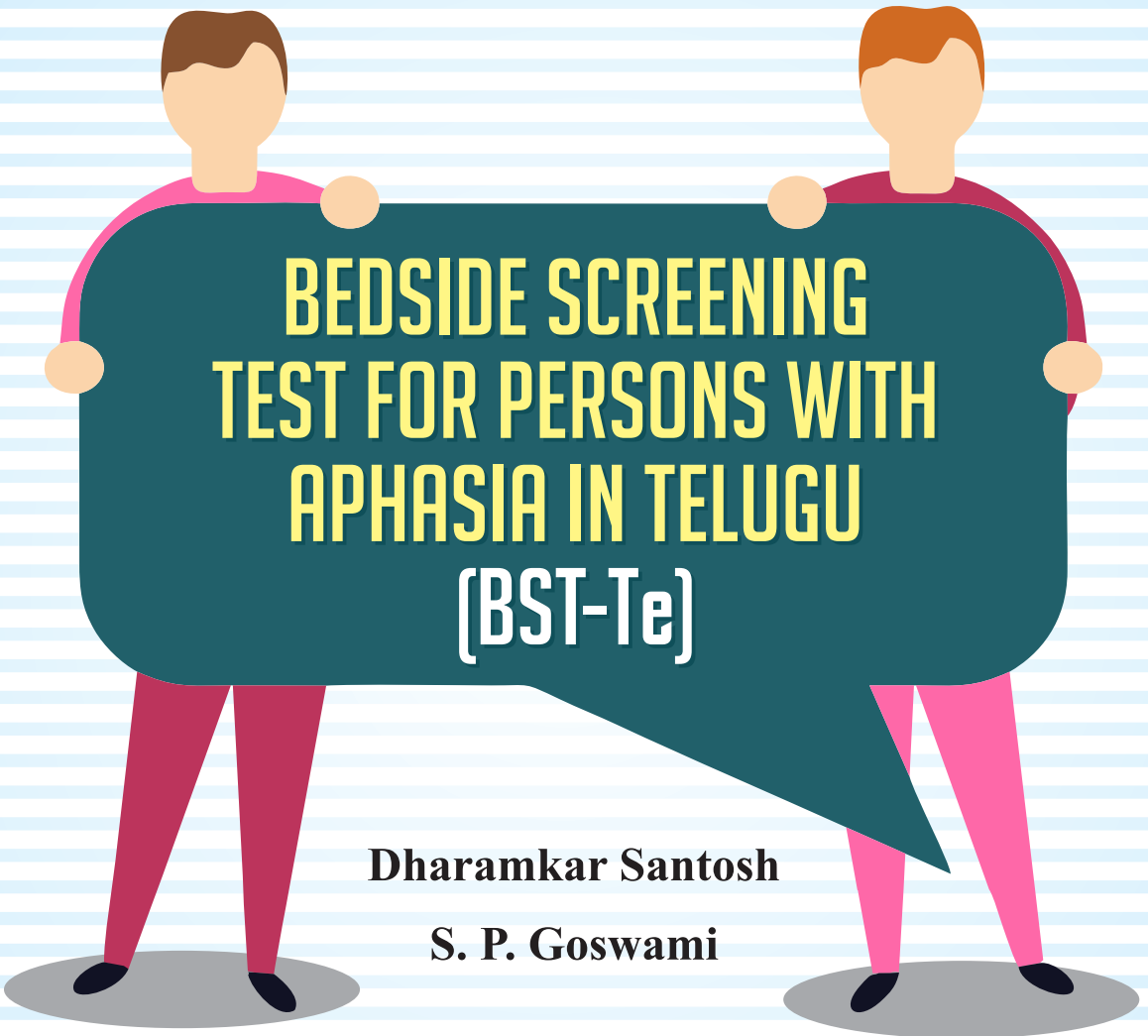


AIISH Tests & Therapy Resources Series



**BEDSIDE SCREENING
TEST FOR PERSONS WITH
APHASIA IN TELUGU
(BST-Te)**

Dharamkar Santosh

S. P. Goswami



All India Institute of Speech and Hearing

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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 **Bedside Screening Test for Persons with Aphasia in Telugu** is an outcome of the effort in the above direction. It was originally developed by **Mr. Dharamkar Santosh**, in partial fulfilment of his Master's dissertation under the guidance of **Prof. S.P.Goswami**.

Dr. M. Pushpavathi
Director, AIISH

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Introduction

Humans are unique among animals that have a highly developed symbolic communication called language. Human communication using language is an exchange of ideas between sender and receiver. It involves message transmission and response or feedback. Any disruption in communication from the sender/receiver in the path of transmit can result in language disorders. There are a host number of factors like stroke, trauma, tumor etc which can lead to acquired speech and language disorders. Cerebral disorders rank high in causing structural variations in the central nervous system, which in turn results in aphasia. Among this, stroke (vascular diseases) is the common cause leading to aphasia, especially when stroke is in the region of language zone i.e. in the left hemisphere. Generally, aphasia is defined as a disorder of language where linguistic processing and linguistic knowledge are affected.

There are many tools available for assessing the linguistic deficits in aphasia, both for detailed assessment and screening. Detailed examination is possible only when the person is physically stable and can attend to the examination for a long time. During the initial post-acute stages of recovery, screening tools play a very important role in predicting whether the person is deviating from normalcy. Majority of the screening tools are developed in western context and hence, it becomes difficult to apply the same in Indian context due to large ethno-cultural variation. Thus, in order to improve the quality of assessment and for better understanding of person's strengths and weaknesses, there is a demand for developing test materials in native languages. Furthermore, the availability of screening tools in Indian languages is limited. Hence, an attempt has been made to develop a bedside screening test in Telugu which can be used to evaluate persons with aphasia. The screening tool can be administered on adults from 18 years and above.

Development of the Screening tool

The development of the test was carried out in two phases

- a) **Phase I:** Development of the test material in Telugu - The test stimuli were prepared keeping in mind the syntactic and semantic aspects of Telugu language. Five Speech-Language Pathologists who were native speakers of Telugu, proficient in reading and writing Telugu, rated the prepared test stimuli for familiarity.

- b) Phase II:** Test administration - The test was administered on two groups of participants. In Group 1, 30 neurotypical participants (20 literates & 10 illiterates) above the age of 18 years were included to form a baseline that was considered as the normative for this test and in Group 2; seven persons (5 literates & 2 illiterates) with stroke were included.

Seating

Since the evaluation is in a bedside condition, it has to be done within the person's range of comfort and preferred seating. The picture cards and objects should be placed at a distance where the person with stroke can comfortably visualize.

Test Instructions

Initially, the task to be performed by the person has to be explained in detail to them. Instruct the person that he/she will need to point to picture cards or objects and perform actions with objects placed on the table according to examiner's instructions. Prior to the actual testing, 'pretest instructions' should be given to make sure whether the person is familiar with the task to be performed and the items that are going to be used in the test. Repeat the instruction if the participant does not perform any part of the test trial correctly. Instruct the person at comfortable listening level and the prosodic features of speech such as rate, intonation, stress and juncture should be maintained.

Pretest instructions should be given as follows:

“I will be administering a test to you now. I will ask you certain questions. You need to answer verbally for some and others require pointing/naming the object/picture card (flash card) placed in front of you. If you feel that you are not able to understand, please stop me and I will repeat the instructions”.

After the pretest instructions, ask the person, “Are you now clear about the task you have to do?” / “Shall we start the test?”/ “Are you ready?” Then begin with the administration of the subsections of the test.

Domains and Subsections

The bedside screening test in Telugu includes six domains with subsections.

- Domain 1 : Spontaneous Speech
- Domain 2 : Auditory Verbal Comprehension
- a) Yes / No Questions
 - b) Pointing Task
 - c) Auditory Word Recognition
 - d) Verification Task
 - e) Sequential Commands
- Domain 3 : Repetition
- a) Automatic Speech
 - b) Word
 - c) Phrase
 - d) Sentence
- Domain 4 : Naming
- a) Confrontation Naming
 - b) Responsive Naming
 - c) Lexical Generative Naming
- Domain 5 : Reading
- Domain 6 : Writing

Scoring Pattern

Responses should be scored based on the three point rating scale given below:

0 - No Response

1 - Partially correct/incomplete responses/frequent shifts from correct one to others

2 - Correct Response

BEDSIDE SCREENING TEST – TELUGU

Person's Name: _____ Date: _____
 Registration No: _____ Age/Gender: _____ Mother Tongue: _____
 Education: _____ Clinician: _____

1. Spontaneous Speech

Mode of communication – Verbal/Non-verbal

- a) **Fluency** – Observe and make a note of fluency/non-fluency in person's speech, effort to produce speech, phrase length, word-finding pauses, hesitations or circumlocutions, rate of speaking, any melody or intonation problems, if present.
- b) **Content** – Observe and make a note of paraphasias (Phonemic/literal, neologistic, semantic), semantic or syntactic errors, if present.

2. Auditory Verbal Comprehension

a) Yes – No Questions

Instructions: Explain the person that you are going to ask few questions and the answers should be either “yes” or “no” only. Initially demonstrate. For e.g.: Are you in theatre? Answer should be “No”. One repetition of each question is allowed, if the person looks confused/when he/she asks for repetition/when there is any kind of disturbance in the stimulus presentation.

Sl. No.	Test items	0	1	2
1.	మీ పేరు కిరణా? /mī peru kirāṇa?/			
2.	మీరు తెల్ల చొక్కా వేసుకున్నారా ? /mīru tēlla t̪okkā vēsukunnārā?/			
3.	కారు ఆకాశంలో ఎగురుతుందా ? /kāru ākāṣamlō egurutundā?/			
4.	మీరు మంచం మీద కూర్చున్నారా? /mīru maṅṅam mīḍa kūṛṅunnārā?/			
5.	కాగితం మంటలో కాలుతుందా? /kāgitaṁ maṅṅalō kālutundā?/			

Maximum score: 10

Person's score: _____

b) Pointing Task

Instructions: Explain the person that few objects/flash cards will be kept in front of him/her and you are going to give some instructions. For e.g.: “point to plate” and the answer should be through pointing to the plate. Placing of the objects/flash cards should be within the person's intact visual field, if there is any obvious visual field deficit seen or reported. One repetition is allowed if the person looks confused/ when he/she asks for repetition/when there is any kind of disturbance in the stimulus presentation.

(Use Picture Set 1: PT-1 to PT-5).

Sl. No.	Test items	0	1	2
1.	చెంచా - /tʃɛntʃɑ/			
2.	ఆవు - /āvʊ/			
3.	అగ్గిపెట్టె - /əɡɡɪpɛttɛ/			
4.	పెన్ను - /pennʊ/			
5.	కుర్చీ - /kurtʃi/			

Maximum score: 10

Person's score: _____

c) Auditory Word Recognition

Instructions: Instruct the person that you are going to say words and the person has to pay attention to the word. The response can be eye blink/ gestures/ pointing. One repetition of each word is allowed if the person looks confused/when he/she asks for repetition/when there is any kind of disturbance in the stimulus presentation.

(Use Picture Set 1: AWR-1 to AWR-5)

Sl. No.	Test items	0	1	2
1.	పువ్వు - /pūvvʊ/			
2.	కన్ను - /kənnʊ/			
3.	ఫ్యాను - /fjænu/			
4.	చాకు - /tʃākʊ/			
5.	మంచం - /mənʃəm/			

Maximum score: 10

Person's score: _____

d) Verification Task

Instructions: Instruct the person that flash cards will be kept in front of him/her and he/she will be told to verify and identify one among the pictures named. Response can be through gesture/eye movement/pointing or verbal. Ask the person for clarification about instructions. Repeat once if he/she looks confused or does not seem to follow the instructions.

(Use Picture Set 2: VT-1 to VT-5).

Sl. No.	Test items	0	1	2
1.	ప్లేటు , కప్పు, చెంచా - /plētʊ, kəppu, tʃemʃā/			
2.	మంచం, కుర్చి, బల్ల - /mənʃəm, kurtʃi, balla/			
3.	ఆసుపత్రి, రైల్వే స్టేషన్, బస్ స్టాండ్ - /āsʊpətri, rālvē stēʃən, bəs stānd/			
4.	దూకు, పరుగెత్తు, కూర్చో - /dūkʊ, pəruɡeʃtu, kūrtʃō/			
5.	కూరగాయ, బుట్ట, పండు - /kūrəgāya, buʃṭa, paṇḍu/			

Maximum score: 10

Person's score: _____

e) Sequential Commands

Instructions: Explain the person that few objects will be kept in front of him/her. Instruct that you are going to give few commands according to which the person should perform the actions and he/she may require to use one of the objects to perform the actions. Demonstrate initially. For e.g.: “Turn your head to the right”. Response should be person turning his head to the right. Ask the person for clarification about instructions. Repeat once if he/she looks confused or does not seem to follow the instructions.

Sl. No.	Test items	0	1	2
1.	కళ్ళు మూసుకోండి /kəʃʃʊ mūsukōṇḍi/			
2.	మీ కుడి చేతిని పైకి ఎత్తండి /mī kudʱi tʃētʃini paiki eʃṭṭṇḍi/			
3.	పెన్ను పుస్తకం పైన పెట్టండి /pennu puʃṭakam paṇa peʃṭṭṇḍi/			
4.	పెన్ను ఇచ్చిన తరువాత పుస్తకం మూయండి /pennu iʃʃʃina tʃaruvāṭṭa puʃṭakam mūjṇḍi/			
5.	పెన్ను ఇచ్చిన తరువాత కప్పు మరియు అద్దం కలిపి నాకు ఇవ్వండి /pennu iʃʃʃina tʃaruvāṭṭa kəppu mərijʃu aʃḍḍam kəʃʃipi nākʊ ivvṇḍi/			

Maximum score: 10

Person's score: _____

3. Repetition

a) Automatic speech

Instructions: Instruct the person that you are going to ask few questions and the person has to answer it. Ask the person for clarification about instructions. Repeat the question once if he/she looks confused or does not seem to follow the instructions.

Sl. No.	Test items	0	1	2
1.	ఒకటి నుండి పది వరకు లెక్కపెట్టండి? /okəʃi nuɳɖi pəɖi vərəku lekka pettəɳɖi?/			
2.	వారాల పేర్లు చెప్పండి ? /vārāla pērlu tʃepɳəɳɖi?/			
3.	సంవత్సరంలోని నెలల పేర్లు చెప్పండి ? /səmvətʃərəmlōni neləla pērlu tʃepɳəɳɖi?/			
4.	పది నుండి ఒకటి వరకు లెక్కపెట్టండి? /pəɖi nuɳɖi okəʃi vərəku lekka pettəɳɖi?/			
5.	అచ్చులు చెప్పండి ? /əʃʃiʃulə tʃepɳəɳɖi?/			

Maximum score: 10

Person's score: _____

b) Word

Instructions: Instruct the person to repeat words after you. Ask the person for clarification about instructions. Repeat once if he/she looks confused or does not seem to follow the instructions.

Sl. No.	Test items	0	1	2
1.	ఇల్లు -/illu/			
2.	బడి -/baɖi/			
3.	తల - /tʃala/			
4.	సబ్బు - /səbbu/			
5.	ఇరవై ఒకటి - /irəvvəi okəʃi/			

Maximum score: 10

Person's score: _____

4. Naming

a) Confrontation Naming

Instructions: Instruct the person that flash cards will be shown and he/she has to name the picture presented. For e.g.: when you show the picture, ask “what is this?” / “can you name this?” Response should be verbal. Dysarthric errors are scored as correct. Ask the person for clarification about instructions. Repeat once if he/she looks confused or does not seem to follow the instructions.
(Use Picture Set 1: CN-1 to CN-5).

Sl. No.	Test items	0	1	2
1.	పిల్లి - /pɪllɪ/			
2.	తాళం చెవి - /t̪āl̪əɱ tʃɛvɪ/			
3.	చెట్టు - /tʃɛttu/			
4.	రేడియో - /rɛdɪjō/			
5.	బకెట్ - /bəkɛt/			

Maximum score: 10

Person's score: _____

b) Word

Instructions: Instruct the person that a question will be asked and he/she has to answer appropriately. Response should be verbal. Dysarthric errors are scored as correct. Ask the person for clarification about instructions. Repeat once if he/she looks confused or does not seem to follow the instructions.

Sl. No.	Test items	0	1	2
1.	అరటి పండు ఏ రంగులో ఉంటుంది? /arəɽɪ pəɱɖu jɛ rəŋɡulō uɳt̪uɳɖɪ?/			
2.	మీరు నీళ్ళు ఎలా తాగుతారు? /mīru nīll̪ɪɳ ələ t̪āɡut̪āru?/			
3.	వంటగదిలో ఏమేమి ఉంటాయి? /vəɳt̪əɡəɖɪlō ēmēmi uɳt̪ājɪ?/			
4.	మీ చుట్టుపక్కల కనిపించే వస్తువుల పేర్లు చెప్పండి ? /mī tʃutt̪upəkkəla kəɳɪpɪɳt̪ɛ vəst̪uv̪ulə pɛrlu tʃɛppəɳɖɪ?/			
5.	మీరు మార్కెట్ లో ఏమి చూడగలరు ? /mīru mārket̪lō ēmi tʃūɖəɡələru?/			

Maximum score: 10

Person's score: _____

c) **Lexical Generative Naming**

Instructions: Explain the person that a question will be asked based on a category and he/she will need to name items within the same category. For e.g.: When asked to name food items, the person has to name within the category of food items only. Ask the person for clarification about instructions. Repeat once, if the person looks confused/does not seem to follow the instructions.

Sl. No.	Test items	0	1	2
1.	కూరగాయల పేర్లు చెప్పండి /kūrāgājāla pērlu tʃɛppəŋɖi/			
2.	ఇంటికి సంబంధించిన పదాలు చెప్పండి /ɪntɪki sɒmbəɖɪ ⁿ ɪŋʃɪna pəɖālɪ tʃɛppəŋɖi/			
3.	ఎరుపు రంగు లో ఉన్న వస్తువుల పేర్లు చెప్పండి /erupu rəŋɡulō unna vəstuvula pērlu tʃɛppəŋɖi/			
4.	"క" అక్షరంతో వచ్చే పదాలు చెప్పండి /ka əkʃərəŋtō vətʃʃɛ pəɖālɪ tʃɛppəŋɖi/			
5.	"అ" అక్షరంతో వచ్చే రెండు పండ్ల పేర్లు మరియు ఇక్కడ చూడగలిగిన రెండు వస్తువుల పేర్లు ఒక్క నిమిషంలో చెప్పాలి /a əkʃərəŋtō vətʃʃɛ rɛndu pəŋɖla pērlu məɾɪju ɪkkəɖa ʃɪɖəgəɪɡɪma rɛndu vəstuvula pērlu okka nɪmɪʃənlō tʃɛppālɪ/			

Maximum score: 10

Person's score: _____

5. Reading

Instructions: Ask the person to identify the letters, words and numbers which are written on the cards from a choice of four cards (Dysarthric errors are considered as correct).
(Use Picture Set 1: R-1 to R-4)

Sl. No.	Test items	0	1	2
1.	అ - /a/			
2.	దూరవాణి - /dūrəvāŋɪ/			
3.	పోలీసు దోంగను పట్టుకున్నాడు - /pōlīsɪ dōŋɡənu pəttukunnāɖu/			
4.	106 - /nūṭa āru/			

Maximum score: 8

Person's score: _____

6) Writing

Instructions: Use an unruled paper with demographic data (name, age, case number, date of examination) of the person written before starting the task.

- ◆ Ask the person to write his /her name, address, names of immediate family members and occupation.
- ◆ Ask the person to write few numbers, days of week/months of year etc for automatic sequential writing (sequential variation can be considered as correct).
- ◆ Ask the person to copy letters and shapes, which are written on flash cards (Use Picture Set 1: W-1 to W-3)
- ◆ Ask the person to do simple calculations (addition, subtraction, multiplication etc.).

Sl. No.	Test items	0	1	2
1.	మీ పేరు వ్రాయండి వ్రాయండి /mī pēru rājəṇḍi/			
2.	ఒకటి నుండి పది వరకు సంఖ్యలు వ్రాయండి /okəʃi nuṇḍi paḍḍi vərəku sənkhʲəlu rājəṇḍi/			
3.	ఐదుకు నాలుగు కలిపితే ఎంత? /aḍḍuʃu ku nāluʃu kalipiʃe eṇṭa?/			
4.	పదాలను చూసుకూంటు కాపీ చేయండి /paḍḍāluṇu ʃūsukūṇṭu kāpi ʃējəṇḍi/			

Maximum score: 8

Person's score: _____

OVERALL SCORE SHEET

Person's Name:

Date:

Age/ Gender:

Registration No:

Mother Tongue:

Clinician:

Education:

DOMAIN OF THE TEST	SUBTEST	Max. Score	Person's Score	Max. Score of Domain	Person's Score
Spontaneous Speech	a. Content	No scoring			
	b. Fluency				
Auditory Verbal Comprehension	a. Yes / No Questions	10		50	
	b. Pointing Task	10			
	c. Auditory Word Recognition	10			
	d. Verification Task	10			
	e. Sequential Commands	10			
Repetition	a. Automatic Speech	10		40	
	b. Word	10			
	c. Phrase	10			
	d. Sentence	10			
Naming	a. Confrontation Naming	10		30	
	b. Responsive Naming	10			
	c. Lexical Generative Naming	10			
Reading		08		08	
Writing		08		08	
Total				136	

Interpretation:

NORMATIVE DATA

DOMAIN OF THE TEST	SUBTEST	LOWER BOUND SCORE	UPPER BOUND SCORE
Spontaneous Speech	a. Content	No scoring is provided, to be carried out qualitatively.	
	b. Fluency		
Auditory Verbal Comprehension	a. Yes / No Questions	10	10
	b. Pointing Task	10	10
	c. Auditory Word Recognition	10	10
	d. Verification Task	10	10
	e. Sequential Commands	09	10
Repetition	<i>Total</i>	49	50
	a. Automatic Speech	08	10
	b. Word	10	10
	c. Phrase	10	10
	d. Sentence	10	10
	<i>Total</i>	38	40
Naming	a. Confrontation Naming	08	10
	b. Responsive Naming	10	10
	c. Lexical Generative Naming	08	10
	<i>Total</i>	26	30
GRAND TOTAL*		113*	120*
Reading		08	08
Writing		08	08
GRAND TOTAL		129	136

*Note: * - Cut off scores for illiterate persons as reading and writing tests could not be administered on them*

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 and 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 and 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 and Family Welfare. 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



Rs.500/-