

ANNUAL REPORT 1999-2000

**ALL INDIA INSTITUTE OF SPEECH & HEARING
MANASAGANGOTHRI, MYSORE - 570 006**



CONTENTS

	Page No
Director's Report	1
Departments	
1. Audiology	12
2. Clinical Psychology	31
3. Electronics	34
4. ENT	39
5. Speech Pathology	41
6. Speech Sciences	51
Central Facilities	
1. Academics	58
2. Library and Information Centre	63
Other Activities	
1. Students of AIISH	64
2. Official Language Implementation	69
Appendices	
A. Clinical Services	71
B. Committees of the Institute	78
- Executive Committee	
- Finance Committee	
- Academic Committee	
C. Faculty and Other Staff	87
D. Personnel	89
E. Accounts	90



Her Excellency, The Governor of Karnataka, Smt.V.S.RamaDevi
is being greeted by disabled children



Hon'ble Minister of State for Health and Family Welfare Sri. N.T. Shanmugam
being apprised of the activities of the institute by the Director of the institute.



Dr. Shivaratna C Savadi, Director of Medical Education, Government of Karnataka distributing the prizes on the occasion of 34th anniversary of the institute



Disabled Children participating in a Cultural Event on the occasion of 34th anniversary of the institute

DIRECTOR'S REPORT

The regular activities of the institute in respect of training, clinical services, research, public education, material development etc. continued during the year.

One of the important events of the year was the XXXXVth meeting of the Executive Council held on 26.2.1999. A number of important decisions were taken under the chairmanship of Sri N.T. Shanmugam, Hon'ble Minister of State for Health and Family Welfare. The XXXIIIrd meeting of the Finance Committee was held in September.

ACADEMIC ACTIVITIES

The institute continued to maintain its excellence in the area of generation of manpower in the field of speech and hearing. A total of 28 graduates (B.Sc) and 21 postgraduates (M.Sc) emerged from the institute this year.

The Mysore University Affiliation Committee headed by Dr. Kamala, Professor and HOD - Paediatrics, K.R. Hospital visited the institute and recommended continuation of affiliation of the institute to the university.

Nine in-house training programmes conducted by various departments formed an important component of human resource development in the institute. These programmes were aimed at updating the knowledge of faculty, technical and administrative staff of the institute in instrumentation.

Topic	Department	Date
Electroglottography	Speech Science	03.11.1999
Oto-acoustic emission	Audiology	10.11.1999
Alternative and augmentative communication	Speech Pathology	17.11.1999
Dr. Speech	Speech Science	24.11.1999
Evoked response audiometry	Audiology	01.12.1999

Topic	Department	Date
Vaghmi	Speech Pathology	08.12.1999
P300	Clinical Psychology	15.12.1999
Audio analyzer	Electronics	22.12.1999
Acoustic phonetics and spectrography	Speech Sciences	29.12.1999

Workshops / seminars

The institute sponsored and conducted the following national level workshops and seminars :

- Workshop on Creativity : December 1999.
 - Aimed at activating and developing latent talents in everybody.
- Workshop on Need for Early Identification and Development of Auditory Behaviour : December 1999
- Workshop on Digits and Syndromes in Speech and Hearing : July 1999
- Seminar on Identification and Rehabilitation of Cleft Lip, Cleft Palate and Orofacial clefts : January 2000
 - It provided a forum for various professionals like plastic surgeons, paediatricians, speech and hearing professionals to discuss their ideas and research findings which would facilitate better identification and rehabilitation of patients with cleft lip, cleft palate and orofacial clefts.
- Workshop on Attitude Change : February 2000
 - It highlighted on positive thinking, ways and means of raising motivation level and increasing efficiency at work place as well as personal life.
- Workshop on Question Bank : February 2000
 - It aimed at preparing a question bank for the core subjects.

- Workshop on Identification and Management of Behavioural Problems : February 2000
 - It aimed at educating the parents regarding the management of mentally retarded children.
- Symposium on Rehabilitation of Laryngectomees and Mandibulectomees : February 2000
 - The objective of this seminar was to provide a common forum to specialists in the field to discuss their ideas and research findings regarding rehabilitation of patients with laryngectomy and mandibulectomy.
- Seminar on Development of Preschool Curriculum for Children with Communication Disorders - Phase I : February 2000; Phase II : March 2000
 - The objective of these seminars was to share ideas and discuss different aspects of curriculum for preschool children between teachers, special educators and speech and hearing professionals. It is planned to develop a curriculum for preschool children after completing phase III of the seminar.
- Seminar on Professional Documentation and Report Writing : March 2000
 - The objective of the seminar was to exchange and discuss ideas regarding professional documentation and report writing.
- Seminar on Transcription System for Speech and Hearing Professionals : March 2000
 - The aim of this seminar was to discuss about the various aspects that are to be considered for evolving a transcription system suitable for speech and hearing professionals in the Indian context. The suggestions offered by speech and hearing professionals and linguists will be incorporated while evolving such a system.

Rehabilitation Council of India

A workshop on Master Trainers' Programme on Management of Disability sponsored by the Rehabilitation Council of India was held from 31.8.1999 to 3.9.1999 to train master trainers who will in turn train the PHC doctors on the early identification of various disabilities.

This workshop was followed by a series of training programmes for PHC doctors. The aim of these programmes was to sensitize the medical officers about prevention, rehabilitation and management of various disabilities such as hearing impairment, visual impairment, locomotor impairment and mental retardation. A total of 75 PHC doctors participated in these programmes held in six different phases.

CLINICAL SERVICES

As in the previous years diagnostic, therapeutic and counselling services were provided to the patients. These services were rendered to a total of 28,235 patients of which 12,399 were new patients. The remaining (15,836) were registered in the previous year.

Hearing evaluation was done for 8,338 patients of which 5,646 were evaluated for providing amplification devices.

Of the 3,484 cases evaluated for speech language disorders, 2,597 were taken up and provided speech, language therapy. The remaining (1,764) were counselled and discharged.

Total number of individual therapy sessions conducted was 26,501 and group therapy sessions 791.

Community service programme

Under the community service programme, the following camps were organized:

Hearing aids distribution camp was held at Tarikere in June 1999 with the sponsorship of Rotary International. A total of 261 patients were evaluated for hearing loss. Free hearing aids were distributed to 32 patients. Speech-language evaluation was done for 259 of which 51 were found to have speech-language problems.

Speech and hearing camp held at Tumkur in the month of February was sponsored by AIISH. Of the 187 cases evaluated for hearing loss, 148 were found to have hearing loss and, of them, 116 were prescribed hearing aids. Speech-language evaluation was done for 119 cases, of which, 18 were found to have speech-language problems.

Alongside pulse polio immunization programme, 13,158 children were screened for speech and hearing problems and 1,538 of them were referred to the institute for further evaluation and management.

Infant screening programme was continued in government medical hospital and immunization centers. Out of 4,314 infants screened, 245 were referred for further evaluation. Screening programmes were also conducted in collaboration with Family Planning Association of India in rural areas. Out of the 12,124 school children screened for hearing problems under this program, 793 were further evaluated at the institute.

Assistance to disabled persons for purchase/fitting of aids and appliances: (ADIP) Scheme

Under the ADIP scheme, 2,502 hearing aids were issued free of cost while 7 were issued at 50% cost. The entire budget for this programme, amounting to Rs. 25.00 lakhs, was a grant by the Ministry of Social Justice and Empowerment, Government of India.

Prevention of Deafness Project

A lot of clinical activities were taken up under the project Prevention of Deafness and Hearing Impairment funded by the Ministry of Health and Family Welfare, Government of India.

The activities under this project included (a) women empowerment, (b) screening of infants for hearing, (c) screening of school-going children for hearing loss, (d) hearing conservation of industrial employees, (e) hearing screening of elder citizens, (f) orientation programs for allied professionals and public, and (g) preparation and production of resource materials.

The target group for women empowerment included, women, expectant mothers, mothers of infants, members of mahila sanghas, etc. They were given orientation lectures regarding prevention of hearing loss during prenatal and perinatal stage and identification of hearing loss as early as possible. These women themselves were also screened for hearing. Hearing screening was carried out on infants and children at local hospitals, immunization centers and pulse polio centers. Hearing screening was carried out in 53 schools. The impact of this program can be seen in the higher number of children with milder and / or unilateral problems being referred to the institute. The employers and employees of several industries were educated regarding the ill effects of noise on hearing, health and psychological aspects and ways to prevent these effects. A camp for the elder citizens, camps for the hearing aid users, hearing screening at old age homes were undertaken. Hearing aid fitting was done whenever indicated and free hearing aids were distributed whenever eligible. They were also counselled regarding the use of hearing aid, communication strategies, and were given public education materials.

Collaboration with World Health Organization

AIISH has been receiving WHO assistance since 1992-93. The grant received biennially has been utilized for purchasing equipment for the institute and towards strengthening and upgrading facilities at other centers. Two such centers were two medical colleges in Indore and Guwahati.

The funds have also been utilized for development of training modules on prevention of deafness and for training the trainers on prevention of deafness.

The institute received a total grant of US \$ 285,000 (Rs. 1.14 crores) from WHO for the biennium 1998-2000.

Preparation of training modules on prevention of deafness has been an ongoing activity throughout the year. Six workshops were conducted with the target groups of nurses, regular school teachers, industrial employees, hearing impaired people, parents, guardians of the hearing impaired. The objective of these training modules is prevention of deafness at primary, secondary and tertiary levels.

Workshop for grass root level workers on Prevention, Identification and Management of Communication Disorders was held from 8th to 10th September 1999. This was a WHO sponsored programme.

A national seminar on Rehabilitation of the Hearing Impaired was held on 14th & 15th October, 1999. The resource persons for the seminar were drawn from different related disciplines. Therefore, it was a forum for discussing different aspects of hearing impairment and rehabilitation.

Apart from these, the WHO also granted five fellowships to the staff of the institute for advanced training overseas in the field of audiology, speech pathology and bio-medical engineering. In 1999-2000, two fellowships were awarded for training in USA - one in the field of speech pathology and one in bio-medical engineering.

RESEARCH

Project Completed

Transformation of the speech of the hearing impaired. It was funded by Department of Science and Technology, Government of India, with a total cost of Rs. 8,71,700/- (1997-2000). The objectives of the project were as follows : (a) recording of speech of normal as well as hearing impaired children, (b) extracting temporal and spectral parameters in their speech and (c) transforming the parameters from the speech of normal children to that of hearing impaired children whenever deviant. The results indicated that transforming temporal parameters yielded the maximum while intelligibility

followed by spectral parameters and transformation of prosodic parameters had a detrimental effect.

Project Under Progress

Developmental milestones of language acquisition in Indian languages : Kannada and Hindi. It is funded by ICSSR with a total cost of Rs. 97,000/-. The objective of this project was to obtain normative data in language acquisition in Indian languages. Data collection is complete and analysis is in progress. This data will be useful for both diagnostic and therapeutic purposes when completed.

OTHERS

Institute Day

The 34th anniversary of the institute was celebrated on 9th August. Justice M.F. Saldanha of Karnataka High Court was the Chief Guest. Dr. Shivaratna C. Savadi, Member, AIISH Executive Council and Director of Medical Education, Government of Karnataka presided over the function. Speaking on the occasion, both Justice Saldanha and Dr. Savadi praised the yeoman services rendered by the institute in the field of speech and hearing. Ms. Elsa Saldanha, journalist, social worker and wife of Justice Saldanha distributed prizes to winners of different competitions like sports, cultural events, quiz etc. held separately for students, staff and patients of the institute.

Ms. Sarah Thomas received the Best Clinician Award. This award is given to a final year M.Sc student for best clinical performance assessed in terms of competence in administering speech-language therapy for various disorders, clinical documentation, punctuality, skills shown in preparation and development of materials for therapy, counselling and guidance given to patients and parents.

Ms. Jayashree Narayan, mother of a cerebral palsied child, received the Mother of the Year Award. This award is given to the mother or any

woman caretaker who makes outstanding contribution in terms of home training and support towards overall improvement of the patient.

Awareness Programmes

A documentary of 25 minutes entitled Opening the doors of silence was produced and the same was telecast by the Bangalore Kendra of Doordarshan on 8th August coinciding with the 34th anniversary of the institute. This film was a step towards creating greater awareness among the people about the services of the institute. Besides this, fourteen shorter films of ten to fifteen minutes duration were also produced covering different aspects of communication disorders. These films are being used for public education as well as for publicity. Feedback received has been very encouraging. The titles of the films are as follows:

- Audiological assessment for adults - A perspective
- Infants and children hear and respond
- The speech and hearing specialists in your neighbourhood
- Assistive devices - Friends in need.
- Psychology of communication disorders.
- Silence to communication - A look at disorders of language.
- The deaf are not dumb
- A journey from defective to normal speech
- Focus on voice - Normal and abnormal.
- The hearing aid, a companion to the hearing impaired.
- Hearing tests go Hi-tech
- Instrumentation in speech and hearing
- Human speech - Investigations and applications
- AIISH - Launch to a dream career.

As part of the publicity programme, five thousand wall calendars were printed and distributed to patients registering at the institute, schools in city, service organizations and visitors coming from outstations.

Computer Centre

The computer center of the institute monitors the server for local area networking. It provides internet, E-mail facilities for the staff and students. Upgradation of nodes and server was taken up to overcome Y2K problem during the year. The internet connection was provided in the Director's office with the help of additional TCP / IP connection from VSNL.

Official Language Implementation

Strong impetus was given to popularize Hindi language. Apart from monthly meetings to assess the progressive use of the language in different departments of institute, competitions for the staff and students were conducted on the occasion of Hindi Day on 14th September 1999. Hindi fortnight was conducted from 3rd to 17th Sept. 1999.

Visitors

Hon'ble Minister of State for Health and Family Welfare Sri N.T. Shanmugam, who is also the Chairman of the institute's Executive Council, visited the institute on 26.2.2000. Her Excellency, the Governor of Karnataka, Smt. V.S. Rama Devi visited the institute on 29.3.2000 and as a token of her appreciation of the services of the institute, she donated Rs.5,000/- to the institute fund.

Prof. Arden Thorum from the Department of Communication Disorders, California State University, U.S.A., and three speech therapists from Scotland were the other professionals in the field who visited the institute. The institute also had other visitors from different walks of life. Prominent were the teachers, trainee teachers, teachers of special education, graduating medical students from different states, administrators, engineering (architect) students, trainees under CBR on probation.

Fiscal Matters

The institute received a grant-in-aid of Rs. 303.00 lakhs under Plan and Rs.180.00 lakhs under Nonplan respectively from the Government of India grants received are as follows:

Grant in Aid - Plan	Rs. 303 lakhs
Grant in Aid - Nonplan	Rs. 180 lakhs
W.H.O.	Rs. 114 lakhs
A.D.I.P.	Rs. 25 lakhs
Donations	Rs. 22,931

Dr. M. Jayaram
Director

DEPARTMENT OF AUDIOLOGY

The Department of Audiology is one of the major departments of the institute. During the year 1999-2000, the department continued to pursue its objectives by (a) training postgraduates and undergraduates students in Audiology, (b) providing hearing evaluation, hearing aid trial and ear molds for hearing handicapped population, (c) carrying out research in the areas of hearing disorders, (d) conducting seminars, workshops, short-term training programmes, public education programmes and developing resource materials and (e) providing extension services in collaboration with other agencies.

TEACHING AND TRAINING

The undergraduate and postgraduate students were trained in taking case history, evaluation and diagnosis of various hearing disorders. Further more, students were trained to carry out special tests for differential diagnosis of neurological and psychological disorders of hearing. They were also imparted practical training in hearing aid selection, prescription, making of ear molds, guidance and counselling the needy.

Short-term Training Programmes

The following short-term training programmes were conducted for the speech and hearing and allied professionals:

<u>Title</u>	<u>No. conducted</u>
Auditory training	2
Earmould making	7
Insertion gain measurement and assistive listening devices	1
Oto-acoustic emission	1
Setting of classroom for the hearing impaired	1
Audiogram	2
Audiometers	1
Audiological tests	1

In-house Training Programmes

The following in-house training programmes were conducted to acquaint the staff of the institute with technological advances in Audiology:

1. Oto-acoustic emission - November 1999
2. Portable evoked response audiometry - December 1999

Ph.D Programme

A doctoral thesis entitled "Self assessment of hearing handicapped - A few audiological and non audiological correlates" was carried out by Mrs. C.S. Vanaja, Lecturer in Audiology, under the guidance of Dr. S. Nikam.

Four dissertations and 23 independent projects were carried out under the supervision of the departmental staff. The titles are as follows:

Dissertations

Sl. No.	Student name	Title of Project
1.	Archana Guruprasad	Audiological evaluation of learning disabled children.
2.	Krithika Iyengar	Correlation between MMN for intensity and DLI
3.	Savitha Kamath	Prediction of loudness discomfort level using ABR.
4.	Shivaprasad Reddy	MMN in patients with sensorineural hearing loss

Independent Projects

Sl. No.	Student name	Title of Project
1.	U. Ajith Kumar	Contralateral suppression of Acoustic Reflex
2.	Aruna Kamath	Hearing aid selection Protocol for ear with tolerance problems
3.	Arushi Chandra	DPOAE in recruiting and non-recruiting ears
4.	Anshula S. Odekar	LLR, P300, MMM in stutterers Children & adults
5.	R. Bharathy	Role of genetics in hearing
6.	M. Beula Maria	Comparison of BOA and VRA
7.	C. Chandralekha	Improvement in speech perception using Auditory Training
8.	B. Harnish	High frequency audiometry in conductive hearing loss cases
9.	S. Jayaradha	Click evoked and tone burst evoked OAE in normal and cases with different configuration of audiogram.
10.	Kaveri Pant	Tone burst ABR in patients with sensorineural hearing loss
11.	Komal Arora	Effect of noise exposure on SOAE

- | | | |
|-----|-------------------|--|
| 12. | Laxmi Venkatesh | Monaural hearing Vs Binaural hearing |
| 13. | K. N. Naveen | Effective damper and its positioning in hearing aid amplification system. |
| 14. | R. C. Perumal | Syndromes - A review |
| 15. | M.N. Poornima | Incidence of hearing loss in school children |
| 16. | P. Puranik Prachi | Dichotic CV test Revised - Normative data |
| 17. | N. Purnima | Comparison of digital and programmable hearing aids |
| 18. | Rasheeda Begum | Speech perception (ESP) in young patients with profound hearing loss |
| 19. | Sangeetha Mahesh | Speech reading test in Kannada |
| 20. | B. Suresh | Comparison of ABR using insert receiver & headphone |
| 21. | K.P. Swaroopa | Audiological pattern in families having more than one hearing impaired child |
| 22. | G. Vijay Kumar | ABR changes in induced TTS |
| 23. | S. N. Vinay | Effect of SOAE on TEOAE |

Workshops

The following workshops were conducted by the department, with the aim of imparting information regarding prevention of hearing impairment and deafness:

1. In-house workshop on training modules - May, 1999
2. Training modules for nurses - June, 1999
3. Training modules for regular school teachers - June, 1999
4. Training modules for industrial employees - July, 1999
5. Training modules for parents / guardians of hearing-impaired - July, 1999
6. Workshop for health workers and other grass root level workers on prevention, identification and management of communication - September 1999.
7. Need for early identification and development of auditory behaviour - December 1999.
8. Hearing conservation - February 2000.

CLINICAL SERVICES

Hearing Evaluation

A total of 4,957 cases were evaluated for their hearing abilities at AIISH, this year. Majority of the patients seen in the department were referred by old patients of the institute. Other referral sources included medical professionals, school teachers, health workers and social workers. Some of the patients came for evaluation after watching T.V. programmes on the institute.

Baseline and monitoring audiograms were obtained from employees of various industries / organizations. Of the 203 employees evaluated, 35 were identified to have hearing loss.

Hearing Aids

Hearing aid selection was done for 2,055 individuals. Of them, 1,763 were prescribed hearing aids. Twenty-six different types of hearing aids / assistive listening devices were procured for the purpose of hearing aid trial.

2718 hearing aids received for distribution under the Aids and Appliances scheme of the Ministry of Social Justice and Empowerment, Government of India, were tested and certified prior to distribution. Trouble shooting of hearing aids and issue of cords were also carried out at the department.

Earmolds

During the year 2,902 ear molds were made for cases. In addition, 64 earplugs were made to be used as "swimmers plugs" or as ear protective devices by industrial workers. The staff of the earmold laboratory underwent training in softmold making with the aim of upgrading the earmold facilities in the department.

Extension Activities

Using the high-risk check-list and calibrated noise makers, 4,314 infants were screened for hearing problems in the government maternity hospital and in immunization centers. Of them, 245 infants were referred for further evaluation. Screening programmes were conducted in collaboration with Family Planning Association of India in rural areas. 302 cases from rural areas were tested and 74 were advised to undergo detailed evaluation. Visits were made to schools to identify children with speech and hearing problems. Of the 12,124 school children screened for hearing problems, 793 were referred for detailed evaluation at the institute. For the first time, the services of an ENT specialist was made available during the extension activities carried out with Family Planning Association of India and at schools. These screening programmes served the dual purpose of training of students and education of the general public.

Free Hearing Check-up Camps

The following three speech and hearing camps were conducted:

- At Tumkur (February 2000), a total of 187 cases were tested of whom 116 were prescribed hearing aids. Counselling regarding the nature of the problem and management was also done. Orientation lecture was also given to the teachers of the school for the deaf regarding ear and hearing loss, usage of hearing aids and speech and language therapy.
- Along with other disciplines, a speech and hearing camp was conducted in association with Women and Child Welfare department, Government of Karnataka, in March 2000 at Nanjangud.
- A speech and hearing camp was conducted for the elder citizens and the general public in Jayalakshmipuram, Mysore, in March 2000. A total of 67 cases were seen and hearing aids were prescribed for 19 of them.

RESEARCH

Projects Completed

Development of software for Central Auditory Processing Disorders tests : Software for developing auditory tests for evaluating the perceptual abilities was completed in collaboration with M/s Voice & Speech Systems, Bangalore.

Projects Under Progress

1. Fabrication of a mobile audiological unit.

Audiological evaluation needs to be carried out in a sound treated room. However, during outreach programmes, it is difficult to control the ambient

noise. To overcome this problem, a mobile audiological unit is being fabricated for audiological evaluation and rehabilitation. The work is under progress since 1992.

2. Up-gradation of AIISH for Prevention of Deafness - funded by WHO

The objective of this WHO sponsored project that commenced during the biennium 1998-99, was to procure equipment. WHO has gifted 18 different equipment / material to the institute during the last financial year to the tune of US \$. 82,160. The above are being used in the departments of Audiology, Speech Pathology, Speech Sciences, ENT and Electronics.

3. Up-gradation of speech and hearing centers in Indore and Guwahati - funded by WHO

This project commenced during the biennium 1998-2000 and as per its objective, WHO has gifted equipment / material to the existing speech and hearing centers in Indore and Guwahati during the last financial year to the tune of US \$ 180,000.

4. Preparation of training modules on prevention of deafness - funded by WHO

This project also commenced during the biennium 1998-2000 and as per its objectives, five workshops on preparation of training modules on prevention of deafness for the following target groups were conducted during the year:

- a) Industrial employers
- b) Hearing impaired and/or guardians of the hearing impaired.
- c) Nurses
- d) Regular school teachers

Prior to conducting the above workshops, a ten day in-house workshop was conducted to get the preliminary material for the training modules.

5. **Prevention of Deafness & Hearing Impairment - funded by the Ministry of Health and Family Welfare, Government of India.**

This project was initiated in 1996-97. The activities of the project included women empowerment, infant hearing screening, screening of school-going children for hearing, hearing conservation of the industrial employees, hearing screening of elder citizens, orientation programs for allied professionals and public, and preparation and production of resource materials.

The target group for women empowerment included women, expectant mothers, mothers of infants, members of mahila sanghas, etc. They were given orientation lectures on prevention of hearing loss during prenatal and perinatal stage, and identification of hearing loss as early as possible. Hearing screening was carried out on infants and children at local hospitals, immunization centers and pulse polio centers. Hearing screening was also carried out in 53 schools. The impact of this program was seen in more number of children with milder and with unilateral problems being referred to the Institute. The industrial employers and employees were educated regarding the ill effects of noise on hearing, health and psychological aspects, and ways to prevent these ill effects. Camps for the elder citizens and hearing aid users were undertaken. Hearing aid fitting was done whenever indicated and free hearing aids were distributed whenever eligible. They were counselled regarding the use of hearing aid, communication strategies and also were given public education materials.

OTHERS

Public Education Programme

The following public education pamphlets were printed during the year:

- High risk register (English & Kannada)
- For the hearing aid users (English)
- Handbills (English & Kannada)
- Guidelines for prevention of the hearing loss (English & Kannada)
- Questionnaire for industrial workers (English & Kannada)

- Trouble shooting (English)
- Adjusting to amplification (English)
- Getting to know you (English & Kannada)
- Hard of hearing in classroom (English)
- Ear and Hearing loss (English)

In addition posters were printed in Kannada on Ear, Hearing and its Care. The posters and public education materials were distributed to teachers, employees of industries, teacher trainees, grass root level workers, doctors (including PHC doctors), etc. The distribution was done while conducting training activities for the above groups or at their place of work.

A *Human Chain Rally* was conducted on March 2000 to create awareness on prevention of deafness. The participants wearing T-shirts, with the message SAY NO TO DEAFNESS formed a human chain at different prominent parts of Mysore city. They distributed public education pamphlets to the public and made announcements over the public address system regarding prevention of hearing impairment.

Orientation Programmes for Allied Professionals and Public

The orientation programmes were conducted for different target groups on prevention of hearing impairment, evaluation and rehabilitation procedures, welfare measures, etc. The target group included PHC doctors, ENT doctors, paediatricians, family physicians, teacher trainees (200 nos.), primary / secondary / high school teachers (600 nos.), members of voluntary organizations, elder citizens, 184 women, grassroot level workers, 50 industrial employers / employees, 24 NSS officers etc. Video cassettes about the activities of the institute were also screened.

Resource material were prepared, displayed and distributed in public places including 15 film theaters, bus stand, etc. The material included slides for film theaters, pamphlets and posters in different languages, handbills, video cassette (for screening during orientation programmes and Doordarshan). Handbills and pamphlets were also distributed along with newspapers. Further,

the public were greeted during festivals along with messages on prevention of hearing impairment.

Honors

Dr. S. Nikam, Director, AIISH

- continued to be a member of the following during the year:
 - o Syndicate of the University of Mysore.
 - o RCI, Govt. of India.
 - o Faculty of science and technology, University of Mysore.
 - o Committee on rate contract in hearing aids under the Ministry of Social Justice and Empowerment, New Delhi.
 - o Selection committee for candidates enrolling for diploma courses at JSS Polytechnic for the Physical Handicapped, Mysore.
- attended the following meetings during the year
 - o Disability Act meeting under the chairmanship of DDG (Medical) at DGHS, Nirman Bhavan, New Delhi.
 - o Chaired the BIS meeting at AIISH on electrotechnical vocabulary part IV ; Acoustic ; section 5 speech and hearing.
 - o 7th BIS meeting on acoustic sectional committee (LTDS) at BIS Office, Bangalore.
 - o Training programmes for adult deaf at NIMH, Secunderabad.
- was nominated as chairperson of the syndicate sub-committee.
- was honoured by the international association of Lions Club, District 324-DI, at Lions Bhavan, Mysore.

Dr. Asha Yathiraj

- organized the following WHO funded activities:
 - o workshop for grass root level workers on Prevention, Identification & Management of Communication Disorders at AIISH
 - o workshops to finalize the training modules on prevention of deafness for the following target groups - a) Industrial Employers, b) Hearing Impaired and / or Guardians of the Hearing Impaired, c) Nurses and d) Regular School Teachers
 - o seminar on Rehabilitation of the Hearing impaired and presented a paper entitled Rehabilitation of the Deaf Blind.
- was elected the Editor of the Journal of the Indian Speech and Hearing Association.
- developed computerized monosyllabic time compressed speech material in English.

Dr. Asha Yathiraj and Dr. K. Rajalakshmi

- were recognized as guides for Ph.D in speech and hearing by the University of Mysore.

Dr. K. Rajalakshmi

- attended the advisory board meeting of CBM International at Coimbatore.

Mr. Animesh Burman

- served as NSS Program Officer.
- co-ordinated the human chain rally for creating awareness on prevention of deafness.

Workshops / Conferences / Symposium Attended

- Dr. Asha Yathiraj presented the following papers:
 - o Need for early identification and development of auditory behaviour at the WHO workshop to finalize training modules for nurses at AIISH.
 - o Parent- teacher interaction and helping the hearing-impaired children adjust in regular classrooms at the WHO workshop to finalize training modules for regular school teachers at AIISH.
 - o Speech reading and communication strategies for adults and an outline to teach language to hearing impaired children at the WHO workshop to finalize the training modules for the hearing impaired and/or their guardians, at AIISH.
 - o (a) Speech reading and communication strategies, (b) Need for early identification of hearing loss, (c) development of auditory behaviour, (d) checklists used for identifying hearing loss at the WHO workshop for grass root level workers on Prevention, Identification & Management of Communication Disorders held. at AIISH
 - o Management of Deaf-Blindness during the Helen Keller's Deaf-blind awareness week at AIISH
 - o Rehabilitation of the Deaf Blind at the WHO seminar on Rehabilitation of the Hearing impaired at AIISH.
 - o Language disorders and management of children in IED situation at Regional Institute of Education, Mysore.
- Dr. K. Rajalakshmi presented the following papers:
 - o Welfare measures for the hearing impaired at the WHO workshop to finalize the training modules for nurses held at AIISH.
 - o a) Support services for the hearing impaired and b) Facts and myths about hearing aids and its use at the WHO workshop to finalize training modules for regular school teachers held at AIISH.

- o Welfare measures for the hearing handicapped at the WHO workshop to finalize the training modules for the hearing impaired and/or their guardians, at AIISH.
- o Welfare measures for the hearing-handicapped at the workshop for grass root level workers on Prevention, Identification & Management of Communication Disorders.
- o Welfare measures for the hearing-impaired WHO seminar on rehabilitation of the hearing-impaired.
- o Sign language and bilingualism in deaf Education and descriptive study of sign language of the deaf at the seminar on Sign Language and Bilingualism in Deaf Education, at Bangalore.
- Mr. Animesh Burman presented the following papers:
 - o (a) Anatomy, physiology of the ear and causes of hearing loss and (b) Signs and Symptoms of Hearing loss at the workshop to finalize training modules for nurses at AIISH.
 - o Hearing mechanism and nature of hearing impairment at the workshop to finalize training modules for regular school teachers at AIISH.
 - o Neonatal hearing screening and audiological management of developmental disabled children at the workshop on Early Identification and Management of Developmental Disabilities - A Multidisciplinary approach at CFTRI, Mysore.
- Mrs. C. S. Vanaja presented the following papers during the year:
 - o Evaluation of deaf-blindness for special school teachers, staff and students of AIISH at the Helen Keller's deaf-blind awareness week at AIISH.
 - o Identification of children with hearing impairment during the WHO workshop on training modules for regular school teachers at AIISH.
 - o Effects of noise exposure and audiometry and NIHL in the WHO

workshop on finalizing training modules on hearing conservation programme for industrial employers.

- o Early identification of hearing loss in the WHO workshop for grass root level workers on Prevention, identification & management of communication disorders.
- o Hearing Evaluation: A pre-requisite to rehabilitation of the hearing-impaired in the WHO seminar on Rehabilitation of the hearing- impaired
- o Audiological findings in patients with cleft lip and palate in the national seminar on Cleft Palate, Cleft Lip, and Orofacial Clefts at AIISH.
- o Documentation in Professional Writing - Audiologist's view in the workshop on Documentation of Professional Reports at AIISH.
- o Facilities available for the paediatric hearing impaired for paediatricians at AIISH.

• Mrs. P. Manjula presented the following papers during the year:

- o Causes of hearing loss at Ideal Jawa Rotary School, Mysore.
- o (a) Optimizing auditory reception, (b) Effects of hearing impairment on the development of a child and (c) Role of the teacher in the prevention of hearing loss at the WHO workshop to finalize training modules for regular school teachers at AIISH.
- o (a) Noise control (b) Legal aspects (c) Myths on EPDs at the WHO workshop to finalize training modules for industrial workers at AIISH.
- o Educating the Educators at HD Kote Tq.
- o Recent developments in ear moulds at the WHO Seminar on Rehabilitation of the hearing- impaired.
- o Role of the grassroot level workers on the prevention of hearing impairment at the WHO workshop on Prevention, Identification & Management of Communication Disorders.
- o Hearing conservation programme for industrial employees of AT & S Co., Nanjangud.

- o Facilities available for the hearing impaired for ENT doctors at AIISH.
- Mrs. K.R. Revathi presented a paper on "Adjusting to amplification" in the WHO workshop to finalize the training modules for the hearing impaired and/or their guardians, at AIISH.
- Mrs. S. Sowmyamala presented a paper on "Changing scenario in the clients seeking speech and hearing guidance" at the WHO seminar on rehabilitation of the hearing-impaired.
- Mrs. N. Parimala underwent in-house training on Internet / E-mail.
- Mrs. K.J. Ramadevi. Sreenivas presented the following papers during the year:
 - o Introduction to hearing aids at the WHO workshop to finalize training modules for school teachers at AIISH.
 - o Hearing aids - parts & types and assistive listening devices at the WHO workshop to finalize the training modules for the hearing impaired and/or their guardians, at AIISH.

Equipment Procured

1. Ear protective devices
2. Intelligent Visual Reinforcement Audiometry
3. Hydraulic Press
4. Hearing Instrument Programmer
5. TV Listening Systems
6. Digital / Programmable Hearing aids
7. Smart Auditory Evoked Potential
8. Aurical (Audio diagnostic fitting system)
9. Faceplate for in-the-canal hearing aid
10. Assistive listening devices
11. Upgradation of Nicolet Spirit to Nicolet Provo NT

WHO Project

1. Audioscope
2. Laboratory handpiece - KAVO
3. Impact DSR 675 programmable BTE hearing aid
4. Portable clinician fitting programmer with BJA - 4 cable and carry ba
5. Rastronics Millennium System
6. GSI 33 Version 2 middle ear analyzer with accessories

Prevention of Deafness

1. Screening OAE analyzer 292 DP Echport Plus with printer
2. Middle Ear Analyzer MI 34
3. Models of :
 - a) Brain & Skull
 - b) Ear
 - c) Labyrinth
 - d) Ear
4. Hearing aids for distribution

PUBLICATIONS

Rajalakshmi, K.(1999). Volume control taper characteristics of Indian BTE Hearing aids. Proceedings of the 5th Technical Session of the Madras India Regional Chapter of the Acoustical Society of America, IIT, Chennai.

DEPARTMENT OF CLINICAL PSYCHOLOGY

The department of Clinical Psychology has contributed to human resource development in the area of communication disorders in the institute. Apart from teaching, training and guiding the students, the department has also taken up research activities that focus more on identification and management of psychological problems associated with communication disorders.

TEACHING AND TRAINING

Students posted to the department received training in administering, scoring and analysis of various psychological tests. They also received training in behavioural modification, bio-feedback, assertiveness training, psychodrama, group therapy, cognitive therapy, cognitive behaviour therapy, guidance and counselling for cases with communication disorders.

Shortterm training programmes

A workshop was organized by the department for 30 parents of the mentally retarded children on Identification and Management of Behavioural Problems in Home Settings - February 2000.

Following groups have received orientation lectures / demonstration about the functions of the department, applications of clinical psychology in various fields like paediatrics, community mental health, etc. and application of psychological techniques in the management of communicative disorders and psycho-physiological disorders:

- Groups of teachers from Malavalli; DIET, Shimoga; DIET, Mandya; ENT surgeons from Mysore city.
- Groups of teacher-trainees from community based rehabilitation center, Kanakapura.
- Groups of student-trainees from Thakur Hariprasad Institute for

Research and Rehabilitation of the Handicapped, Hyderabad; College of Education, Calicut; St. Mary School, Tilak Nagar; Sanskrit University, Trissur; St. Agnes Teachers Trainees Institute for Special Education, Mangalore; Model Polytechnic College, Kannur, Kerala; Dept. of Psychology, Calicut University; B.M. Hospital, Mysore; K.R. Hospital, Mysore and B.Ed College, Udupi.

- PHC doctors, delegates participated in W.H.O. workshop.

Ph.D programme

The following Ph.D. theses were in progress under the guidance of Dr. P. Kalaiah:

- Mr. Firas Saleh Daher Al-Fwares - Development of a package of therapies for Arabic speaking stutterers based on personality characteristics (Foreign candidate)
- Mr. Venkateshaiah - Angavikala makkala vyaktithva vikasakke poshakara matthu samajada prabhava - ondu adhyayana
- Mr. R. Jayaraju - Karnataka rajyada vivida karagrahagalalli iruva angavikala aparadhigala maanasika samasyegala ondu samagra adhyayana
- Mr. Jagadish - The impact of parental attitude on temperament, adjustment and social maturity in hearing handicapped children

The following thesis were in progress under the guidance of Dr. Jyothi S. Madgaonkar, University of Mysore

- Mr. H.H. Raju - A study of job satisfaction in relation to occupational stress and quality of life of employees in public and private sectors

CLINICAL SERVICES

The department provided clinical services as shown below:

New cases	2,938
Follow-up	448
M.R. certificates	599
No. of patients given therapy	138
No. of therapy sessions	2,724

Different types of patients evaluated at the department are given in the table below:

Patients attending the department also received certificates which would enable them to get financial assistance, travel concessions, income tax rebates, special school admissions, exemptions from second language study in school, L.I.C. / U.T.I. schemes (shown in the table given below):

Sl.No.	Certificates and reports	No. of cases
1.	M.R. certificates for pension	599
2.	Railway concessions for M.R. persons	42
3.	Income-tax rebate for parents of M.R. persons	18
4.	Psychological reports for special school admissions	26
5.	Certificates for language exemption in children with learning disabilities	22
6.	LIC / UTI deposits for M.R. persons	12

Sl. No.	Diagnosis	No. of cases
1.	Mental retardation	111
2.	Autistic disorder	16
3.	Delayed speech language	471
4.	Articulation disorder	109

5.	Normal non-fluency	20
6.	Stuttering	369
7.	Specific learning disability	32
8.	Cerebral palsy	51
9.	Aphasia	20
10.	Functional dysphonia	17
11.	Hearing loss	907
12.	Voice disorders	25
13.	Others	232
Total		3,386

RESEARCH

Projects under progress

- Parental attitude towards hearing handicapped children.
- Development and standardization of scale on mathematical assessment for remedial teaching (SMART-KV).
- Teaching children with arithmetic delays : manual for instructors.
- Validation and extension of gessells drawing test for children with communication disorders
- Vocational assessment of the communicatively handicapped
- Consanguinity and communicative disorders.

OTHERS

Public Education Activities

A comprehensive video cassette titled Psychology of communication disorders projecting the detailed activities and functions of the various units of the department was made during the year.

Workshops / conferences attended

Dr. G. Jayaram delivered an orientation talk on various aspects of cognitive assessment in children with developmental disabilities to visiting HOD and Professor in Pediatrics from Annamalai University Medical College, Annamalai Nagar.

PUBLICATIONS

Venkatesan, S. (2000). Revalidation of Seguin form board in Indian children. *Indian Journal of Applied Psychology*, 1 & 2, 17-23.

Venkatesan, S. (2000). Parents' perception adjustment patterns in adults with mental retardation. *Journal of Personality and Clinical Studies*, 15, 19-24.

Venkatesan, S. (2000). Developmental assessment for early identification of children with mental retardation and cerebral palsy in developmental disorders: Early identification and intervention - a multi-disciplinary approach. Regional Institute of Education, Mysore.

DEPARTMENT OF ELECTRONICS

During the year 1999-2000, the department of Electronics continued to pursue its objectives by (a) training undergraduates and postgraduates in basic electronics and acoustics, (b) calibration of various instruments, (c) repairing hearing aids, (d) maintaining various electrical and electronic appliances, (e) computer networking and (f) development of electronic devices.

TEACHING AND TRAINING

Basic electronics and acoustics were taught to undergraduate and postgraduate students. The students were also trained on repairing of various types of hearing aids and calibration of equipment used in the field of speech and hearing.

Short-term training programmes

Sl.No.	Title	No. of courses conducted
1.	Installation of equipment related to speech and hearing	2
2.	Preventive maintenance of bio-medical equipment	1
3.	Hearing aid servicing	6

MAINTENANCE OF EQUIPMENT

Hearing aid servicing

Hearing aids issued under ADIP scheme were regularly serviced along with patients' own hearing aids (appended below). The annual requirement of spares for all types of hearing aids were procured, tested and certified.

All the serviced hearing aids were evaluated to satisfy the standards by using FONIX 6000 C and IGO HAT 1000 instruments.

Instruments servicing

Equipment belonging to all the departments / sections were serviced effectively with minimum downtime (appended below). All the audiometers and immittance meters were calibrated regularly to meet the ANSI standards.

Functional instruments such as sterilizers, voltage stabilizers, ZEISS microscope and otoclave were attended to regularly.

In addition to the routine activities, the department looked after regular operation and maintenance of computers, LAN, internet and e-mail services.

Nature of work	Type of work	
	Major	Minor
1. Hearing aid serviced	305	75
2. Equipment serviced	133	128
3. Electrical work attended	191	39

RESEARCH

Projects completed

1. N-Indicator

N-Indicator is a device used for speech therapy. This provides visual indication of the nasal output of speech. The unit is battery operated, portable and cost effective. The patients can afford to have it at home for self-therapy. The department took up the project of designing, developing and fabricating N-indicator as an import substitute. The project was completed within 12 months. Two units were developed and given to the department of Speech Pathology for field trials. The results were satisfactory. The project, with Mr. H.S. Sathish, Head, Electronics, as the principal investigator and Mr. S.R. Srinivas, Junior Technical Officer as co-investigator, was financed by the institute at a cost of Rs.10,000/-.

2. Versatile cord tester

There is a need for the hearing aid user to have a low cost portable unit to test the body level hearing aid, its battery and the cord. A project was taken up to develop a low cost unit using locally available electrical tester with modifications. The project was funded by the institute. Twenty such units were developed. Five of them have been sent for field trials. The cost of the project was Rs. 8,000/-. Mr. H.S. Sathish, was the principal investigator and Ms. B.R. Chudamani, Junior Technical Officer and Mr. B.N. Balasubramanya, Junior Technical Officer were co-investigators.

Projects Under Progress

1. Vibrotactile chair

Sensory reinforcement for children is good for therapy. Vibrotactile chair is one such unit which provides mild vibrations which is proportional to the strength of the speech. The vibrations are developed with the help of electro mechanical system and the control signal is developed with digital electronics. The project costing Rs. 45,000/- was funded by AIISH. The unit has now been designed and fabricated and will be sent to therapy clinic for field trials. Mr. H.S. Sathish, is the principal investigator while Mr. M.K. Seetharam, Electronics Engineer and Mr. S.R. Srinivas, Junior Technical Officer are the co-investigators.

2. Speech discrimination test

This project was taken up to develop CDs for testing speech discrimination in patients in different Indian languages. The main purpose of this project was to eliminate errors encountered during speech discrimination test with live speech (the accent of the clinician will be different for different languages). The project could not be completed due to non-availability of the components. The project costing Rs. 1.20 lakhs was funded by the institute. It is expected to be completed by March 2001. Mr. H.S. Sathish is the principal investigator and Mr. M.K. Seetharam is the co-investigator.

OTHERS

External Consultancy

Other organizations take help from the department in carrying out the calibration of audiometers, measurement of industrial noise / instrument noise and guidance for the construction of audiometric rooms. The department has offered four such consultations and generated reports.

Seminar / Conferences Attended

H.S. Sathish

- Served as an expert on preparation of syllabus for a certificate course on hearing aid servicing by RRTC, Chennai - July 1999.
- Presented a paper on Application of ANN in the Diagnosis of Speech Disorders at the ISHA Conference held at Hyderabad - January 2000.

M.K. Seetharam

- Served as a member of the committee on preparation of syllabus for a certificate course on hearing aid servicing by RRTC, Chennai - July 1999.

B.N. Balasubramanya

- Delivered a lecture on Hearing aid repair and servicing to the staff of Women and Child Welfare department.

Visit abroad

Ms. B.R. Chudamani, Junior Technical Officer, was awarded Fellowship by the World Health Organization on Biomedical Engineering for professional training at Texas Children Hospital, Houston, USA from 2nd August to 27th August 1999.

Equipments procured

2.

1. Calibration set-up SLM 1800 Model (Type Quest) with accessories
2. Fluke Digital Multimeter

to
up
ir
w
p
N
J

I

I

(

f

DEPARTMENT OF ENT

The department of ENT is a well equipped, specialized branch of the institute concerned with clinical services to patients with various types of communication disorders.

TEACHING AND TRAINING

In addition to regular teaching of ENT subjects to undergraduates as well as postgraduate students, the pathology of speech and hearing disorders was taught by clinical demonstrations using various instruments and operating microscopes. The students were also exposed to clinical aspects of diseases pertaining to speech and hearing.

CLINICAL SERVICES

Various ear, nose and throat diseases were diagnosed using modern equipment like microscope, endoscope and ENG etc. Minor procedures like suction clearance of ear discharge, removal of foreign bodies, removal of wax etc. are being conducted. The department of ENT, AIISH is running a separate unit (AIISH ENT "C" Unit) at K.R. Hospital attached to Mysore Medical College. Major, minor and emergency operations are performed at K.R. Hospital. In-patient facilities are being provided at K.R. Hospital (20 beds for male and 10 beds for female) for patients of the AIISH ENT unit.

No. of cases seen at AIISH	15,412
No. of cases seen at K.R. Hospital	8,609
Major operation performed	166
Minor operation performed	91

The major surgeries are mastoidectomy, tympanoplasty, microlaryngeal surgery among others. Minor surgeries included, among others, myringotomy gromelte, aural polypelltomy, tongue tie release etc.,

RESEARCH

Projects Under Progress

1. Pre-operative and post-operative cases and evaluation of voice disorders.
2. Chemical cauterization for small central perforation (silver nitrate)
3. Long-term follow-up of CSOM cases.
4. Comparison of different modalities of treatment in tinnitus.
5. ENG - its diagnostic applications to oto and neurological disorders.

OTHERS

Seminar / Symposium Attended

Dr. M.V. Susheela Presented a paper entitled Contribution of otolaryngology in the rehabilitation of the hearing impaired - recent advances in the seminar on Rehabilitation of the Hearing Impaired held at AIISH - October 1999.

Equipments procured

- | | |
|----------------------|--------|
| 1. Suction apparatus | 3 Nos. |
| 2. Drill motor | 1 No. |

WHO Equipment

1. Zeiss operation microscope OPMir-1 FC with 5-step magnification change on mobile floor stand S21 for ENT surgery
2. Bur Tips

DEPARTMENT OF SPEECH PATHOLOGY

The Department of Speech Pathology is one of the major departments of the institute. During the period under report, the department continued to pursue its objectives by (a) training postgraduates and undergraduates in speech and language pathology, (b) providing diagnostic and therapeutic services to persons with speech, language and communication disorders, (c) carrying out research in identified areas of communication disorders and (d) conducting seminars, workshops, short term training programmes, public education programmes and developing resource material.

TEACHING AND TRAINING

Academic training leading to B.Sc (Speech and Hearing) and M.Sc (Speech and Hearing) degrees was carried out according to schedule. The students were trained in theoretical and applied aspects of various speech, language and communication disorders. On par with the academic training, training in clinical skills was also provided.

Short-term Training Programmes

The following short-term training programmes were conducted:

- Progressive aphasia and computer techniques in aphasia treatment
- Development of speech and language
- Identification and management of learning disability

In-house Training Programmes

The following in-house training programmes were conducted for the faculty and other staff of the institute to acquaint them with advances in the subject:

- Alternate and augmentative communication
- Vaghmi software for speech analysis

November 1999

December 1999

Ph.D Programme

The following theses are in progress under the guidance of Dr. K.C. Shyamala:

- Ms. S. Philomena : Writing Deficits in Hearing Impaired
- Mr. Satyapal Puri Goswami : Comprehension Deficits in Aphasics
- Ms. Swapna Sebastian : Comparison of Language Skills in Normal Children and Children with Language Disability and Learning Disabilities

Dissertations

During the year seven dissertations were completed under the supervision of departmental staff as follows:

Sl.No.	Name of the student	Title of the project
1.	C.R. Anjana	Pragmatic abilities of autistics and mentally retarded children
2.	Anjana R. Rao	Perceptual and acoustic analysis of dysarthria and speech of normal geriatrics
3.	Hia Dutta	Traumatic brain injury in adults - an assessment protocol
4.	Kamalesh	A study of pragmatic aspects in the right hemisphere damage
5.	M. Seema	Prevalence of speech and language disabilities in children - a survey of 5000 case files at AIISH
6.	K. Sridevi	Comprehension defects in bilingual aphasics
7.	S. Vandana	Analysis of intonation in normals and dysarthrics - declaratives and interrogatives

The following dissertations were in progress:

Sl. No.	Name of the student	Title of the project
1.	P. Akila	Phonological awareness and orthographic skills in Tamil speaking children
2.	Anne Varghese	Reading comprehension and listening comprehension among III and IV grand children
3.	Sapna Bhat	Syntactic deficits in aphasia

Workshops / Seminars Conducted

The following workshops / seminars were conducted at the department:

- Workshop on Prevention, Identification and Management of Communication Disorders for grass root level workers and teachers, Family Planning Association of India workers and nurses : funded by WHO - September 1999
- 1-day joint workshop on Early Identification and Management of Developmental Disabilities convened by Krupanidhi Institute of Mother and Child in association with Indian Academy of Paediatrics and Regional Institute of Education, Mysore held at CFTRI Auditorium - December 1999.
- Seminar on Cleft Lip, Cleft Palate and Orofacial Cleft - January 2000.
- Seminar on Documentation of Professional Reports - March 2000.
- Seminar on Development of Curriculum for Preschool Children with Communication Disorders Phase I and II - February 2000 and March 2000, respectively.
- Seminar on Transcription System for Speech and Hearing Professionals - March 2000.

CLINICAL SERVICES

Clinical services were rendered to the needy both in the diagnostic centre and in the therapy clinic. Case history of 3,569 patients was taken in the diagnostics during the year. Speech evaluation was done for 3,484 cases with various types of communication disorders. The needy patients were sent to the therapy clinic for speech / language therapy.

The full-fledged therapy clinic under the department also pursued its objectives of (a) training student clinicians in rehabilitating children and adults with speech and language problems, (b) providing rehabilitation services to the needy, (c) providing public education services and (d) developing materials.

The department also runs a preschool for children with hearing impairment, mental retardation, cerebral palsy, learning disability etc. The objective of this program is to achieve successful integration in the school. The activities in the school were planned with specific curriculum framed for various communication disorders. Thirty children in the age group of 2-5 years were trained in the preschool during the year.

Patients with various types of communication disorders were given speech, language and communication therapy at the therapy clinic. A total of 2,595 cases attended 25,312 sessions of speech and language therapy.

For effective implementation of speech and language therapeutic services beyond the clinical set-up, itinerant services were provided. The itinerant speech therapist visited the schools wherein the children availing therapeutic services were integrated. The therapist oriented the teachers towards the scholastic problems of the children with communication disorders and also visited the work set-ups and homes wherever required.

1.	No. of patients seen in diagnostics	3,569
2.	No. of patients evaluated for speech	3,484
3.	No. of patients given therapy	2,595
4.	Total no. of therapy sessions	25,312

Professional service of a visiting physiotherapist and plastic surgeon was available for children and adults presenting sensory motor disorders associated with speech - language problem and maxillofacial abnormalities. The prosthodontic technician under the guidance of a speech - language pathologist and plastic surgeon provided the following services:

1. Plastic surgery services	60
2. Cleft palate prostheses prepared	11
3. Speech bulb prostheses prepared	03
4. Speech bulb prostheses (study models)	06
5. Cleft palate prostheses (study models)	04

RESEARCH

Project Under Progress

1. Developmental Milestones of Language Acquisition in Indian Languages: Kannada and Hindi - funded by ICSSR, New Delhi.

The objective of this study is to obtain normative data on language acquisition in different Indian languages. Data collection is complete and analysis is in progress. This data will be useful for both diagnosis and therapy. Dr. K.C. Shyamala and Dr. Basanti Devi are the investigators of this project.

OTHERS

Workshops / Conferences / Seminars Attended

Dr. K.C. Shyamala

- Gave a lecture on Communication Disorders and their Causes as resource person at WHO workshop on Prevention, Identification and Management of Communication Disorders for grass root level workers and teachers, Family Planning Association of India Workers and nurses - September 1999.

Dr. Basanti Devi

- Presented a paper entitled Rehabilitation in a Multilingual Country - A Linguist's Point of View at the seminar on Rehabilitation of the Hearing Impaired held at AIISH - October 1999.
- Presented a paper entitled New Trends in Television Language - their Implications for Communication Development and Disorders at the seminar on New Discourse Trends Emerging through Television held at CIIL - December 1999.

M. Pushpavathi

- Presented a paper on Management of Communication Disorders at the WHO workshop - September 1999.
- Presented a paper on Early Identification of Communication Disorders in Developmental Delays at the workshop on Early Identification and Management of Developmental Disabilities - a Multidisciplinary Approach - December 1999.
- Presented a paper on Identification and Management of Speech Characteristics in Cleft Palate Children at the seminar on Cleft Lip, Cleft Palate and Orofacial Cleft - January 2000.

Dr. K.S. Prema

- Presented a paper on Preschool Education for the Hearing Impaired - a Path to Integration at the seminar on Rehabilitation of Hearing Impaired as resource person - October 1999
- Presented a paper on Documentation of Professional Reports - Past, Present and Future at the seminar on Documentation of Professional Reports held at AIISH - March 2000

Dr. Y.V. Geetha

- Presented a paper on Records, Types and Formats of Clinical Reports at the seminar on Documentation of Professional Reports - March 2000.

Sujatha V. Shastry

- Presented a paper on Identification and Management of Speech Characteristics in Cleft Palate Children at the seminar on Cleft Lip, Cleft Palate and Orofacial Cleft - January 2000.

Satyapal Puri Goswami

- Presented a paper on Syntactic Comprehension Deficits in TBI Aphasics at the ISHA Conference 2000.

Public Education Activities

- Open House for cases, parents, regular / special school teachers, healthy child contest and an orientation programme were organized during Helen Keller's Deaf Blind Awareness week.
- Toy shop (dance drama) by children with communication disorders on the occasion of the institute anniversary.
- Various sports and other competitions were conducted for speech and hearing handicapped children on the occasion of the World Day of the Disabled .
- Talent show as a part of celebration of International Day of the Disabled.
- Magic show and various competitions for children attending therapy on the occasion of Children's Day.

- The following short video films were translated to Kannada:

1. Focus on voice - normal and abnormal
2. Silence to communication - a look at disorders of language
3. A journey from defective to normal speech
4. The deaf are not dumb.

Material Development

- Home training programmes in different languages like Kannada, Tamil, English, Malayalam and Hindi for different disorders like childhood stuttering, adult stuttering, mental retardation, articulation disorders etc.
- Charts for public education, language testing and disorders.
- Therapy kits for learning disability and hearing impaired.
- Handouts for parents of hearing impaired.
- Visual models to improve comprehension of different language concepts and attention span.
- Audio cassettes on different communication disorders with speech samples of fluency disorders, voice disorders, mental retardation, dysarthria, cleft palate, cerebral palsy etc.
- Flash cards for teaching concepts related to speech language and sub language skills.
- Teaching aids to develop grammatical objects of language.

Equipments / Softwares Procured

- | | |
|-----------------------------|-------|
| 1. VAGHMI - windows version | 1 No. |
| Nasal view - CD ROM | |

2. S - Indicator	1 No.
3. FM hearing aid	12 Nos.
4. Sigma Trainer	1 No.
5. VAGHMI software package	1 No.
6. N-Indicator	2 Nos.
7. Binaural FM hearing aid	1 No.

Visitors

- Prof. Arden Thorum from Department of Communication Disorders, California State University, U.S.A.
- Dr. Beverley Powell, Paediatrician from California University, U.S.A.
- Mrs. Rajeshwari - Speech Pathologist from U.S.A.
- Ms. Lakshmi Gopal from the University of Hamburg, Germany
- Ms. Nageswari, Senior Manager, Social Welfare Department, A.P.
- Students and trainees from Raichur; Udupi; Chamarajanagar; DIET, Shimoga; CBR trainees, M.V. Shetty College, Mangalore; Kanakapura; Kerala; St. Mary's College, M.M.I., Tirupathi; Maharaja's College, Mysore; Polytechnic College; Kananur
- Teachers from Malavalli; Asha Niketan School for Speech and Hearing Handicap, Vijayawada; H.D. Kote; Sairanga Vidya Samsthe, Bangalore; Mandya; Mysore Public School.
- Other visitors include 57 PHC doctors, 7 I.A.S. trainees from Mysore, 49 NGO officers from different places, 2 orthopaedic surgeons.

Visits Abroad

Dr. R. Manjula, Clinical Lecturer attended W.H.O. short-term fellowship programme at the Department of Communication Sciences and Disorders, University of Florida, Gainesville, Florida from 21st Feb. to 31st March 2000

PUBLICATIONS

Shyamala, K. C. (2000). Communication Disorders in Cerebral Palsied.

Proceedings of the workshop on Early Identification and Management of Developmental Disabilities, Regional Institute of Education, Mysore.

Prema, K.S. (2000). Identification of Learning Disability - Paediatricians Desk Guide. Proceedings of the workshop on Early Identification and Management of Developmental Disabilities, Regional Institute of Education, Mysore.

Manjula, R. (2000). Role of Speech Language Pathologists in Rehabilitation of Cerebral Palsy. Proceedings of the workshop on Early Identification and Management of Developmental Disabilities, Regional Institute of Education, Mysore.

PUBLICATIONS



DEPARTMENT OF SPEECH SCIENCES

Established in 1984, the Department of Speech Sciences is actively involved in training, research, clinical activities and public education. The primary objectives of the department are to (a) train students to understand the normal aspects of speech and hearing sciences, (b) advance our understanding of the acoustic aspects of speech and hearing disorders among children and adults, (c) develop and investigate innovative research ideas geared toward the evaluation, treatment and rehabilitation of individuals having speech disorders, (d) obtain external funding for research projects, and (e) develop collaborative research across several disciplines related to the speech and hearing sciences.

TEACHING AND TRAINING

The faculty of the department were involved in teaching courses on (a) introduction to speech and language, (b) anatomy and physiology of speech and language, (c) normal aspects of voice, articulation and prosody and (d) advanced course in speech production to undergraduate as well as postgraduate students.

Both undergraduate and postgraduate students were imparted training in taking case history, evaluation, diagnosis and treatment of various speech disorders.

The following programmes were conducted during the year:

Short-term Training

- Application of computers in diagnosis and treatment of communication disorders - July, 1999
- Measurement procedures in voice articulation, fluency and nasality - July, 1999

- Speech synthesis, computer aided therapy techniques - July, 1999
- Speech production - July, 1999
- Computer aided therapy techniques - July, 1999
- Measurement procedures in voice and nasality - July, 1999
- Acoustic phonetics and spectrography - July, 1999
- Refresher Course on computer applications in speech and hearing - July, 1999
- In-house training on Electroglottography - November 1999
- In-house training on Dr. Speech software - November 1999
- In-house training on Acoustic phonetics and spectrography - December 1999

Workshops / Seminars Conducted

- Seminar on Identification and Management of Cleft Lip, Cleft Palate and Orofacial Clefts -January 2000
- Workshop on Rehabilitation of Laryngectomy and Mandibulectomy - February 2000.

Ph.D Programme

The following theses are in progress under the guidance of Dr. S.R. Savithri:

- Ms. N. Sreedevi : Acoustic characteristics of vowels in Kannada.

- Ms. N. Swapna : Fine-grained auditory discrimination in normal children and children with learning disabilities.
- Ms. M. Pushpavathi : Language and speech motor interference in children with stuttering.

Dissertations

During the year ten dissertations were completed under the supervision of the departmental staff as follows:

Sl.No.	Name of the student	Title of the project
1.	Anitha Coelho	Spectrographic analysis of speech of glassectomees
2.	Anusha Ayyar	Acoustic analysis of the speech of Bengali speaking hearing-impaired children
3.	J. Jayakumar	Acoustic analysis of speech of Tamil speakers
4.	Milind Sonawane	Analysis and synthesis of the speech of Telugu speaking hearing-impaired children
5.	Na. Muthukrishnan	Analysis and synthesis of hoarse voice
6.	A. Radhika	Perception of voicing in patients with cerebellar disorders
7.	Sanyukta Jaiswal	Non-linearity in rate of speech production
8.	D.K. Shameem Taj	Multidimensional profile of voice in dysphonics
9.	Shrabanti Saha	Intonation patterns in Bengali speakers under different emotional conditions
10.	Suja K. Kunath	Analysis of nasal consonants in Malayalam

The following dissertations are in progress:

Sl.No.	Name of the student	Title of the project
1.	M. Amrithavarshini	Some aspects of intonation in Tamil
2.	Anita Sarah	Voice parameters in developmental speech and language disorders
3.	P.S. Aparna	Comparison of three different softwares for evaluation of voice disorders
4.	Binu Jose	Acoustic and temporal correlates of dysarthric speech
5.	Mini Nandakumar	Intonation in Malayalam - some aspects
6.	B. Prakash	Acoustic measures in the speech of stuttering and normally non-fluent children - a key to differential diagnosis
7.	Prarthana S. Karpur	Identification of speakers physical characteristics based on speech
8.	Ruchi Aggarwal	Acoustic analysis of voice with cognitively induced stress
9.	C. Sandhya	Some aspects of intonation in Telugu speakers
10.	N. Sangeetha	Acoustic analysis of infant cry
11.	Sarah Jacob	Perception of linguistic stress in brain damaged
12.	Saritha Kumari	Classification of hoarse voice based on acoustic parameters
13.	Uma Rajan	Dysfluencies in Malayalam speaking children (3-8 years)
14.	A. Vasanthi	Some acoustic aspects of speech of cleft palate

CLINICAL SERVICES

- Diagnostics - Evaluation of 993 patients with voice, articulation and fluency disorders was done.
- Therapeutics - Therapy for 178 patients with voice, articulation and fluency disorders was supervised.

RESEARCH

Project Completed

1. Transformation of the Speech of the Hearing Impaired - funded by the Department of Science and Technology, Government of India

The project was completed on 23rd February 2000 at a total cost of Rs. 8,71,700/- (1997-2000). The objectives of the project were as follows : (a) recording of speech of normal as well as hearing impaired children, (b) extracting temporal and spectral parameters in their speech, (c) transforming the parameters from the speech of normal children to that of hearing impaired children whenever deviant and (d) investigating the parameter of significance. The results indicated that transforming temporal parameters yielded the maximum percent intelligibility followed by spectral parameters and transformation of prosodic parameters had a detrimental effect.

Projects Under Progress

1. Acoustic Analysis of Speech

This project is a part of the research activities of the institute. The aim of the project is to acoustically analyze the speech of various Indian languages. Words with initial consonants in Hindi and Kannada were recorded and three spectral parameters - F1, F2, F3 and five temporal parameters - vowel duration, consonant duration, VOT, closure duration and word duration - were measured using SSL software. The results indicated that females had higher formant

frequencies compared to males. As both Hindi and Kannada are four-way languages, VOT cannot distinguish all the four categories of stop consonants. Also, closure duration was longer for unvoiced stop consonants compared to voiced stop consonants.

2. Developing Software for Diagnosis and Analysis of Speech

This project is also a part of the research activities of the institute. The objective is to develop software for speech evaluation in collaboration with the Voice and Speech Systems, Bangalore. The softwares that have been developed are being field tested. Sixty seven parameters in respect of 74 patients with voice disorders are being analyzed.

3. Glottal Behaviour in Normals and Speech Disorders

This is another project taken up as a part of the research activities of the institute. The objective of the project is to extract electroglottographic patterns in normals and in patients with various voice disorders using electroglottogram (EGG) from Dr. Speech (speech analysis software). Till date, EGG of 200 normals and fifteen patients with voice disorders have been recorded. The results indicated that the parameters amplitude tremor and contact coefficient perturbation were significant in differentiating irregularity of vocal fold vibration.

OTHERS

Workshops / Seminars / Conferences Attended

Dr. S.R. Savithri

- Presented a paper entitled Speech Perception and Computer Application in the Rehabilitation of the Hearing Impaired at the WHO seminar on Care of the Hearing Impaired - October 1999.

- Presented a paper entitled Acoustic Characteristics of the Speech of Patients with Cleft Palate at the workshop on Identification and Management of Cleft Lip, Cleft Palate and Orofacial Clefts at AIISH - January 2000
- Presented a paper entitled Transformation of Spectral Characteristics in the Speech of Children with Hearing Impairment at the 32nd annual ISHA conference held at Hyderabad - January 2000
- Presented a paper entitled Relevance of Information Available on Phonetics in Siksa Sastra in the Modern World at the national workshop on Sanskrit Speech Recognition, IISc, Bangalore - January 2000.
- Presented a paper entitled Devanagari Script in the seminar on Transcription Systems for the Speech and Hearing Professionals - March 2000.

PUBLICATIONS

Savithri, S. R. (1999). Perception of Word Stress. Proceedings of the 5th technical session of Madras-India Regional Chapter of the Acoustical Society of America, 110-113.

Savithri, S. R. (1999). Perceptual Cues of Word Stress in Kannada. Journal of the Acoustical Society of India, 25, 1-4.

CENTRAL FACILITIES

ACADEMICS

The primary objective of the institute is to train undergraduate, postgraduate and doctoral students in the field of speech and hearing to serve the speech and hearing handicapped in India. Student trainees are given training as per the course of study approved by the University of Mysore.

Undergraduate and Postgraduate Programmes

a) Admission details

A total of 229 applications for B.Sc and 90 applications for M.Sc were received. Selection committee meetings were held on 6.7.1999 and 4.8.1999 for B.Sc and M.Sc, respectively, and admissions were made according to the rules and regulations of the University of Mysore. The zone-wise distribution of students admitted is as follows:

	I B.Sc		I M.Sc	
	Male	Female	Male	Female
General merit	2	4	5	11
North Zone	*	3	**	**
East Zone	2	3	**	**
West Zone	*	4	**	**
South Zone	3	1	**	**
SC / ST	1	4	1	3
Foreign	*	3	**	**
Inservice	**	**	*	3
Total	8	22	6	17

* No candidates ** Not Applicable

b) Annual examination results

No. of Passes	I Class	II Class	III Class	% pass
III B.Sc	18	6	NIL	77
II M.Sc	14	3	NIL	77

c) Merit scholarships

Ten AIISH merit scholarships each were awarded to I, II and III year B.Sc students. Five and six scholarships were awarded to I and II M.Sc students, respectively

d) State-wise distribution of students

Sl. No.	State	No. of students	
		I B.Sc	I M.Sc
1.	Andhra Pradesh	1	1
2.	Bihar	5	-
3.	Chandigarh	1	-
4.	Delhi	1	2
5.	Foreign	4	-
6.	Jammu and Kashmir	1	-
7.	Karnataka	3	6
8.	Kerala	1	1
9.	Madhya Pradesh	1	-
10.	Maharashtra	3	2
11.	Orissa	1	-
12.	Tamil Nadu	8	8
13.	Uttar Pradesh	-	2
14.	West Bengal	-	1
Total		30	23

e) Guest lectures

Faculty were appointed to teach paediatrics to the B.Sc students and Neurology to the B.Sc and M.Sc students.

Clinical Practicum

The students were posted to various departments. The number of hours of postings to different departments are as follows:

Departments	B.Sc			M.Sc	
	I	II	III	I	II
(a) Diagnostics					
Audiology	900	1740	3100	1380	2200
Clinical Psychology	900	1740	3100	1380	1100
Electronics	900	*	*	*	1100
Otorhinolaryngology	*	1740	*	1380	*
Speech Pathology	450	870	3100	690	2200
Speech Sciences	450	870	*	690	*
(b) Therapy **	3600	6960	9300	5520	6600

* No postings

** For patients of all ages and various communication disorders such as hearing-impairment, delayed speech, misarticulation, voice disorders, stuttering, aphasia, learning disabilities etc.

Extension Services - Field Work

The extension services involved student postings at the local district hospital - Krishnarajendra hospital, Mysore to paediatric, adult and psychiatry wards, physiotherapy, and plastic surgery units. In addition, the students were posted for infant screening, school screening and screening of geriatric population in old age homes.

Doctoral Research

1. Candidates working for Ph.D.	6
2. Candidates who were awarded Ph.D.	NIL
3. Candidates registered and working for Ph.D.	3

Sl.No.	Name of the candidate	Title of the thesis
1.	Ms. N. Sreedevi	Acoustics characteristics of vowels in Kannada
2.	Ms. N. Swapna	Fine-grained auditory discrimination in normal children and children with learning disability.
3.	Ms. M. Pushpavathi	Language and speech motor interference in children with stuttering.
4.	Ms. C. S. Vanaja	Self-assessment of hearing handicap: A few audiological and non-audiological correlates.
5.	Mr. S. P. Goswami	Comprehension deficits in aphasia
6.	Mr. H.H. Raju	A study of job satisfaction in relation to occupational stress and quality of life of employees in public and private sectors.

Workshops / Seminars / Symposia Conducted

Sl. No.	Name of the workshop	Date
1.	Question bank	May 1999
2.	Digits and syndromes in speech and hearing	July 1999
3.	Creativity	December 1999
4.	Identification and management of cleft lip, cleft palate and orofacial clefts	January 2000

5. Parents of mental retardation children in identification and management of behaviour problems	February 2000
6. Question bank	February 2000
7. Attitude change	February 2000
8. Rehabilitation of laryngectomee and mandibulectomee	February 2000
9. Development of preschool curriculum for children with communication disorders - Phase I	February 2000
10. Documentation of professional reports	March 2000
11. Transcription systems for the speech and hearing professionals	March 2000
12. Development of preschool curriculum for children with communication disorders - Phase II	March 2000

LIBRARY AND INFORMATION CENTRE

The AIISH Library and Information Centre is the nucleus for information retrieval, storage and dissemination in the speciality of speech and hearing field. The center has been providing the following services:

- a) latest books and periodicals in the speciality areas of speech-language and hearing and their allied areas
- b) bibliographic services
- c) current awareness service
- d) inter library loan service
- e) reference service
- f) reprographic service
- g) audio-visual materials and their screening and
- h) literature search facility on topics of interest to its users.

The Library has been provided with computers and printers. They are being used to increase the efficiency of the library services.

AIISH library has been enrolled as a member of the Mysore City Libraries Consortium and Mylibnet.

The institute has also been contemplating a new building to house all library activities.

Annual Statistics

1. No. of volumes as on 31.3.2000	12,048
2. No. of volumes added (from 1.4.1999 to 31.3.2000)	269
3. No. of journals subscribed	48
4. No. of books / journals issued and consulted (from 1.4.1999 to 31.3.2000)	76,473
5. No. of outside members	35

OTHER ACTIVITIES

STUDENTS OF AIISH

Throughout the year, in addition to attending regular classes and clinical activities, the students participated in speech and hearing camps conducted along with pulse polio programs and in co-ordination with other voluntary organizations. They also participated in a number of extra curricular activities.

Extra Curricular Activities

The NSS volunteers (a) donated blood as part of the blood donation camp, (b) collected Rs. 4,001/- and three boxes of clothes towards the Orissa Cyclone Relief Fund, (c) formed human chains in the major circles of Mysore City for creating awareness regarding prevention of deafness and gave orientation lectures to NSS officers, and (d) 43 students participated in the NSS trekking programme to Kuduremukh from 14th to 16th January 2000. Several cultural and sports activities were held.

Conferences Attended

A number of students participated in the following conferences:

1. Madras India Regional Conference of the Acoustical Society of America, IIT, Chennai
2. Indian Speech and Hearing Association Conference, NIMH, Secunderabad.

Papers Presented

The following students presented papers, shown against their names, at the Indian Speech and Hearing Association Conference held at NIMH, Secunderabad - January, 2000:

- Ms. Anita Sarah Mathew: An insight into auditory processing abilities of autistics through electrophysiological measures
- Ms. A. Vasanthi: Delayed speech and language - a myth
- Mr. B. Prakash: Some prosodic aspects in the speech of stutterers
- Ms. Krithika Iyengar and Ms. Sapna Bhat: Language characteristics in parkinson's disease
- Ms. Sarah Jacob: Stress perception in patients with right hemisphere damage
- Mr. Binu Jose: Acoustic analysis of the speech of dysarthrias voice - an indicator for degeneration
- Mr. Binu Jose: Acoustic and perceptual differentiation of spastic dysphonia and essential tremour
- Ms. P. Perumal Devi : Perceptual judgement of speech intelligibility in Tamil speaking mentally retarded and hearing impaired children
- Ms. Uma Rajan: Lingual dystonia - a case report
- Ms. Prarthana Karpur: Cerebellar dysarthria and lithium therapy - case report
- Mr. M. Shivaprasad Reddy and Ms. Krithika Iyengar: Interaction effects of stimulus parameters in MNN - frequency vs. intensity
- Mr. Amit Kumar Gupta: Genetics and stuttering - some investigations
- Mr. Amit Kumar Gupta: Acoustic and temporal analysis of dysarthric speech in Wilson's disease

- Ms. Chanchal Kumari: Stuttering with Wilson's disease
- Ms. B.H. Sreevidya: Audiological test results of a case with retrocochlear pathology with two consecutive pre-operative follow-ups
- Mr. K. Satish: Language deficit in TBI vs. CVA - a comparative study
- Ms. Krupa Elizabeth Daniel, Ms. Kavitha Elizabeth Mascarenhas and Mr. Sharad Govil: Establishment of threshold octave masking at higher frequencies
- Ms. Gowri Krishna: Some aspects of intonation in the pre-post therapy speech of stutterers
- Mr. Rajesh Kumar and Mr. Ram Pravesh Kumar: Is specific learning disability genetic?
- Ms. Aditi Chakravarti and Ms. Shivakami Rangaraj: Attention-deficit hyperactive disorder
- Ms. C. Kiruthika and Ms. Krupa Elizabeth Daniel: Isolation aphasia - a single case study
- Mr. G. Vijaya Kumar: Effect of rate on co-articulation
- Mr. S. N. Vinay: Acoustical aspects in professional classical singers
- Mr. B. Suresha: Contralateral suppression of TEOES in normals

The following papers were presented at the Madras India Regional Conference of the Acoustical Society of America, IIT, Chennai:

- Mr. B. Prakash and Ms. Sarah Jacob: Normal non-fluency and stuttering, acoustic measures for differential diagnosis

- Mr. Binu Jose and Ms. Anitha Sarah Mathew: Effects of low dose ethanol in auditory discrimination
- Ms. Sarah Jacob and Mr. B. Prakash: Perception of fricative-vowel coarticulation in adults.

Awards

The following students received awards for their papers in different categories in various conferences:

- Mr. B. Prakash and Ms. Sarah Jacob: Normal non-fluency and stuttering, acoustic measures for differential diagnosis - Best paper in Speech - MIRC, Chennai
- Mr. Binu Jose and Ms. Anitha Sarah Mathew: Effects of low dose ethanol in auditory discrimination - Best paper in Bio-medical Sciences - MIRC, Chennai
- Ms. A. Vasanthi : Delayed speech and language - a myth - Best paper in Speech Pathology - ISHA, Hyderabad
- Mr. S.N. Vinay and Ms. Komal Arora: Acoustical aspects of professional classical singers - Best paper in Voice - ISHA, Hyderabad (Abrol Award)
- Ms. Krithika Iyengar and Mr. M. Shivaprasad Reddy: Interactive effects of stimulus parameters in MMN - frequency vs. rate - Best paper in Audiology - ISHA, Hyderabad

The following students received awards as mentioned against their names:

- Ms. A. Radhika - Aarati Venkataraman Gold Medal - University of Mysore for obtaining highest marks in M.Sc.

- Ms. C.R. Anjana - Manohar Gold Medal - University of Mysore, for obtaining highest marks in speech in M.Sc.
- Ms. Sarah Thomas - Abhilash Award - for being the best student clinician of AIISH.

OFFICIAL LANGUAGE IMPLEMENTATION

All programmes scheduled for the year were successfully carried out.

Official Language Implementation Meetings

- Promoters meeting of official language implementation (OLI) - held once in a month.
- OLI Committee meeting - held once in a quarter.
- Town Official Language Implementation Committee meetings (TOLIC)- the institute actively participated in the half yearly meetings of TOLIC organized by CIIL, Mysore.

Training in Hindi / Hindi typing and Incentive Schemes

Schemes of incentives for successful completion of Hindi / Hindi typing examination and implementation of official language continued.

The following is the number sponsored / appeared for Hindi examinations in May and November 1999.

Exam	May 1999	Nov. 1999
Prabodh	4	-
Praveen	4	4
Pragya	1	-

Hindi Typing through correspondence - one

Official Language Correspondence

The provisions of Clause 3(3) of Official Language Act, 1963 were complied with to the best possible extent. Circulars, general office memos, forms, etc. were issued in bilingual form. Annual report, half yearly report, statement of accounts, performance budget, slogans etc. were all rendered into Hindi.

Hindi Competitions

- Inter-institutional Hindi competitions at the institute were organized as a part of the institute anniversary.
- Hindi fortnight was conducted from 3rd to 17th September 1999.
- Quarterly Hindi competitions were conducted to commemorate the 50th year of official language implementation.
- The winners of various competitions were suitably awarded. The amount of cash for the prizes were considerably enhanced.

Hindi Workshop / Conference

Hindi Translator was deputed to Trivandrum to attend Southern Regional Official Language Conference held in collaboration with Southern Regional Official Language Implementation Offices, Bangalore and Cochin from 10th to 11th March 2000.

Across the table workshop was conducted for the staff of Library and Information Center on 16th March 2000.

Use of Hindi on Computer

Shabdharatna and Prakashak softwares were used at all nodes of LAN system to carry out bilingual work (Hindi and English).

APPENDIX - A (i)

CLINICAL SERVICES

No. of cases registered at the institute

1.	New cases	12,399
2.	Repeat cases	15,836
3.	Total No. of cases	28,235
4.	No. of working days	252

Statewise distribution of cases registered during the year

Sl.No	State	No. of cases seen
1.	Karnataka	9150
2.	Kerala	2051
3.	Tamil Nadu	710
4.	Andhra Pradesh	415
5.	Uttar Pradesh	28
6.	Maharashtra	20
7.	Madhya Pradesh	15
8.	Orissa	3
9.	Jammu and Kashmir	2
10.	Rajasthan	1
11.	Bihar	1
12.	Sikkim	1
13.	Assam	1
14.	Tripura	1
Total		12,399

Age wise statistics of new patients

Age Group	Male	Female	Total
0-5	1200	900	2100
5-10	1030	700	1730
10-20	1480	880	2360
20-40	1900	1290	3190
40-60	1145	700	1845
60-80	600	300	900
80+	147	127	274

APPENDIX - A (ii)
HEARING EVALUATION

No. of patients seen for hearing evaluation	8338
---	------

No. of cases with -

a) normal hearing	2932
b) conductive hearing loss	2849
c) mixed hearing loss	3765
d) sensorineural hearing loss	4932

No. of certificates issued (financial aid)	546
--	-----

No. of audiogram copies issued	2297
--------------------------------	------

No. of patients seen for hearing aid trial	5646
--	------

No. of patients counselled	2166
----------------------------	------

No. of cases recommended for

a) Auditory training	1262
b) Speech reading	1812

No. of hearing aids issued under ADIP scheme	2509
--	------

a) Issued free of cost	2502
b) Issued at 50% of cost	07

No. of hearing aids issued on exchange	367
--	-----

Hearing aids received for repairs	256
-----------------------------------	-----

APPENDIX - A (iii)

EARMOLD STATISTICS

No. of patients seen	2586
No. of earmolds completed	5945
No. of earmolds issued on 50% payment	3781
on 100% payment	884
No. of special earmolds made	356
No. of shell earmolds made	92

APPENDIX - A (iv)

AGE-WISE STATISTICS OF PATIENTS

Hearing Evaluation, Hearing Aid Trial and Earmold

	Hearing Evaluation		Hearing Aid Trial		Earmolds		HAT counselling	
	M	F	M	F	M	F	M	F
0-1	9	25	25	13	11	11	12	10
2-5	80	06	359	255	182	135	251	215
6-10	547	459	272	185	139	90	186	125
11-15	334	253	146	109	70	54	86	69
16-20	405	249	85	70	64	37	84	47
21-25	446	233	73	25	54	13	70	23
26-30	367	211	67	50	38	26	47	30
31-35	251	147	55	48	37	24	59	25
36-40	268	181	65	47	33	25	55	30
41-45	295	167	93	41	59	29	83	39
46-50	221	155	86	55	62	45	81	52
51-55	220	111	88	52	51	35	68	39
56-60	258	141	142	73	101	58	116	60
61-65	276	154	157	73	107	46	105	52
66-70	218	109	141	82	116	56	120	49
71-75	215	55	142	39	132	33	95	30
76-80	172	35	125	25	96	24	70	19
81-85	86	11	63	14	46	7	66	17
86-90	26	8	19	7	25	5		
91-95	10	8	2	5	3			
96-100	2	1	3					
100+								
Total	5228	3110	2213	1266	1431	756	1654	931
	8338		3479		2187		2585	

APPENDIX - A (v)

SPEECH AND LANGUAGE DISORDERS AGEWISE DISTRIBUTION

Age in years	Male	Female	Total
0-1	13	18	31
1-5	789	482	1271
5-10	624	354	978
10-15	338	141	479
15-20	162	73	235
20-25	132	35	167
25-30	48	22	70
30-35	49	17	66
35-40	16	14	30
40-45	24	12	36
45-50	20	6	26
50-55	29	1	30
55-60	17	5	22
60-65	28	2	30
65+	25	3	28

APPENDIX - A (vi)

DISTRIBUTION OF CASES WITH SPEECH AND LANGUAGE DISORDERS

	Case History	Speech Evaluation	Speech Therapy
I. Language disorders			
1. Delayed speech and language (DSL)	357	356	206
2. DSL with M.R.	502	498	411
3. DSL with C.P.	171	172	221
4. DSL with autism	32	32	113
5. Aphasia	25	25	61
6. Speech regression/ Multiple disorders	27	27	15
7. Learning disability	46	47	97
II. DSL with hearing loss	1291	1227	796
III. Rhythm disorders			
1. Stuttering	347	348	299
2. Cluttering	2	2	6
3. Normal nonfluency	18	18	1
IV. Articulatory Disorders			
1. Misarticulation	251	253	110
2. Cleft Palate	66	66	88
3. Dysarthria	35	34	11
V. Voice Disorders			
1. Dysphonia	381	375	136
2. Laryngectomy	4	4	9
Total	3569	3484	2595

APPENDIX - B

COMMITTEES OF THE INSTITUTE

EXECUTIVE COUNCIL

1. Sri N.T. Shanmugam
Hon'ble Minister of State for
Health and Family Welfare
(Independent charge)
Government of India
Nirman Bhavan
NEW DELHI - 110 011
Chairman
2. Dr. A.B. Malaka Reddy
Hon'ble Minister for
Health and Family Welfare
Government of Karnataka
Vidhana Soudha
BANGALORE - 560 001
Vice-Chairman
3. Sri Javed Chaudhary, I.A.S.
Secretary to the
Government of India
Ministry of Health and Family Welfare
Nirman Bhavan
NEW DELHI - 110 011
Member
4. Dr. S.P. Agarwal
Director General of Health Services
Government of India
Nirman Bhavan
NEW DELHI - 110 011
Member

5. Sri J.V.R. Prasada Rao
Additional Secretary (Health)
Ministry of Health and Family Welfare
Government of India
Nirman Bhavan
NEW DELHI - 110 011
Member
6. Sri Vijay Singh, I.A.S.
Joint Secretary (FA)
Ministry of Health and Family Welfare
Government of India
Nirman Bhavan
NEW DELHI - 110 011
Member
7. Smt. Gauri Chatterjee, I.A.S.
Joint Secretary to
Government of India
Ministry of Social Justice and Empowerment
Shastri Bhavan
NEW DELHI - 110 001
Member
8. Smt. Renu Sahane Dhar, I.A.S.
Joint Secretary
Government of India
Health and Family Welfare
Nirman Bhavan
NEW DELHI - 110 011
Member
9. Sri A. Sengupta, I.A.S.
Secretary to the
Government of Karnataka
Department of Health and Family Welfare
Multistoreyed Building
BANGALORE - 560 001
Member

10. Dr. Shivaratna C. Savadi
Director of Medical Education
Government of Karnataka
Ananda Rao Circle
BANGALORE - 560 009
Member
11. Dr. S.N. Hegde
Vice-Chancellor
University of Mysore
Crawford Hall
MYSORE - 570 005
Member
- 12-14 Three nominees of the Chairman
Executive Council
- Dr. S. Gopalakrishnan
Professor and Head
Department of ENT
JIPMER
PONDICHERRY - 605 006
- Sri I. Kandaswamy
Professor of Radiology
Madras Medical College and Research Institute
CHENNAI
- Dr. Ravi Ramalingam
Consulting ENT, Head and Neck Surgeon
Joint Managing Director
K.K.R. Hospital and Research Institute
827, Poonamalle High Road
Kilpauk
CHENNAI - 600 010
Members

15.

Nominee of the Director, AIISH, Mysore

Member

Dr. M.V. Susheela
Professor and HOD - ENT
All India Institute of Speech and Hearing
MYSORE - 570 006

16.

Dr. Shailaja Nikam
Director
All India Institute of Speech and Hearing
MYSORE - 570 006

Member Secretary

FINANCE COMMITTEE

1. Sri J.A.R. Prasada Rao, I.A.S.
Additional Secretary (Health)
Ministry of Health and Family Welfare
Government of India
Nirman Bhavan
NEW DELHI - 110 011
Chairman
2. Dr. S.P. Agarwal
Director General of Health Services
Government of India
Nirman Bhavan
NEW DELHI - 110 011
Member
3. Sri Vijay Singh, I.A.S.
Joint Secretary (FA)
Ministry of Health and Family Welfare
Government of India
Nirman Bhavan
NEW DELHI - 110 011
Member
4. Sri A. Sengupta, I.A.S.
Secretary to the
Government of Karnataka
Department of Health and Family Welfare
Multistoreyed Building
Dr. B.R. Ambedkar Road
BANGALORE - 560 001
Member
5. Dr. Gouri Devi
Director
National Institute of Mental Health
and Neuro Sciences
BANGALORE - 560 029
Member

6. Dr. Shailaja Nikam
Director
All India Institute of Speech and Hearing
MYSORE - 570 006

Member Secretary

ACADEMIC COMMITTEE

1. Prof. B.S. Ramakrishna
Former Vice-Chancellor
68, 2nd Main, 2nd Cross
Gangenahalli
BANGALORE - 560 068
Chairman
 2. Dr. A.S. Bais
Deputy Director General (M)
Directorate General of Health Services
Government of India
Nirman Bhavan
NEW DELHI - 110 011
Member
 3. Dr. Seethalakshmi
Director of Medical Education
Government of Karnataka
BANGALORE - 560 009
Member
 4. Nominee of Vice-Chancellor
University of Mysore
MYSORE - 570 005
Member
- Prof. Ramakrishne Gowda
Department of Physics
University of Mysore
Manasagangothri
MYSORE - 570 006

5-7.

Three heads of departments of AIISH, Mysore

Dr. M.V. Susheela
Professor and HOD - ENT
All India Institute of Speech and Hearing
MYSORE - 570 006

Dr. P. Kalaiah
Professor and HOD - Clinical Psychology
All India Institute of Speech and Hearing
MYSORE - 570 006

Sri H.S. Sathish
Electronics Engineer and HOD - Electronics
All India Institute of Speech and Hearing
MYSORE - 570 006

Members

8. Dr. T.S. Sidhu
HOD - ENT
Ram Manohar Lohia Hospital
NEW DELHI

Member

9. Dr. P.V. Rajendrakumar
Institute of Speech and Hearing
Government General Hospital
CHENNAI - 600 010

Member

10. Dr. Shashidhar Prasad
Professor and Head
Department of Physics
University of Mysore
Manasagangothri
MYSORE - 570 006

Member

11. Prof. L.M. Patnaik
Convenor,
Microprocessor Application Lab.,
Indian Institute of Science
BANGALORE - 560 012
Member
12. Dr. Shailaja Nikam
Director
All India Institute of Speech and Hearing
MYSORE - 570 006
Member-Secretary

APPENDIX - C

FACULTY AND OTHER STAFF

Director

1. Dr. S. Nikam

Director &
Professor and HOD - Audiology

Department of Audiology

1. Dr. Asha Yathiraj
2. Dr. K. Rajalakshmi
3. Mr. Animesh Burman
4. Ms. C.S. Vanaja
5. Ms. P. Manjula

Reader
Lecturer
Lecturer
Lecturer
Lecturer

Department of Clinical Psychology

1. Dr. P. Kalaiah
2. Dr. S. Venkatesan
3. Dr. G. Jayarama

Professor and HOD
Reader
Assistant Lecturer

Department of Electronics

1. Mr. H.S. Sathish
2. Mr. M.K. Seetharam

Electronics Engr. Gr. I and HOD
Electronics Engr. Gr. II

Department of ENT

1. Dr. M.V. Susheela
2. Dr. K. Rathna Sabhpathy
3. Dr. H. Sundara Raju

Professor and HOD
Reader
Lecturer

Department of Speech Pathology

- | | |
|-----------------------|------------------------------|
| 1. Dr. K.C. Shyamala | Reader in Language Pathology |
| 2. Dr. Basanti Devi | Lecturer in Linguistics |
| 3. Dr. R. Manjula | Clinical Lecturer |
| 4. Ms. M. Pushpavathi | Lecturer |
| 5. Dr. K.S. Prema | Lecturer |

Department of Speech Sciences

- | | |
|----------------------|----------|
| 1. Dr. S.R. Savithri | Reader |
| 2. Ms. K. Yeshoda | Lecturer |
| 3. Ms. H. Rohini | Lecturer |

General Administration

- | | |
|------------------------|-----------------------|
| 1. Mr. K. Purushothama | Office Superintendent |
| 2. Mr. A.V. Koti | Accounts Officer |

Library and Information Centre

- | | |
|--------------------|------------------------------|
| 1. Mr. M. Mahadeva | Library and Information Asst |
|--------------------|------------------------------|

Publicity & Information

- | | |
|-----------------------------|-----------------------------------|
| 1. Mr. K. Mohammed Fazlulla | Publicity and Information Officer |
|-----------------------------|-----------------------------------|

APPENDIX - D

PERSONNEL

APPOINTMENTS

1. Mr. Premnath	Clinical Supervisor	17.12.1999
2. Ms. N. Swapna	Clinical Supervisor	23.12.1999
3. Mr. Abraham Joby	Clinical Assistant	27.12.1999
4. Ms. Gayathri	Peon	27.01.2000
5. Mr. K. Ramesha	Peon	27.01.2000
6. Mr. M.K. Viswanath (on contract basis)	Asst. Audit Officer	27.03.2000

RETIREMENT

1. Dr. N.P. Nataraja (Voluntary) Sciences	Professor of Speech	17.09.1999
--	---------------------	------------

DEATH

1. Mr. B.R. Basavaraju	Clinical Attendant	02.05.1999
2. Mr. D. Krishnaiah	Peon	02.07.1999

APPENDIX - E

ACCOUNTS

Summary of provisions proposed Revised Estimates 1999-2000 and Budget Estimates 2000-2001 PLAN

(Rs. in lakhs)

Sl.No.	Standard object of expenditure	
	R.E.1999-2000	B.E.2000-2001
1. Salaries	-	18.13
i) Sanctioned posts:		
a) Filled posts	9.92	9.57
b) Vacant posts		
ii) Fresh posts	-	-
2. Allowances other than travel	1.55	1.55
3. Other charges	39.08	41.65
4. Contribution to funds	5.15	5.50
5. Travel expenses :		
a) Within India		
b) Outside India	5.00	2.50
	3.00	1.50
6. Furniture	5.00	13.00
7. Public Education - Pub. & inf.	10.00	4.00
8. Equipment	105.50	71.52
9. Summer camp for speech and hearing	0.25	0.25
10. Payments to professional services	4.78	5.03
11. Library books and journals	25.00	25.00
12. POD Project	-	35.30
13. Capital works	80.00	100.00
14. Mobile van project	10.00	5.00
Gross total	303.73	
Less : Receipts	-	-
Net Demand	307.73	-
Grants received	303.73	-