THE ROLE OF CLINICAL PSYCHOLOGIST IN SPEECH AND HEARING CLINIC*

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I. Introduction

The idea of application of Clinical Psychology in the speech and hearing set up, first came to my mind about 3 years ago, when the department of Clinical Psychology had to be started afresh at the All India Institute of Speech and Hearing, Mysore. The departmental work had to be geared to the needs of the speech and hearing clinic.

Some basic issues at hand were: (1) What type of services can Clinical Psychology render to the speech handicapped and hearing handicapped? (2) What type of diagnostic material would be most suited to such cases and their availability? (3) In what areas of speech and hearing can clinical psychology make positive contributions? (4) How is the clinical psychologist to participate in the integrated team programme? In addition to these, preparation of formata for case taking, report sheets, framing the syllabus—course content, in the related fields of psychology for the B.Sc. and M.Sc. Courses in speech and hearing occupied our attention.

More or less, this paper is an answer as to how the issues raised earlier were met. What is presented here may appear something like an appraisal of a functioning clinical psychologist in the speech and hearing context. It would highlight those aspects where his services may be modestly claimed to be useful, as well as, some practical difficulties in the way of his effective functioning. In this attempt, of course, I mostly draw upon my experiences at the All India Institute of Speech and Hearing.

2. The areas of Speech and Hearing

The fields of Speech Pathology and Audiology, deal with disorders of speech and disorders of hearing. As specialisations, they grew in the context of understanding and helping people with communication disorders. In other words, the subject matter of study is the 'deviant' or the disabled person, in the avenue of communication. The clinical groups of aphasia, stuttering, cleft palate, cerebral palsy, articulation defects, voice disorders, delayed speech, laryngectomies, hearing loss of different types fall here. As such, there is considerable overlap in these fields of study.

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Unfortunately, as yet, we do not have the prevalence rates of these defects in our country. Although there are some limited surveys on the prevalence of speech and hearing disorders, comprehensive data on this are not available. This was recognised at the First and Second All India Workshops on Speech and Hearing problems in India at Vellore, and they are planning to take effective steps in carrying out surveys, which would study this aspect (Proceedings. AIWSHPI 1966 and 1967). Appendices (A) and (B) give an idea of the distribution of patients with speech and hearing disorders registered during 1967 April to 1968 March and 1968 April to 1969 March, at our Institute. The tables show that the hearing loss cases form the majority (about 50 per cent), followed by stuttering (about 15 per cent) and mental retardation (about 8 per cent) of the total cases seen; and the remaining cases fall under categories of hearing loss with other defects, delayed speech, misarticulation, etc. The daily average of cases seen, inclusive of new and repeat cases, has gradually increased, reading a daily average figure of 40 during the year 1968-1969.

Incidentally, I may mention here of a survey of screening school children in Mysore City, (Nursery, Primary and Middle Schools) going on at our Institute, pointing out a 2.3 per cent prevalence rate of hearing loss, out of about l800 children so far tested (Report V.R.A. 1968-69). However, if surveys carried out elsewhere are taken as pointers, a prevalence rate of about 5 per cent hearing loss and a prevalence rate of 3 to 4 per cent speech defects can be surmised as approximations, from the general population.

This would indicate that there is a sizeable group in the general population who need professional services for their problems. The number of existing speech and hearing clinics are too few to cater to the needs of this group. Plans are on way to open a larger number of such clinics, and we hope this would materialise soon.

The variety of cases seen at such a clinic would convince the importance of a coordinated programme of team work. The days are gone when one could take the view that a problem is purely organic or purely functional. In terms of diagnosis, therapy and rehabilitation, the multidisciplinary approach has become the rule of the day, as it is realised that in order to deal effectively with a person, it is necessary to study him as a whole. It is the essence of this paper to emphasise that clinical psychology has an important contribution to make in this field. This point was brought to bear upon the minds of a group of professional people elsewhere (Bharath Raj 1967).

3. Application of Clinical Psychology in Speech and Hearing

1. DIAGNOSIS

The importance of the normal processes in the development of speech and hearing in understanding the deviant person, in the avenue of communication is well recognised. Without such a knowledge of the 'normal' and his

communicative processes, the study of the deviant would become something **like a** 'wild goose chase'. Here clinical psychology is of distinctive help as it has provided us with the normative data, and even deviant forms of behaviour in relation to speech and hearing.

The primary function of diagnosis is not always a problem in a speech and hearing set up. Misarticulation, stammering, deafness and cleft palate conditions are easily identifiable. But often there would be an overlap of symptoms, as in the case of a mixed picture of hearing loss, mental retardation and cerebral damage. In such cases, the differential diagnosis through the application of standard psychological tests stands to the credit of clinical psychologist.

At our Institute we have the practice of such cases being presented, twice a week, in clinical conferences, and group discussions facilitate in diagnostic formulations. Such conferences are attended by Clinical Psychologists, Speech Pathologists, Audiologists, and Otolaryngologists. Fortunately we have the collaboration of a team of experts from the K.R. Hospital, like those from ENT, Medicine and Paediatrics. Wherever necessary we have taken assistance of the staff of All India Institute of Mental Health, Bangalore, for detailed neurological check up; EEG, psychiatric examination etc., to the referred cases for which we are much obliged to them.

Not unusually, our cases do show problems such as hyper-activity, memory defects, intellectual impairment, and so on. It would be important to know whether an impaired hearing is more likely due to organic factors or emotional factors. Occasionally, there are cases of hearing loss with an overlay of schizophrenic symptoms and those of hysteric deafness. A good number of mentally retarded children are brought for correction of speech. An estimate of mental subnormality in such cases may provide guidelines as to the feasibility of speech training and to counsel the parents. Poor progress at school can be identified as due to low intelligence or other social and emotional problems. In the cases of brain damaged children, assessment would reveal what functions have suffered greater impairment. Periodical retesting would throw light on the progress made by the patient. Personality assessment of stutterers may indicate the usefulness of certain forms of therapy. In all these contexts the value of psychological testing need not be further emphasised.

A limitation in this regard is the lack of standardised test materials and norms in our conditions. We heavily lean upon the Western Norms and do not know to what extent our interpretations are justifiable. IF we decide upon standing on our own feet for test-construction, standardisation and norms, at least time considerations would not permit us for such adventures of academic interest. I believe this aspect will be covered in our discussion at some stage during this convention.

4. Application of Clinical Psychology in Speech and Hearing

2. THERAPY

Therapy forms another part of our clinical service. A large share of responsibility for treatment of stutterers is being borne by us and the cases are being tried on various forms of behaviour therapy, such as shadowing, negative practice, treatment through aversive stimuli such as electric shock and aversive noise.

Shadowing or more appropriately, speech shadowing, is a relatively simple method, where the therapist reads from a book and the stutterer immediately follows by reproducing whatever is said by the therapist. The treatment sessions may last from 20 to 30 minutes, the therapist recording the number of blocks during each session. During consecutive sessions these blocks decrease and in some cases almost reach zero. It is observed that this improvement is carried over to other speaking situations as well, and this is substantiated by many cases.

Negative practice was tried on a few cases only and the results were not very encouraging.

Since recently, two types of aversive stimuli are being tried with stutterers. In one, electric shocks of previously determined intensity, to produce an unpleasant effect, are delivered to the fingers,whenever the case stutters while reading or speaking. In the other, a sharp click noise is fed into the ears of the subject, through the earphones, everytime he sutters, while reading or speaking. Data are being collected on these lines.

Among these methods, shadowing which has been tried on a good number of stutterers, has yielded beneficial results. We are attempting to make an analysis of the data obtained, from these methods. A comparison of these techniques of treatment with reference to their efficacy, correlating with variables Extraversion —Introversion, and Neuroticism, has to await till this analysis is over.

A practical problem that we have in the field of therapy is that a number of these cases coming from outside Mysore find it difficult to stay for prolonged periods of treatment and get discharged before they are advised to do so. This is a handicap in giving effective treatment for an optimum period. Collection of data from a large group of cases, therefore, becomes difficult. Followup studies of those cases, who received treatment has not been a smoothgoing affair. Some of them do write to us and quite a few do not respond at all. In spite of all these problems we are continuing to do our best in the circumstances.

Apart from stutterers, there are a number of other cases who receive therapy at our Institute either in the form of speech training or auditory training. Cases with voice problems more often in the form of high pitched voice among boys around 16 years visit us. In regard to them, we formulate our recommendations based on our clinical impressions and psychological assessments about the feasibility

of training procedures. Therapy with such cases have **proved** the value **of such recommendations.**

Parent counselling forms a part of our therapy programmeUsually the speech and hearing defects are intimately associated with psychological problems. Overprotection and rejection on the part of parents may have their undesirable consequences. Hearing defects since early life may adversely affect the growth of intelligence. Limitation of intelligence may produce a variety of speech defects. Depending on the merits of the case, the parents are counselled as to what best is needed.

We have also been conducting monthly group parent counselling sessions. The sessions provide brief lectures on a number of topics such as 1. education of deaf children, 2. behaviour problems of children, 3. normal child development and so on. Following this, discussions are held about the specific problems presented by their children. Parents also talk to the group regarding what they have been doing for their children and what problems they have. The response on the part of parents is quite encouraging as evidenced by their large attendance.

5. Application of Clinical Psychology in Speech and Hearing

3. RESEARCH

Although we are hard pressed for time, as with the busy schedules of diagnostic appraisal, treatment and teaching training of our students.we occupy a part of our time in research also. In fact this aspect of research has been given due importance right from the beginning. Presently we are also collaborating with the Speech and Hearing departments in carrying out a VRA research project (VRA-IND-38-68) on 'Developing and Establishing a pattern of Rehabilitation Services that will provide the most effective management of patients with hearing and speech disorders in the shortest period of time'.

For want of norms on a brief screening device for mental development of children, data were collected from about 1052 children, ranging in age from 5 to 15 years on the Seguin Form Board Test and tentative norms were obtained. Those norms showed a close comparison to the Western norms (Bharath Raj, 1968).

Similarly the normative data on children under the age of 3 years, at five stages of motor development and one of speech development were derived and compared with Western norms. No significant intercultural differences on most patterns of child development could be found (Hegde, 1968).

A study was undertaken to differentiate between stutterers and non-stutterers on the two dimensions of personality—neuroticism and extraversion. EPI being administered to a group of 100 male stutterers and a group of 1OO male non-stutterers, both groups being fairly equated on age and education, their responses on N and E scales were analysed. The study pointed out a statistically

significant difference between the two groups on N and E scores. The differentiating personality characteristics between the two groups were analysed (Bharath Raj and Pranesh Rao, 1969).

Another area which is occupying our interest, is about the efficacy of certain forms of Behaviour Therapy on stuttering. A reference to this was made earlier. Stutterers are being tried on techniques like speech shadowing, negative practice aversion techniques with the use of electric shocks and click noise. Data are still being collected on these lines and in the near future it would be possible to make a comparative analysis of these techniques.

Two other research projects which are still in the planning stage are 1. To study the relationship between Psycho-motor co-ordination and Speech defects, 2. To study the value of Psychological Test findings as prognostic indicators for speech training of the educable mentally retarded children.

The research studies such as these will undoubtedly be of some value in terms of arriving at Indian norms or in terms of arriving at effective methods of treatment in the Indian context.

6. Application of Clinical Psychology in Speech and Hearing

4. TEACHING AND TRAINING

Teaching and training the students in all the above aspects, namely diagnosis, therapy and research become a primary concern of the clinical psychologist in the teaching set up. At the moment, about 45 students are receiving training leading to B.Sc. in Speech and Hearing and about 10 students leading to M.Sc. in Speech and Hearing. About 20 students who have successfully completed their M.Sc. course are under clinical internship. The technical personnel at the Institute consist of the following:

1.	Audiologist	3
2.	Speech Pathologists	4
3.	Clinical Psychologists	2
4.	Oral Deaf Educationist	1 (vacant)
5.	Clinical Assistants	4
6.	ENT Specialist	1

In addition we have the part time assistance of the following:

1.	Pediatrician	1
2.	Physician	1
3.	Non-clinical medical specialists	3
4.	Specialist in ENT	1
5.	Specialist in Linguistics	1

As **per the curriculum,** the B.Sc. students will have an introductory course in general psychology in the first year. During the second year they study (1) developmental psychology (emphasis on speech development) (2) introductory clinical psychology and mental testing and (3) statistics, which are the University examination papers. During the third year, they major in Speech and Hearing subjects.

At the M.Sc. level, during the I year in addition to other subjects, they have two papers (1) clinical psychology and psychology of the exceptional (2) statistics and methods of research. During the II year, they have one paper (3) counselling and psychotherapy. All these subjects are compulsory to speech as well as hearing students. In addition to these papers in Psychology, they have other papers in Speech and Hearing and related subjects.

The above subjects, and syllabus prescribed has been recommended by the Board of Studies (AIISH) and the sub-committee for training programme in Audiology and Speech Pathology (Proceedings AIWSHPI 1966) and approved by the University of Mysore.

Apart from class room lectures and training, clinical conferences, Journal clubs, seminars, etc., are held where all the student trainees and clinical staff participate.

7. Concluding Remarks

All this discussion in the foregoing pages, I am sure, will help us to infer one thing. That Clinical Psychology has a significant role to play in speech and hearing disorders.

It is under the consideration of the Government of India and the State Governments to increase the number of Speech and Hearing Centres although the inclusion of a clinical psychologist on the staff pattern may not be in sight in the near future. However it is up to our Association (IACP) to take initiative in the matter and persuade the government to reach our objectives.

Also depending upon the areas in which clinical psychology is to be put in the service of Speech and Hearing, it would perhaps be necessary, to include and emphasise those aspects in the training programme of clinical psychologists.

APPENDIX A

Table showing the distribution of patients with speech and hearing disorders registered in the Institute for the period April 1, 1967 to March 31, 1968

Age	Haring loss		Hearing loss with others		Stammering		Misarticulation		Delayed speech		Cleft palate		Mental retardation		Others		Total		Grand total		%
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
2- 5	32	25	17	12	8	1	8	1	9	4	-	-	7	7	--		81	50	131		22.1
6-17	57	49	32	12	53	4	14	3	4	-	6	2	23	15	9	-	198	85	283		42.5
18 +	123	36	15	4	34	3	2	1			1	-			4	3	177	48	225		35.4
Total	212	110	64	28	95	8	24	5	13	4	7	2	30	22	13	3	456	183	639		100.0
Grand total	322		92		103		29		17		)		52		16		639				
%	50.6		14.5		16.4		3.4		2.8		1.5		8.2		2.6		72.6		27.4		100

APPENDIX B

Table showing the distribution of patients with speech and hearing problems registered tn the Institute for the period April 1, 1968 to March 31, 1969

Age	Hearing loss		Hearing loss with others		Stammering		Misarticulation		Delayed speech		Cleft palate		Mental retardation		Laryngectomy		Aphasia		Others		Total		Grand total		%
	M	F	M	F	M	E	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
0 - 5	15	12	35	24	4	1	1	-	20	9	.	-	10	6	-	-	1	1	7	2	93	55	148		16.54
5-16	23	18	39	34	18	5	4	1	12	5	1	2	9	17	-	-	-	-	7	4	113	86	199		22.23
10-20	57	27	19	19	52	3	1	4	3	1	2	1	18	7	-	-	-	-	10	6	162	68	230		25.70
20 & above	162	68	6	1	46	-	3	-	-	-	2	1	-	3	2	-	3	1	9	11	233	85	318		35.53
Total	257	125	99	78	120	9	9	5	35	15	5	4	37	33	2		4	2	33	23	601	294	895		100.00
Grand Total	382		177		129		14		50		9		70		2		6		56		895				
%	42.69		19.78		14.41		1.56		5.59		1.00		7.82		0.22		0.67		6.26		100				

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