



A RETROSPECTIVE STUDY OF PREVALENCE OF HEARING AND SPEECH CASES IN CRC RAJNANDGAON, CHHATTISGARH, INDIA

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Abstract

The Ministry of Social Justice & Empowerment has set up Composite Regional Centre for Persons with Disabilities in various states to provide both preventive and promotional aspects of rehabilitation like education, health, employment and vocational training, research and manpower development, rehabilitation for persons with disabilities etc.

Composite Regional Centre Rajnandgaon is 11th in number. Composite Regional Centre has rehabilitation related clinical setup including hearing – speech therapy, special education, occupation therapy, clinical psychology, physiotherapy & Early Intervention unit. Department of speech & hearing provides services as Pure Tone Audiometry, Otoacoustic Emission, voice therapy, articulation therapy, Neurological Disorders as Aphasia, Auditory verbal training, speech language stimulation to developmental disorders as Intellectual Deficit, cerebral palsy, Autism, Attention deficit Hyperactivity etc. Hearing Aid is also distributed as per ADIP scheme.

Key Words:

Composite Regional Centre, Incidence, Prevalence, Developmental Disorder, Neurological Disorder.

Introduction

The Ministry of Social Justice & Empowerment has set up Composite Regional Centre for Persons with Disabilities in various states to provide both preventive and promotional aspects of rehabilitation like education, health, employment and vocational training, research and manpower development, rehabilitation for persons with disabilities etc.

These CRCs function as extended arms of the National Institutes.

Objectives of CRC

- To serve as Resource Centre for rehabilitation and special education of persons with disabilities.
- To undertake human resource development by training rehabilitation professionals, village level workers, multi – rehabilitation workers and other functionaries in Govt. and non – Govt. sector, required for providing services to persons with disabilities.
- To undertake public education programs for creation of awareness in the parents and the community.

- To undertake designing, fabrication and fitment of aids and appliances.
- To undertake services of education and skill development leading to enhancement of opportunities for employment, rehabilitation, mobility communication recreation and integration in society.
- To undertake research and development with specific reference to needs of diverse group of people with disability, keeping in view the nature and severity of disability in the region.
- To develop strategies for delivery of rehabilitation services suitable to the sociocultural background of the region.
- To stimulate growth of services by encouraging and supporting voluntary organization, parent groups and self – help groups.
- To establish linkages with existing medical, educational and employment services, following the principles of community – based rehabilitation and offer extension services in the rural areas.

CRC in India

In India there are 21 CRC till now (Guwahati, Lucknow, Bhopal, Srinagar, Patna, sundernagar, Ahmedabad, Kozikode, Nellore, Devengiri, Rajnandgaon, Gorakhpur, Agartala, Naharlagum, Nagpur, & Balangir). Out of these, CRC Rajnandgaon is 11th in number.

Composite Regional Centre has rehabilitation related clinical setup including hearing – speech therapy, special education, occupation therapy, clinical psychology, physiotherapy & Early Intervention unit. Department of speech & hearing provides services as Pure Tone Audiometry, Otoacoustic Emission, voice therapy, articulation therapy, Neurological Disorders as Aphasia, Auditory verbal training, speech language stimulation to developmental disorders as Intellectual Deficit, cerebral palsy, Autism, Attention deficit Hyperactivity etc. Hearing Aid is also distributed as per ADIP scheme.

Methodology

Participants

This retrospective study was carried out by reviewing the clinical records of clients who visited Speech and Hearing Department of Composite Regional Center, Rajnandgaon, Chhattisgarh, between 1st February 2020 to 30th March 2021 & 1st April 2021 to 30th January 2022. The diagnosis of all the clients had been carried out by experienced Audiologists and Speech Language Pathologist. The diagnosis included hearing loss, specific language impairment, delayed speech and language secondary to hearing impairment, delayed speech and language secondary to autism spectrum disorder, delayed speech and language secondary to intellectual disability, delayed speech and language secondary to cranio facial anomalies, specific learning disability, fluency disorder, voice disorder and speech sound disorder. Data of those clients as new & follow up visited the clinic with some complaint & after diagnosis attend the therapy session.

Procedure

All the participants were tested to identify and diagnose any speech, language and hearing problems. In order to diagnose speech and language disorders, standard test materials such as case history, medical history, informal language evaluation, formal test for language, articulation, fluency, voice evaluation had been used. Similarly, for diagnosing adult cases with hearing loss, pure-tone thresholds had been obtained using calibrated diagnostic audiometers (ALPS AD 2000). For pediatric case with hearing loss, Transient Evoked Oto acoustic emissions (Neurosoft) were recorded. Clients having average audiometric threshold at 500, 1000, 2000 & 4000 Hz greater than 26 dBHL were considered as hearing impaired (WHO, 2008). Auditory training was also done severe to profound hearing impaired cases with using hearing aids.

Demographic data, possible etiological factors such as prenatal, perinatal and postnatal histories, family history, consanguinity, other medical history etc. were obtained from each individual.

Result and Discussion

Retrospective study of clinal cases of speech and hearing at CRC Rajnandgaon from February 2020 to January 2022 were taken in this study. A total of 4245 cases were reported with hearing and speech & language related problem. Total 538 cases belongs to schedule caste, 326 cases of schedule tribe, 2262 cases belongs to other backward caste and 1129 cases of general category. Figure 1 shows the number of cases in each months those cases were divided into their categories like schedule caste (SC), schedule tribe (ST), other backward caste (OBC) and general (GEN).

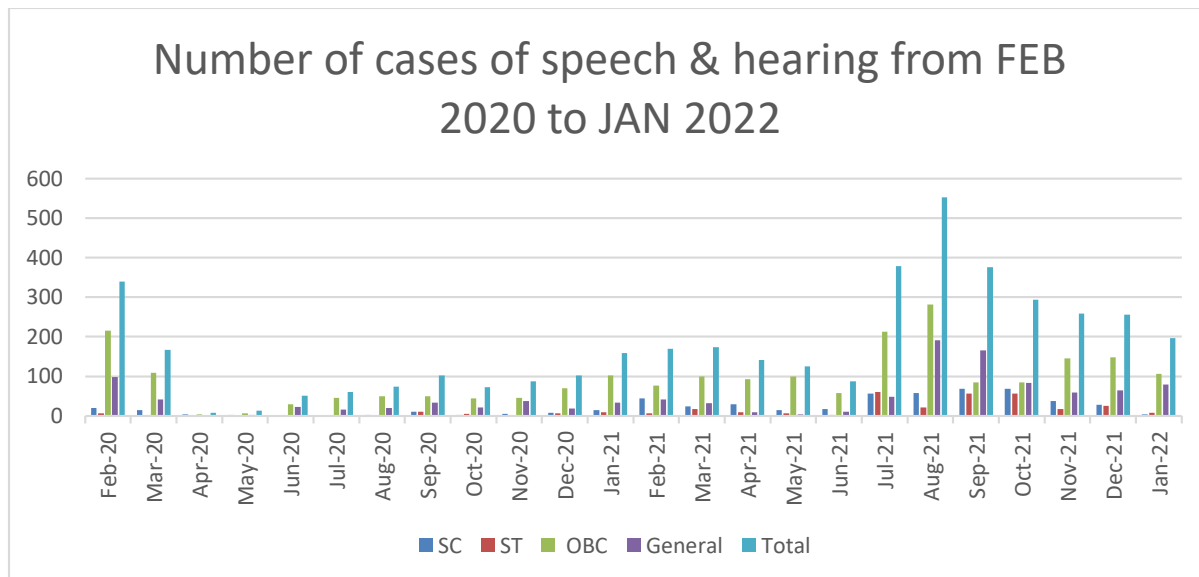


Figure: 1 - Number of cases of speech & hearing from FEB 2020 to JAN 2022

As we can see that the numbers of cases were very less during the lockdown period due to COVID-19 pandemic. After the unlocking phase of pandemic there is increment in total number of cases of speech and hearing. If we see the cases as per their category of SC, ST, OBC and General which is shown in figure 2.

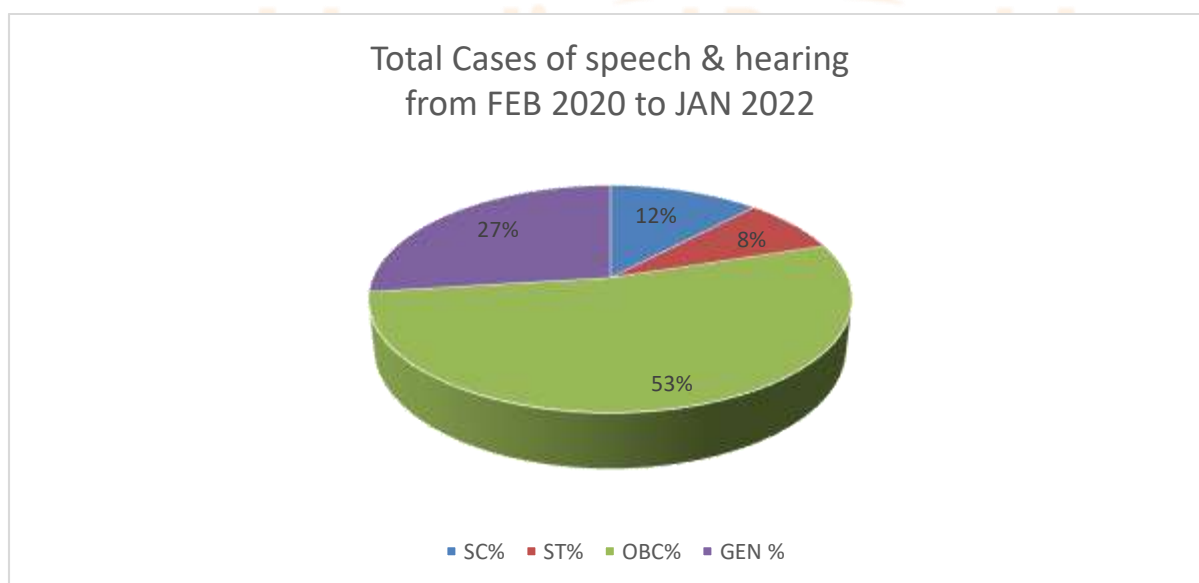


Figure: 2 – Distribution of cases as per category

In this figure we can see that percentages of SC cases were 12%, ST cases 8%, OBC cases 53% and General cases 27%. So most cases of speech & hearing at CRC Rajnandgaon belongs to OBC category. If we see the percentage of new and old or follow up cases which can be seen in figure 3.

Total % of Speech & hearing cases
from FEB 2020 to JAN 2022

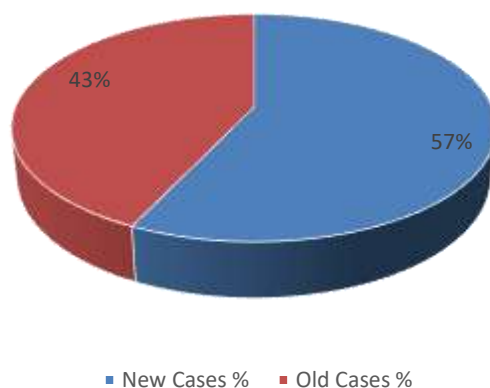


Figure: 3 – Total percentage of new and old cases of speech & hearing.

During the period from FEB 2020 to JAN 2022 the 57% of new cases and 43% of follow up cases were observed. If we see the percentage of new and old cases percentage for each month of study which is shown in figure 4.

Percentage of new and old cases of speech & hearing from FEB 2020 to
JAN 2022

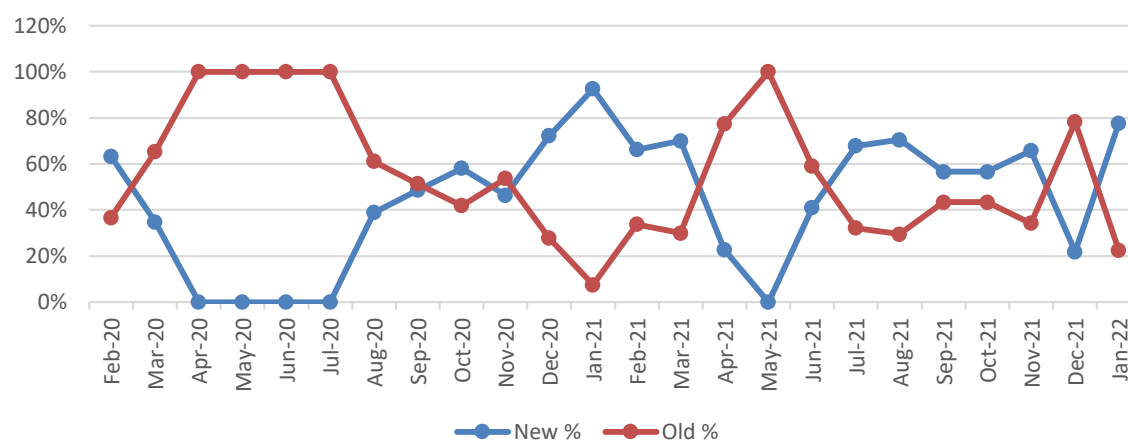


Figure: 4 – Percentage of new and old cases of speech & hearing

In this figure we can see the percentage of new cases were very less during the lockdown period due to COVID-19 pandemic and after the unlock phases the number of new and old speech & hearing cases were increased.

Conclusion

This retrospective study is carried out to determine the prevalence of hearing and speech cases in CRC Rajnandgaon, Chhattisgarh, India. The results of study revealed that prevalence of speech and hearing problem was highest in other backward cast than general cast, schedule cast & scheduled tribes cast. percentages of SC cases were 12%, ST cases 8%, OBC cases 53% and General cases 27%. Numbers of cases were very less during the lockdown period due to COVID-19 pandemic. After the unlocking phase of pandemic there is increment in total number of cases of speech and hearing. During the period from FEB 2020 to JAN 2022 the 57% of new cases and 43% of follow up cases.

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