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Original Article

Variety of speech and language disorders reporting at a tertiary care hospital in Malwa belt of Punjab, India

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ABSTRACT

Background: A wide variety of speech and language disorders has been known to exist. These disorders impair the ability to communicate to different extent so as to adversely affect social, emotional and functional well-being of a person. In literature, little has been documented about types of various such disorders and their frequency of occurrence. Less is known about pattern of such patients seeking speech language assessment and therapeutic services. Hence need of the present study.

Method: Data was collected from a total 6707 patients reporting with communication difficulty to Audiology and Speech Language Pathology wing of ENT department, GGS Medical College Hospital, Faridkot, a tertiary care hospital of Punjab, India. Patients' data were classified depending on (a) age, (b) gender, and (c) diagnosis.

Results: Maximum number of patients was aged below 10 years of age which accounted to approximately 43% of the total patients with speech and language difficulties. The number of patients was observed to reduce as age increased. Mis-articulation was most common among all disorders in the first two decades of life where as stuttering was maximally evident in the young age group (21–30 years). Voice related difficulties were most affecting in the middle age groups (31–50 years).

Conclusions: Results of the present study would be useful in guiding administrative authorities to establish adequate and suitable infrastructure, employment of disability specific professionals and manpower, proper planning and execution in order to accommodate variety of case load. Awareness program or meetings can be arranged to make the co-professionals (doctors, nurses, and other para-medical staffs) well versed with a Speech Language Pathologist's scope of practice.

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1. Introduction

A wide variety of speech and language disorders has been known to exist. These disorders impair the ability to communicate to different extent so as to adversely affect social, emotional and functional well-being of a person. Communication disorders can be of many types and presentations affecting both speech as well as language. Impaired production of speech (misarticulation), disturbed fluency (stuttering, cluttering, normal non-fluency, etc.), and voice disorders are few among the communication disorders. These disorders also include language impairment like aphasia. Language disorders also include inability to follow/maintain the form, content, and the function of language.¹ These disorders occur in children, adults, and people of old age. Speech language disorders are reported to be among the most common childhood impairments which affect 1 in every 12 children or 5–8% of pre-school children.² Among the adult and elderly population, the impact of communication disorders is equally disturbing. National Institute of Neurological Disorders and Stroke estimated one million people in the United States suffering from aphasia.³ Adults with language disorder such as aphasia are found to have fewer contacts with siblings and loss of friends.⁴ In literature, little has been documented about types of various such disorders and their frequency of occurrence. Less is known about pattern of such patients seeking speech language assessment and therapeutic services. The present study aimed at a systematic process to find out (a) various types of speech and language disorders reporting at a tertiary care hospital attached to a medical college and (b) percentage of different types of disorders. Reporting such simple statistical data may not be greatly exciting to the clinicians but certainly has a reasonable potential to contribute in making budgetary decisions for research activities, better administrative controls, and in general broad public interest. The authors feel that the statistics and discussion in this article will help professionals from medical as well as administrative fraternity across the country to understand the wide arena of speech and language disorders and therefore to facilitate adequate referral and related regulations.

2. Method

2.1. Study design

The present study is a retrospective observational study.

2.2. Participants

Data were collected from a total of 6707 patients reporting with communication difficulty to Audiology and Speech Language Pathology unit of ENT department, GGS Medical College Hospital, Faridkot, a tertiary care hospital of Punjab, India. The study covered all patients between 1st August 2013 and 31st July 2016, i.e., for a span of 3 years. Patients' data were classified depending on (a) age, (b) gender, and (c) diagnosis. All the patients were diagnosed by experienced Speech Language Pathologists (SLPs) working at the hospital.

3. Results and discussion

Data were tabulated for 6707 patients of which 4292 were male and 2415 were female. Approximately, 64% of the total patients were male and 36% were female. In literature male to female ratio of speech language disorders has been reported be as high as 2.30:1.⁵ Similar findings were reported by other researchers also.⁶

3.1. Disorders at different age groups

All patients reporting with speech and language problems aged between 2 and 65 years were included in the present study. The patients were categorized under six age groups (0–10 years, 11–20 years, 21–30 years, 31–40 years, 41–50 years, and above 50 years). Maximum number of patients was aged below 10 years of age (Fig. 1), which accounted to approximately 43% of the total patients with speech and language difficulties. Higher age groups had lesser number of patients. All possible pairs of the age groups in terms of number of patients were significantly different (Chi square value: 3800.20; $p < 0.001$). This pattern is indicative of the fact that burden of communication disorders declines with age. This could be due to two reasons: (1) parental concern for their children to achieve normal speech and language skills in early stages of life facilitated professional consultation and (2) such difficulties were under reported at later stages of life due to busy work schedule and lifestyle. Surprisingly, there is a slight increase (Fig. 1) in the total number of patients above 50 years of age. This could be due to that we included all patients above the age of 50 years in this group and no further age group was defined. All the patients in this group had either dysarthria or a voice related issue. Voice related issues could be due to age related changes in laryngeal functioning. Motor speech disorders involving the nervous system are also very common at this age group due to stroke, brain injury, etc. Misarticulation was most common among all disorders in the first two decades of life whereas stuttering was maximally evident in the young age group (21–30 years). Voice-related difficulties were most affecting in the middle age groups (31–50 years). This can be attributed to professional use of voice as well as vocal abuse by females during household activities as they remain the most active during this period of life.

Fig. 1 – Agewise distribution of patients having speech language disorders.

Fig. 2 – Various types of speech language disorders.

3.2. Types of communication disorders

Patients were categorized grossly under five categories viz. developmental speech and language disorder, speech disorder, language disorder, fluency disorder, and voice disorder. A major portion (34%) of the patients lie in the developmental speech and language disorder category (Fig. 2) which included cases with idiopathic delayed speech and language (DSL), mental retardation (MR), cerebral palsy (CP), and hearing impairment (HI). Cases with HI alone constituted a great share of patients among the developmental disorders.

Fluency and voice are two other areas of concern. However voice related issues were more evident as compared to fluency disorders (Fig. 2). 26% of the patients had voice disorders whereas 12% had fluency disorders. An interesting fact was to find only 30 female cases with impaired fluency (stuttering, cluttering) out of total 811 reported which forms a male to female ratio of 27:1. Earlier, male to female ratio of 4:1 has been reported for fluency disorder (stuttering).⁷ Therefore, finding of the present study in this context is not in consonance with earlier published data. We understand the reason behind under-reported female cases in the present study is more to do with psycho-social aspects such as shyness, feeling of social

Fig. 3 – Distribution of developmental speech and language disorders.

isolation, etc. by many of them. Community based rehabilitation programs, gender specific group intervention sessions, and public lectures addressing this issue may bring a solution to this.

3.3. Developmental delays in speech and language

Fig. 3 represents variety of developmental delays in acquisition of speech and language milestones due not/to other co-morbid conditions such as MR, HI, and CP. 41% of all children in this group were having DSL due to HI and 48% had DSL without any associated problem. This could be related to family and social environment. It also hints lack of speech and language

Fig. 4 – Categorization depending on specific speech language disorders.

stimulation or inadequate parental understanding about age appropriate developmental milestones. Further studies addressing this question may throw light on this issue.

Only 11% of the total patients had either MR or CP. Speech impairment due to MR and CP has been reported to be in many folds as compared to those due to HI.⁸ This shows such developmental disorder cases to be under reported/under-referred in the present scenario. This kind of observation emphasizes on the need of inter-department referrals. Therefore it becomes a need of the hour to collaborate with departments like pediatrics, psychiatry, neurology, etc. so that maximum number of patients can get adequate and appropriate services. Various specific communication disorders were listed (Fig. 4). It is evident that maximum number of patients reported with misarticulation, voice abnormalities, HI, and DSL. Again, to our surprise, no patient was seen for swallowing disorder. Management of swallowing disorders has been identified as one of the speech language pathology service delivery areas.⁹ The finding of the present study indicates lack of awareness about scope of practice of a speech language pathologist.

4. Conclusion

This paper has demonstrated pattern of various speech language disorders reporting to a tertiary care hospital of Punjab. Possible reasons were discussed for the observed patterns. Results of the present study would be useful in guiding administrative authorities to establish adequate and suitable infrastructure, employment of disability specific professionals and manpower, proper planning and execution in order to accommodate variety of case load. Purchase and procurement of instruments and therapy materials which best meet the requirement of specific group of population would also be feasible. Awareness program or meetings can be arranged to make the co-professionals (doctors, nurses, and other para-medical staffs) well versed with an SLP's scope of practice. This will enhance the likelihood of appropriate referrals of the patients with communication difficulties.

Conflicts of interest

The authors have none to declare.

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