Original Article

Prevalence of communication disorders in a rural population at taluq level of Gujarat, India

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A B S T R A C T

Objectives: The main objective of the study was to estimate the prevalence of communication disorders between genders and across age groups.

Methods: The All India Institute of Speech and Hearing, Mysore conducted a Speech and Hearing camp as a part of the annual activity of National Service Scheme (NSS) in Sinor Taluq, Vadodara district, Gujarat State of India. Speech and Hearing camp was conducted in 13 villages of Sinor Taluq. These villages were selected randomly and the population of these villages was 28,954 (twenty eight thousand nine hundred fifty-four).

Results: Among the 28,954 individuals surveyed, 1187 (4.09%) individuals were found to have communication disorder. The overall prevalence of ear-related disorders was 3.30% (male – 1.66%, female – 1.63%) and prevalence of speech- and language-related disorder was 0.75% (male – 0.60%, female – 0.24%).

Conclusion: The results of the present study could be used to plan and execute policies for the identification, management, and rehabilitation of individuals with communication disorders.

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1. Introduction

For intervention of any communication disorder, prevention is the first and crucial component. Communication disorders are hidden disabling conditions, which have affects on the social and emotional well-being, cognition, behaviour, and academic achievement in the school and college years and also affect vocational choices later in adulthood. Communication disorder is an umbrella term, which includes a variety of speech, language, and hearing disorders. Although several studies have described the communication disorders in a

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variety of ways, there is a lack of clear and empirically derived definitions and classification systems. This has always resulted in poorly developed evidence, based on which most of the identification and management of communication disorders is done across the globe.\(^5\) The planning of any rehabilitation programme for communication disorders requires adequate prevalence data to understand the nature and severity of the communication disorder in a particular region.

Several studies across the globe have reported the different amount of prevalence rate for communication disorders. In a group of 2980 children (age range 1–11 years), De Andrade\(^6\) reported 4.19\% prevalence for the communication disorder. Annie et al.\(^7\) reported the prevalence of communication disorder to be 21.5\% for hearing impairment. Thorns et al.\(^8\) reported prevalence of neurogenic stuttering to be 5.3\% in a group of individuals with stroke in Belgium. Roongpraiwan et al.\(^9\) reported prevalence of dyslexia to be 6.3\% in a group of children in the age range of 7–11 years. Beitchman et al.\(^10\) reported the prevalence of speech and language disorders to be 11.08\% in a group of 1655 children aged below 5 years. Shriberg and group\(^11\) reported prevalence of speech disorders to be 6.8\% in a group of 7218 children below 6 years of age. Silva et al.\(^12\) reported prevalence of speech disorder to be 1.51\%.

Among the Indian studies, the National Sample Survey Organisation\(^13\) reported that in India 21 out of every 1000 children have hearing loss. Singh et al.\(^14\) reported the prevalence of hearing impairment to be 7.3\% for hearing impairment in a rural population of Lucknow district. Kumar et al.\(^15\) reported that prevalence of mental retardation to be 2.3\% in Karnataka. Devadiga et al.\(^16\) reported that more prevalence for auditory disorders (62\%) followed by language disorders (24\%) and then speech disorders (14\%) in a register-based study. Devadiga et al.\(^16\) also reported that the disorders were more prevalent in males compared to females for the disorders under study across all the age groups. Sreeraj et al.\(^17\) reported prevalence of communication disorder to be 6.07\% in a rural population of Karnataka (sample size ~ 15,441 individuals). Sreeraj et al.\(^17\) also reported that otological disorders were more prevalent compared to speech and language disorders and prevalence of communication disorder was more in males compared to the females.

There are different ways in which these prevalence studies are carried, for example such as questionnaire, surveys, parental interview, teachers interview, register-based studies, etc. The prevalence rate of communication disorders vary according to the method adopted for the study. For example, Leske\(^18\) reported those lower prevalence rates are typically reported in the studies that involve questionnaire or survey method (including parental interview or teacher’s interview). Shriberg et al.\(^11\) reported that prevalence rate is reported better when a survey method is followed by the screening of the individuals suspected for the communication disorders. Law et al.\(^19\) also reported that prevalence of communication disorders was always underreported when the studies did not involve the survey and a follow-up assessment. In the present study, we first conducted a door-to-door survey followed by screening of individuals who were suspected to have communication disorders.

2. **Need of the study**

There is a wide variation in the prevalence of communication disorders reported across several studies across the globe. The wide range of variability across the studies could be due to different methods adopted in various studies, for example such as definition of the disorder, classification of the disorder, total population studied, the age of the participants in the study, rural versus urban population, etc. In India, there is a dearth of published data regarding prevalence of communication disorders. There is also a dearth of information on prevalence of otological versus speech and language disorders in India. Thus, there is a need to study the prevalence and characteristics of these communication disorders. Further, there could be differences in the prevalence of communication disorder across different parts of India as India is culturally, socially and geographically a diverse country. In addition, the Sinor Taluq that was selected for the survey and screening of the communication disorder is a rural area of Gujarat. Awareness of the communication disorder is always less in rural areas compared to the urban areas. Hence, the current study was conducted to see the distribution of communication disorders in Sinor Taluq of Gujarat.

3. **Aim of the study**

The aim of the study was to estimate the prevalence of communication disorders in a group of 28,954 individuals based in Sinor Taluq of Gujarat.

4. **Objective of the study**

The specific objective of the study was to identify the individuals with communication disorder by conducting door-to-door survey and screen these individuals in order to understand the nature and characteristic of the communication disorder.

5. **Method**

The All India Institute of Speech and Hearing, Mysore conducted a Speech and Hearing camp as a part of the annual activity of National Service Scheme (NSS) in Sinor Taluq, Vadodara district, Gujarat State of India. Speech and Hearing camp was conducted in 15 villages of Sinor Taluq. These villages were selected randomly and the population of these villages was 28,954 (twenty-eight thousand nine hundred fifty-four). The study aimed at surveying and screening all the individuals irrespective of the age and the gender residing in these villages. Clustered sampling method was adopted for the same.

The Speech and Hearing camp was conducted in two phases. First phase involved door-to-door survey of communication disorders and an informal screening with questionnaire. Second phase involved the screening of the individuals who were identified to have communication disorders during
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