

Awareness of Speech and Hearing Disorders Among MBBS Students in Bihar

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Abstract

The Speech-language and hearing is one of the most important primary senses which help us to communicate smoothly. Audiologist and Speech-Language Pathologist assess, diagnose and treat speech and hearing disorders or impairments. The present study aim to analyze the awareness of speech and hearing disorders among MBBS students in Bihar. A group of 20 individuals pursuing final year medical course (MBBS) from Katihar Medical College volunteered for the present study. The questionnaire was circulated among the 20 MBBS students and they were asked to mark the appropriate answers for the questions. The results revealed that MBBS students who filled questionnaire had moderate knowledge of speech and hearing disorders. Which suggested that there is a need for medical students to have adequate knowledge and attitude about speech and hearing disorders as they are guiding parents and their families through hearing screening and treatment procedure.

Keywords: speech and hearing disorders among MBBS students in Bihar

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I. INTRODUCTION

Communication process involves encoding, transmitting, and decoding the intended message (Owens, 2008). Communication disorder is impairment in the ability to receive, send, process and comprehend concepts of verbal, nonverbal and graphic symbol systems (American Speech-Language Hearing association ASHA, 1982). The word 'communication disorders' is a broad term which includes delay in speech and language in children, specific language impairment, motor speech disorders, neurological speech and language disorders in children, cleft lip and palate, stuttering and cluttering, voice disorders, neurogenic communication disorders in adults, stroke or head injury, dementia, hearing impairment, and disorder or syndrome associated with delay in speech and language. Hearing is one of the most important primary senses which help us to communicate smoothly with the hearing world. Unfortunately, the sense of hearing is often being kept neglected and people usually fail to realize its importance unless it is diminished or reduced gradually. According to World Health Organization (WHO, 2015) 6.3% of Indians are suffering from significant hearing loss. According to a study conducted by Varshney (2016), 1 out of 4 in every 1000 children suffer from severe to profound hearing loss. The impact of delayed diagnosis and proper intervention in infants with hearing loss has a severe negative effect on the overall speech and language, as well as the cognitive and social skills.

Audiologist and Speech-Language Pathologist assess, diagnose and treat speech and hearing disorders or impairments. In addition to the clinical aspect of audiology, prevention of hearing impairment and the promotion of hearing health are also critical and therefore incorporated into the realm of audiology (Anderson & Shames, 2011)

Lokheshwa and Rajasudhakar (2021) conducted a study of medical practitioner's awareness on speech -language pathologist and their services in India. Results revealed that nearly half of the practitioners are unaware of the speech-language pathologists and their related services.

Shilpashri and Akshata (2019) conducted a study of awareness of speech language and hearing disorders among anganwadi workers. Results indicated that a comprehensive training focusing on speech, language and hearing disorders in children, early identification and treatment for communication disorders in children, is of greatest importance to enhance the awareness on disability among Anganwadi workers at Mysuru and Mandya district (rural).

Sanju, et al. (2018) conducted a study to check the knowledge regarding hearing loss among pediatric nurses. As, the outcome of the study was revealed poor knowledge and attitude towards hearing impairment of infants among nurses across north India. Henceforth, there is an urgent need to educate these professionals as prevention is better than cure.

Yerraguntla, Ravi and Gore (2016) investigated knowledge and attitude of medical intern in coastal Karnataka, showed positive attitude toward different hearing related issues. There is a dearth of literature regarding attitude and knowledge about hearing impairment and balance disorders among medical students of North India.

Ebert (2013) studied The Perception of Racial Privilege in Prospective Speech-Language Pathologists and Audiologists. Results suggested that the majority of respondents view racial privileges as minimal in the speech-language-hearing professions; most respondents denied the concept of White privilege or showed minimal awareness.

Berruecos and Cacho (2009) conducted a study to evaluate the attitude and knowledge of hearing loss in a group of physicians. Results suggested that physician's knowledge level on the matter is deficient and their attitude is far from ideal, physicians selected for a residency in audiology showed slightly better results.

Vinacour, Platzky and Yairi (2001) evaluated The Young Child's Awareness of Stuttering-Like Disfluency. Studies found that from age 3, children show evidence of awareness of the disfluency used in the study, but most children reached full awareness at age 5. Also, negative evaluation of disfluent speech is observed from age 4.

Medical students working with general practitioners, otorhinolaryngologists (ENTs), pediatricians, neurologist, obstetricians/gynecologists, speech language pathologist and audiologists are often involved together in the hearing testing of newborns and children. They frequently work together in various setups such as government and corporate hospitals, primary health centers, medical college, camps, clinics and private institutes. Medical students may play an important role in guiding patients and their families through diagnostic and treatment procedures. Similarly, medical students should also be aware about speech and hearing disorders and rehabilitation and services this helps the medical students in guiding patients about evaluation and management by concerned professionals. The present study aimed to evaluate the awareness of speech and hearing disorders among MBBS students of Bihar.

From the above literature it is revealed that positive attitude and knowledge toward different hearing related issues. There is a dearth of literature regarding attitude and knowledge about speech and hearing disorders among medical students in Bihar. Previous studies were carried out in South India, whereas no such investigation has been conducted in North India till now. This will be the first study in Bihar. Hence the present study aimed to investigate knowledge and attitude toward speech and hearing disorders among MBBS students in Bihar.

II. METHODOLOGY

A. Aim of the Study:

The present study aimed to analyze the awareness of speech and hearing disorders among MBBS students of Bihar.

The study was carried out in three phases.

Phase 1: Preparation of Questionnaire

A set of 20 questions was prepared keeping in mind speech-language and hearing disorders, facilities available for rehabilitation of speech-language and hearing disorders and also listening device benefits for disabled population. The questions prepared were closed ended with yes/no options to answer or tick the correct option. The questionnaire had two sections: The first section has 10 questions about the audiology and hearing disorders. Second section has 10 yes/no questions about speech and language pathology.

Phase 2: Validation of Questionnaire

The prepared questions was subjected to validation. It was done by 5 expert audiologist and speech language pathologists who are working in this field for more than 5 years. The suggestion and correction given by the Audiologist and Speech-language pathology were incorporated, after which a set of 20 questions with yes/no options were finalized for the questionnaire, few questions which were irrelevant were not considered for the final questionnaire.

Phase 3: Google form

The final questionnaire was put into google form format and was ready.

B. Subjects

A group of 20 individuals pursuing final year medical courses (MBBS) from Katihar Medical College were volunteers for the present study. Students of Allied Health Sciences, Bachelor of Dental Science (BDS) and nursing were not included in the present study.

C. Procedure

The finalized google form questionnaire was circulated among the 20 MBBS students and they were asked to mark the appropriate answers in the questions.

D. Analysis

The responded google form were analyzed where every yes given score of 1 and no score of 0. The score obtained were tabulated and subjected to the statistical analysis and result are discussed below.

III. RESULT AND DISCUSSION

The aim of the study was to analyze the awareness of speech and hearing disorders among MBBS students in Bihar. The responses of 20 google form questionnaires were analyzed and the mean scores obtained by the participants for each statement are listed below. The overall awareness of speech and hearing disorders by the medical students was categorized based on the scores obtained. A score of less than 50% was considered poor knowledge, score 51 – 75% was considered moderate and a score 76 – 100% was considered good knowledge.

Table. 1 Showing the percentage mean scores for awareness questions of audiology and hearing disorders among MBBS students in Bihar.

	No		Yes		Total	
	Count	Row N %	Count	Row N %	Count	Row N %
1. Hearing loss has no known treatment?	10	50.0%	10	50.0%	20	100.0%
2. Hearing loss may cause attention deficits?	4	20.0%	16	80.0%	20	100.0%
3. If hearing aids are not effective cochlear implant can be helpful?	3	15.0%	17	85.0%	20	100.0%
4. Excessive loud noise can damage hearing?	2	10.0%	18	90.0%	20	100.0%
5. Age related hearing loss may affect behavior.	6	30.0%	14	70.0%	20	100.0%
6. Listening to music for more than 3 hours a day using earphone may cause permanent hearing loss?	12	60.0%	8	40.0%	20	100.0%
7. Are you aware of Audiological services available?	7	35.0%	13	65.0%	20	100.0%
8. Otoacoustic emission detects the infant's hearing loss at early age?	3	15.0%	17	85.0%	20	100.0%
9. Hearing aids helps the person to understand speech?	4	20.0%	16	80.0%	20	100.0%
10. Audiometer is used to evaluate hearing threshold?	4	20.0%	16	80.0%	20	100.0%

	N	Minimum	Maximum	Mean	Std. Deviation	Mean (%)
Awareness audiology (10)	20	4.0	9.0	7.25	1.41	72.5

Fig. 1 Showing Percentile Responses of awareness in audiology and hearing disorders among medical students

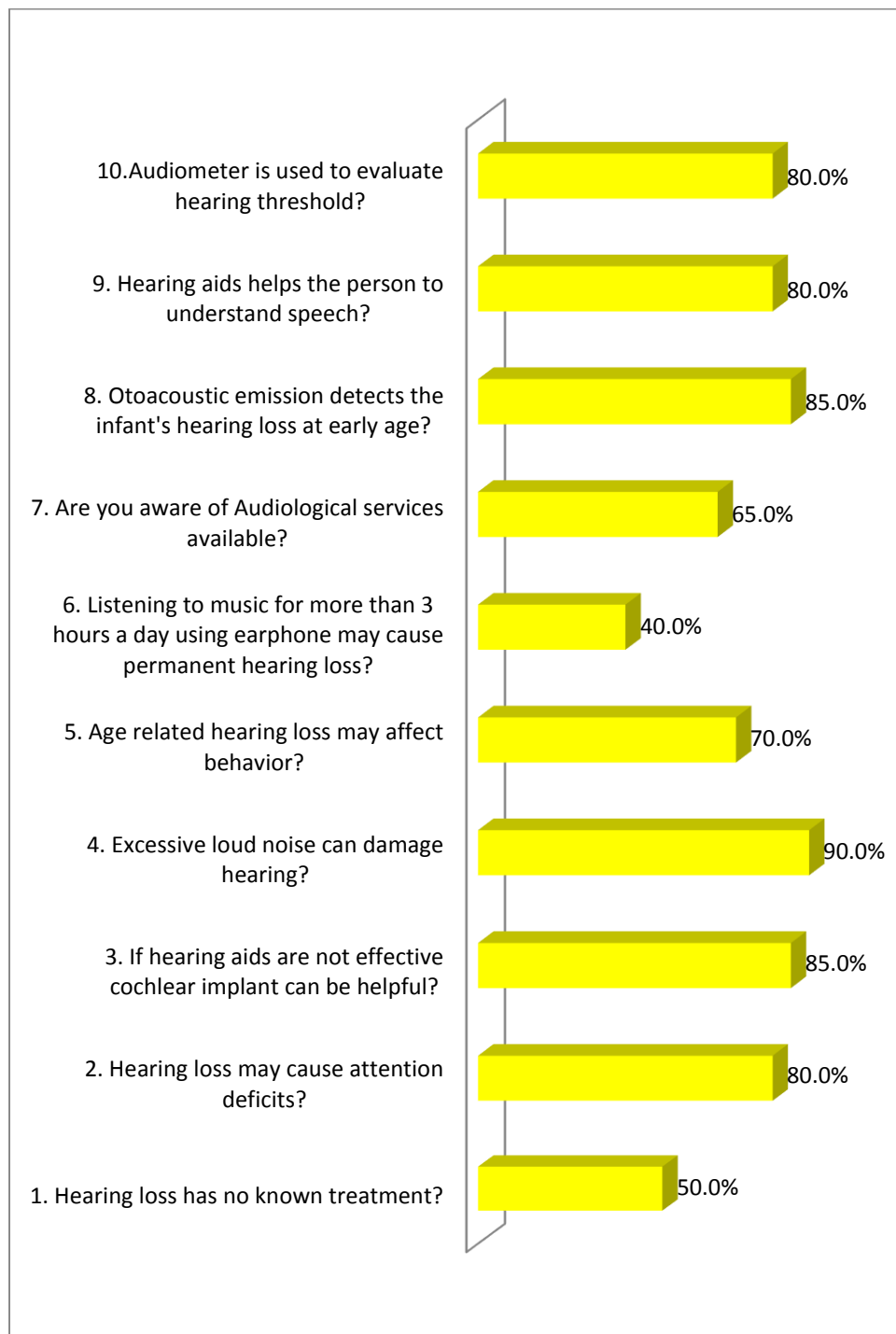


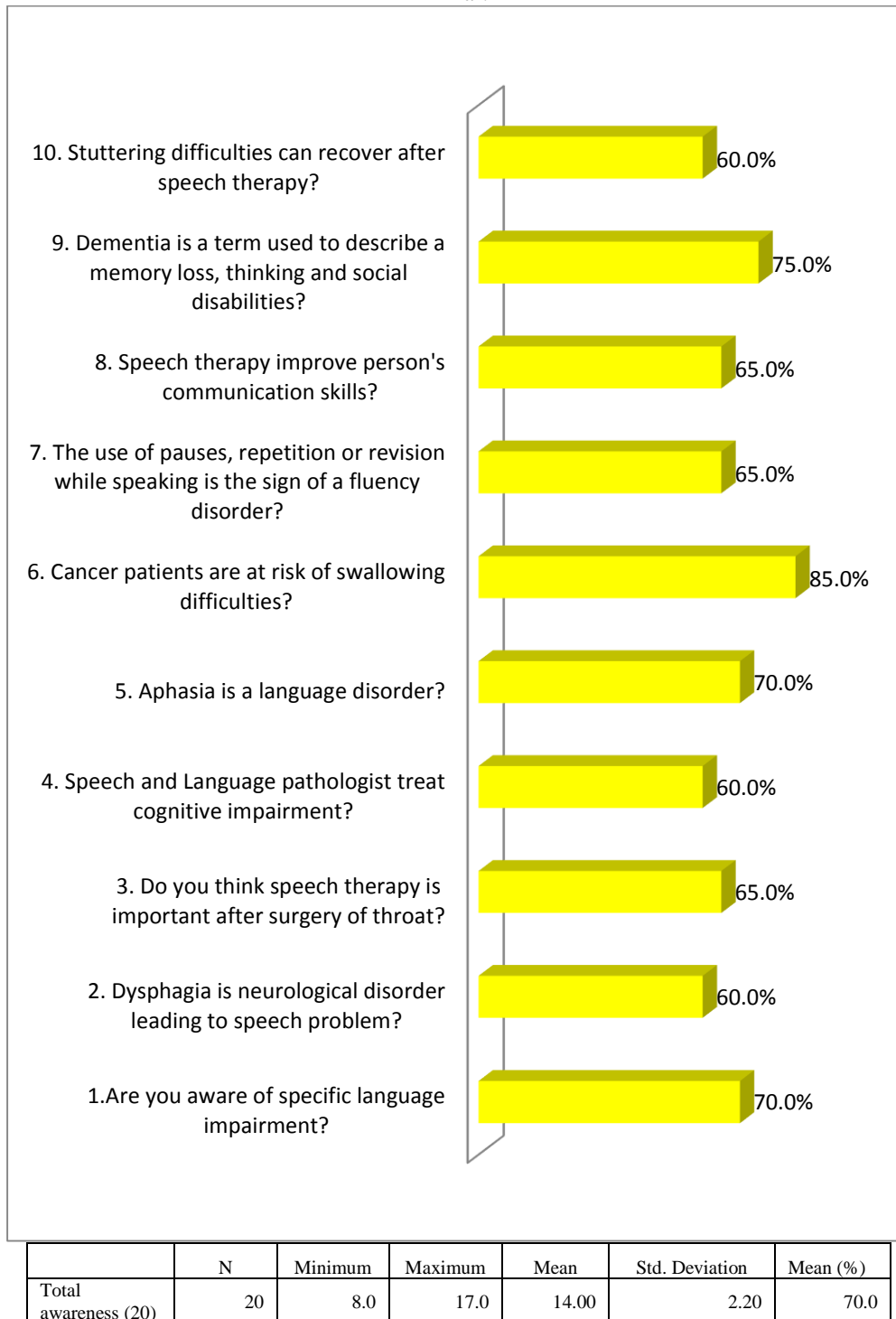
Table 1 and Fig 1 shows the percentage of medical students for general questions yes/no (Q1) Hearing loss has no known treatment? 50% students were aware. (Q2) Hearing loss may cause attention deficits? 80% students were aware. (Q3) If hearing aids are not effective cochlear implant can be helpful? 85% of participants were aware and 15% were not aware. 90% students are aware about (Q4) excessive loud noise can damage hearing?. 70% participants are aware about (Q5) age related hearing loss may affect behavior? (Q6) Listening to music for more than 3 hours a day using earphone may cause permanent hearing loss? 60% students were unaware about it. (Q7) are you aware of audiological services available? 65% of students are aware. (Q8) otoacoustic emission detects the infant's hearing loss at early age? 85% students of them were aware. (Q9). Hearing aids helps the person to understand speech? 80% respondents were aware. (Q10) Audiometer is used to evaluate hearing threshold? 80% students were aware about this.

Table. 2 Showing the percentage mean scores for awareness questions of speech and language disorders among medical students in Bihar.

	No		Yes		Total	
	Count	Row N %	Count	Row N %	Count	Row N %
1.Are you aware of specific language impairment?	6	30.0%	14	70.0%	20	100.0%
2. Dysphagia is neurological disorder leading to speech problem?	8	40.0%	12	60.0%	20	100.0%
3. Do you think speech therapy is important after surgery of throat?	7	35.0%	13	65.0%	20	100.0%
4. Speech and Language pathologist treat cognitive impairment?	8	40.0%	12	60.0%	20	100.0%
5. Aphasia is a language disorder?	6	30.0%	14	70.0%	20	100.0%
6. Cancer patients are at risk of swallowing difficulties?	3	15.0%	17	85.0%	20	100.0%
7. The use of pauses, repetition or revision while speaking is the sign of a fluency disorder?	7	35.0%	13	65.0%	20	100.0%
8. Speech therapy improve person's communication skills?	7	35.0%	13	65.0%	20	100.0%
9. Dementia is a term used to describe a memory loss, thinking and social disabilities?	5	25.0%	15	75.0%	20	100.0%
10. Stuttering difficulties can recover after speech therapy?	8	40.0%	12	60.0%	20	100.0%

	N	Minimum	Maximum	Mean	Std. Deviation	Mean (%)
Awareness speech and language (10)	20	4.0	9.0	6.75	1.25	67.5

Fig. 2 Showing Percentile responses of awareness of speech and language disorder among medical students in Bihar.



If mean (%)	
<50%	Poor
51 – 75%	Moderate
76 – 100%	good

Table 2 and Fig 2 shows the percentage for awareness questions of speech and language disorders questions. (Q1) Are you aware of specific language impairment? 70% of them are aware. (Q2) Dysphagia is neurological disorder leading to speech problem? 60% respondents are aware. (Q3) Do you think speech therapy is important after surgery of throat 65% students are aware about this. (Q4) Speech and Language pathologist treat cognitive impairment? 60% of them unaware about this. (Q5) Aphasia is a language disorder? 70% participants are aware. (Q6). Cancer patients are at risk of swallowing difficulties? 85% students are aware about it. (Q7) The use of pauses, repetition or revision while speaking is the sign of a fluency disorder? 65% students are aware this. (Q8) Speech therapy improve person's communication skills? 65% individuals are aware. (Q9) Dementia is a term used to describe a memory loss, thinking and social disabilities? 75% students are aware. (Q10) Stuttering difficulties can recover after speech therapy? 60% individuals are aware about this. Responds indicates a good level of knowledge and awareness among medical students.

The above results revealed that out of the 20 participants (72.5%) had good knowledge about audiology and hearing disorders, (67.5%) had moderate knowledge about speech and language pathology and total awareness score was (70%) had moderate knowledge.

The results revealed moderate awareness of speech and hearing disorders among MBBS students in Bihar. The results suggested that medical students should have adequate knowledge and attitude about speech and hearing disorders as they are guiding parents and their families through hearing screening and treatment procedure this will help the medical students in guiding parents about evaluation and management by concerned professionals.

IV. CONCLUSION

The aim of the study was to analyze the awareness of speech and hearing disorders among MBBS students in Bihar. A group of 20 individuals participated in the present study. Data was collected from Katihar medical college. Medical students may play an important role in guiding patients and their families through diagnostic and treatment procedures. The results revealed moderate awareness of speech and hearing disorders among MBBS students in Bihar. They need to increase knowledge about delay in speech and language in children and hearing impairment and Audiologists speech-language pathologist who assess, diagnose, and treat speech and hearing disorders or impairments as they serve a wide range of services in assessment and rehabilitation in the field of communication disorders and hearing impairment.

V. Limitation

- Limited sample size
- Data taken only from one medical college of Bihar

VI. Future Recommendation

- Increasing sample size
- Incorporating other medical courses student

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