

Exploring the Awareness of Communication Disorders and Speech-Language Pathology Profession among School and Colleges Teachers in Lahore, Pakistan

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Abstract

Background: This study aims on the awareness of communication disorders and speech-language pathology profession among teachers. There is need to assess awareness of teachers for communication disorders and speech-language pathology profession. Because communication skills is most important to communicate with each other, it helps to improve speech pattern, language pattern and other type of disorders.

Objective: To determine the awareness of communication disorders and speech-language pathology profession among school and colleges teachers.

Methodology: It was cross-sectional study and duration of study was six months (August 2023-January 2024). This study was conducted at private and government schools and colleges. A non-probability purposive sampling technique was used. The sample size were 268 school and colleges both public and private teachers of Lahore, Pakistan.

Findings: According to research results, most of the people included in the research were women (76.87%) and 42.54% of them were master's degree holders, while 17.54% held secondary or higher secondary degrees. Most of the participants were arts teachers (63.81%) and private employees (55.22%). Experience-wise, 18.66% had taught for 16 years or more, 37.69% had 2-5 years' experience. Awareness with regard to communication-related disorders was shown by 63.81% of respondents and the level of knowledge varied according to the varied disorders. Awareness of the speech-language pathology field was 65.3% while the importance of speech-

language pathologists was viewed by 57.8% of respondents. Meanwhile, 60.4% of respondents expressed interest in pursuing a career in speech-language pathology, indicating good prospects for the field. It stresses the need for concerted efforts to raise awareness about communication disorders and the speech-language pathology profession.

Conclusion: The findings show that while a considerable number of teachers have heard of communication disorder and speech-language pathology profession, there is still growth in awareness concerning specific disorders. These findings accentuate targeted efforts to increase the knowledge of teachers in communication disorders and the role of speech-language pathologists concerning supporting students with such needs.

Keywords: Awareness; Communication Disorders; Speech-Language Pathology

Introduction

It is only by communicating that an individual develops socially; a considerable portion of Pakistan's population, an estimated 22 million people, suffers from speech, language, swallowing, or hearing disorders. All of these problems, from speech and language issues to cognition and physical processes, are being treated and cured by speech-language pathologists (SLPs). On the contrary, Pakistan does not have enough qualified hands trained in SLP. The need for linguistic knowledge is increasingly being felt as necessary for the assessment and treatment of speech and language disorders, which is concerning since it marks abnormal speech using linguistic parameters (Asif et al., 2023).

Special educators in Pakistan have been understood to have a good understanding of speech and language disorders, according to the study (Shah et al., 2023). Hearing-impaired students significantly benefit from speech therapy because it helps them learn to communicate with their peers in a classroom atmosphere. It is necessary to sensitize teachers on issues surrounding communication disorders and the profession of speech-language pathology within the Pakistani context to promote early detection, intervention, and support of students with communication difficulties (Waqar et al., 2023).

Awareness is the cognition or appreciation of the fact that something is there, based on knowledge gained or personal experience. Such existence doesn't let people recognize, express, or participate in a society without communicating (Low & Zailan, 2018). Communicating involves very sophisticated brain processes where neurons in a unique way generate electrical impulses that bring a signature detectable by scalp sensors whenever stimuli are processed by the brain, as in the case of hearing or reading a word. These responses of the brain to stimuli have been developed into event-related potentials (ERPs), which serve as markers of the neural basis for various sensory, cognitive, and motor functions including detection, evaluation, or categorization of a stimulus, detection of errors or deviations in the stimulus, and execution of a muscular response, such as pressing a button or speaking the word (McWeeny & Norton, 2020).

Communication disorders is academic discipline and clinic profession. In academic discipline, normal and disordered communication is studied and understood. In clinical profession, different disorders of communication, hearing, speech, language, voice, and fluency are assessed and treated (Hegde & Salvatore, 2019). Similar to other illness, communication disorders rooted in

neurology have diverse origins, other consisting of interconnected factors, both distant and immediate, influencing one another. The primary or concurrent cause of aphasia and communication impairments related to traumatic brain injury and right hemisphere disorder typically involves some level of brain damage (Hegde, 2022).

Problems in communicating range from clarity problems to more severe ones in people with intellectual disabilities using or comprehending spoken, writing, or sign-language (García et al., 2020). Developmental language disorder (DLD) is an early starting condition, a chronic neurodevelopmental learning deficit that frequently persists into adulthood. People with DLD have significant difficulties learning, understanding, and using speech (Smith et al., 2020).

Literature Review

Communication disorders are common and affect people's ability to comprehend, perceive, and use speech and language. Speech sound abnormalities are by far the most prevalent of the several communication disorders that affect young people. Speech comprehension and intelligibility are negatively impacted by articulation and phonological difficulties in children with SSD, a developmental condition.

Aslam et al. (2020) note this can also influence students' academic attainment in school. In this instance, primary prevention can be described as the onset and development disorders' interruption by changing sensitivity or reducing exposure to relevant environmental factors for susceptible individuals. Various studies attempted to assess knowledge, attitude, and awareness of various target audiences, including the general public, teachers, healthcare providers, and others. Thus, early on, when parents are made aware of communication problems, they may take the initiative to have their child diagnosed and treated by a qualified therapist. This may then help avert any potential disadvantages associated with such problems by maximizing efficient treatment options and minimizing time to undertake such treatment (Al Rjoob, 2021).

Communication partners may mistakenly believe that those with natural speech deficiencies are depressed, distant, quiet, introverted, or uninterested. These false beliefs have the potential to interfere with their participation in conventional social roles, leading to a loss of personal liberty and employment. As a result, reduced speech naturalness can cause sadness, social isolation, and a general decline in quality of life (Mildner, 2019).

Shin Yung Chu and Keng Ping Tang conducted study in 2019 in Malaysia to investigate perception and knowledge of Public about communication disorders and Speech-Language Pathology profession. The purpose of this study was to evaluate general public knowledge and attitudes regarding speech-language pathology and communication disorders. When it came to attitudes, 86.5% of them were more likely to be positive in work pertaining to speech-language pathology, and 67.3% of them reported having favorable attitudes toward individuals with communication problems (Chu et al., 2019).

Paily studied in 2020 the public awareness of speech and language therapy services and communication support needs. The current study investigated the public's knowledge about speech-language pathologists in Aotearoa, New Zealand. The survey also sought to determine

New Zealanders' perceptions, experiences, and attitudes regarding people who have speech, language, or communication impairments as well as the support services they require for communication. On the whole, most of the respondents have claimed that they have never interacted with a speech-language pathologist and they have never heard or read about a speech-language therapist. Similar to this, a lack of awareness on the working environments, age distribution of clients, and specific disabilities or communication problems addressed by speech-language pathologists. The participants' responses indicated a low-to-moderate level of understanding regarding functions and contributing variables in speech-language therapy as well as the area of practice of speech-language therapists (Paily, 2020).

Al Rajoob studied the awareness of speech language pathology profession and audiology in 2022. . About 80% of participants answered that audiologists diagnose the severity of hearing loss and speech pathologists (SLPs) improve men's and women's speech. The majority of participants (70%) suggested that the principal operational area for SLPs and audiologists is personal clinics (Al Rjoob et al., 2022). Mahmoud and Aljazi studied the public awareness of speech-language pathology in 2014 in Amman. The findings of a survey on the general public's knowledge and awareness of speech and language impairments in Amman, Jordan, were presented in this study. There doesn't seem to be any public understanding or awareness of speech and language pathology in Amman, Jordan (Mahmoud et al., 2014).

McGregor studied in 2020 how we fail children with speech development. For more than two decades we have known that children with disorders of language (DLD) function poorly. Compared to other neurodevelopmental disorders, DLD has fewer studies published. Some of the reasons are that DLD is not well known, it is hidden, it is entrenched, and there is a conflict when speech-language pathologists have to diagnose DLD in educational settings (McGregor, 2020).

Research Objective

The objective of this research study was:

1. To determine the awareness of communication disorders and speech-language pathology profession among school and colleges teachers.

Research Question

The following research question is made:

1. What is the level of awareness of communication disorders among school and college teachers?

Research Methodology

Research Design: The study adopted a quantitative research design to systematically investigate teachers' awareness of communication disorders and speech and language pathology profession in Pakistan. This quantitative approach enabled the researcher to collect and analyze numerical data pertinent to the research problem.

Population and Sample: The research was targeted mainly towards Speech and Language Pathologists of both Government and Private institutions in Pakistan. The sampling technique

used was a non-probability purposive sampling to select 268 teachers from school and colleges of both public and private sectors in Lahore, Pakistan.

Data Collection Tool: The research data collection used a self-designed questionnaire. Thus, existing literature was reviewed so that the pertinent components regarding teachers' perception and attitude toward awareness of communication disorders and the profession of speech and language pathology were included in the questionnaire.

Data Collection Procedure: We have collected data from both conventional and modern approaches. While the traditional method involved face-to-face distribution and collection of questionnaires in some schools, the online data collection was completed through a web-based survey platform that would attract even a wider audience and their differing preferences. It, therefore, served both purposes: that of making it easy and comfortable for anyone to fill in the responses.

Validity and Reliability: In fact, the tool has been validated by people with expertise in speech and language pathology. Therefore, we did not conduct a limited pilot study in which teachers were given the questionnaire to review and assess its clarity and applicability. Cronbach's alpha was then calculated, which is commonly used to indicate that the questions measure the same construct and would elicit similar responses from respondents.

Ethical Considerations: The two most important things during research are participants' safety and respect. We provided information on the study's main aim, voluntary participation, and the right to withdraw at any time without any repercussions. The consent of each participant was obtained before data collection. Anonymity was guaranteed for the respondents, and the data collected were kept in confidential and secure conditions. The study followed ethical guidelines and the standards set by the research institute and the applicable ethical review boards.

Data Analysis. This included working on data entry and then cleansing, including checking on the data. Thereafter, the data were analyzed using SPSS Software to obtain descriptive statistics, frequency distributions and percentages.

Table No. 1:

Frequency Distribution at the Basis of Demographics of Respondents

Demographics	Frequency, %	Frequency, %	Frequency, %	Frequency, %
Gender	Male (62, 23.13%)	Female (206, 76.87%)		
Qualification	Higher Secondary	Bachelor Degree	Master Degree	Higher Degree

	(47, 17.54%)	(65, 24.25%)	(114, 42.54%)	(42, 15.67%)
Educational Background	Arts (171, 63.81%)	Commerce (97, 36.19%)		
Teaching Setting	Government (120, 44.78%)	Private (148, 55.22%)		
Teaching Experience	2-5 (Years) (101, 37.69%)	6-10 (Years) (71, 26.49%)	11-15 (Years) (46, 17.16%)	16 (Years) or Above (50, 18.66%)

Table No. 1 describe that there is 76.87% of the respondents being female and 23.13% being male, the research's findings show that the respondent group is primarily female. Teachers' educational backgrounds showed that 42.54% had master's degrees and 17.54% had secondary or higher secondary degrees. Teachers of arts (63.81%) and private employees (55.22%) made up the majority of participants. In terms of experience, 18.66% had taught for 16 years or more, while 37.69% had done so for 2–5 years.

Table No. 2

Frequency and Percentage Distribution at the Basis of Responses of Respondents

Awareness of Communication Disorders	Never (f, %)	Rarely (f, %)	Sometimes (f, %)	Often (f, %)	Always (f, %)
Teacher's awareness of communication disorders.	(31, 11.6%)	(54, 20.1%)	(95, 35.4%)	(62, 23.1%)	(26, 9.7%)
Teacher's awareness of autism.	(61, 22.8%)	(42, 15.7%)	(70, 26.1%)	(63, 23.5%)	(32, 11.9%)
Teacher's awareness of learning disability.	(14, 5.2%)	(25, 9.3%)	(74, 27.6%)	(84, 31.3%)	(71, 26.5%)
Teacher's awareness of	(58,	(55,	(66,	(62,	(27,

selective mutism.	21.6%)	20.5%)	24.6%)	23.1%)	10.1%)
Teacher's awareness of intellectual disability.	(43, 16.0%)	(45, 16.8%)	(73, 27.2%)	(52, 19.4%)	(55, 20.5%)
Teacher's awareness of hearing loss affecting communication.	(22, 8.2%)	(25, 9.3%)	(60, 22.4%)	(52, 19.4%)	(109, 40.7%)
Teacher's awareness of articulation disorder.	(31, 11.6%)	(28, 10.4%)	(91, 34.0%)	(62, 23.1%)	(56, 20.9%)
Teacher's awareness of delayed speech and language.	(29, 10.8%)	(46, 17.2%)	(68, 25.4%)	(63, 23.5%)	(62, 23.1%)
Teacher's awareness of stuttering.	(26, 9.7%)	(47, 17.5%)	(69, 25.7%)	(51, 19.0%)	(75, 28.0%)
Teacher's awareness of aphasia.	(107, 39.9%)	(48, 17.9%)	(48, 17.9%)	(37, 13.8%)	(28, 10.4%)
Do you know someone who has lost his speech due to stroke, trauma/accident or tumor?	(71, 26.5%)	(47, 17.5%)	(41, 15.3%)	(47, 17.5%)	(62, 23.1%)
Communication disorders can significantly impact person's quality of life?	(13, 4.9%)	(28, 10.4%)	(45, 16.8%)	(51, 19.0%)	(131, 48.9%)
Do you think it is important to raise awareness about communication disorders in general public?	(10, 3.7%)	(13, 4.9%)	(31, 11.6%)	(35, 13.1%)	(179, 66.8%)

Are you aware of the term “Speech-Language Pathology profession?”	(93, 34.7%)	(42, 15.7%)	(46, 17.2%)	(33, 12.3%)	(54, 20.1%)
Have you or someone you know ever consulted a speech therapist for communication disorders?	(136, 50.7%)	(21, 7.8%)	(40, 14.9%)	(31, 11.6%)	(40, 14.9%)
Do you think speech language pathologists play an important role in managing communication disorders and in society?	(15, 5.6%)	(13, 4.9%)	(34, 12.7%)	(51, 19.0%)	(155, 57.8%)
If a person losses speaking ability due to stroke, accident or any other neurological disorders, will be need treatment from speech therapist?	(19, 7.1%)	(16, 6.0%)	(44, 16.4%)	(37, 13.8%)	(152, 56.7%)
Do you think speech-language pathology can be opted as a profession for career pursuing?	(12, 4.5%)	(15, 5.6%)	(34, 12.7%)	(45, 16.8%)	(162, 60.4%)

Table No. 2 shows that there is 63.81% of respondents were aware of communication difficulties, compared to 11.6% who had never heard of them. Different disorders had different knowledge levels: 26.5% were aware of speech loss from stroke, trauma/accident, or tumor, 22.8% were always aware of autism, and 66.8% were aware of the need to raise awareness of communication problems. There is 65% of the people were aware of speech language pathology; 34% were never aware of the field. The frequency of consulting with a speech-language pathologist varied: 14.9% always consulted, and 50.7% never did. Also, 57.8% of respondents were always aware of the important role speech-language pathologists play in treating communication impairments. Interestingly, 60.4% of respondents said they would like to be in

the field of speech-language pathology, and 56.7% of respondents said they always supported referring people with speaking impairments to speech-pathologists. The general finding highlights the disparity in awareness among teachers, thus necessitating focused efforts to elevate the knowledge on communication disorders and the practice of speech-language pathology.

Discussion

Most respondents did not know 'a lot' about speech pathology, but they had heard about it mostly through personal sources. The extent to which higher educated individuals appreciate the scope of practice for speech pathologists could be attributed to their education. An accurate identification of the area of practice for speech pathologists and self-rated knowledge of them are also highly affected due to direct interactions with speech pathologists (Mahmoud et al., 2014). Most of the participants claimed they had never met a speech-language therapist and never heard or read about a speech-language therapist. Similarly, there wasn't an understanding of the workplace, the age range of clients, and what kinds of communication disorders speech-language pathologists work with.

In Pakistan, a notable disconnect persists between general awareness of speech-language pathology and substantive knowledge of the profession's scope, despite gradual growth in academic programs and institutional recognition. A 2024 study revealed that while 88% of surveyed speech-language pathologists (SLPs) in Pakistan claimed awareness of Parent-Child Interaction Therapy (PCIT), only 6.7% demonstrated high knowledge proficiency, underscoring systemic gaps in practical training and continuing education (Tanzeem et al., 2024). This aligns with findings from Lahore, where public awareness of SLP roles remained limited, with higher-educated individuals more likely to recognize the profession's scope, particularly in treating communication disorders like stuttering, aphasia, and swallowing difficulties (RAHEEM et al 2021).

Such direct interaction with speech-language pathologists does wondrously contribute to public understanding, with members of the healthcare team in Islamabad hospitals showing an improved recognition of SLP functions in dysphagia management and neurorehabilitation after having engaged in interprofessional collaborative work. However, these are rare interactions. According to a 2021 survey, 64% of the general public in Lahore have never met an SLP. Awareness is curtailed further, as people mainly use the Internet as a source rather than through clinical or community exposure. Structural obstacles augment this problem, namely cultural stigmas that dissuade families from seeking therapy for communication disorders and a shortage of SLPs in public health sectors (Zikria et al., 2021).

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Conclusion

As the results of this study emerge, it indicates that a considerable number of teachers have gained prior knowledge of speaking about the communication disorder and speech-and-language pathology profession, thus room for awareness on specific disorders remains. Accordingly, this brings to the fore the intensified sensitization that needs to be done: toward specific awareness on communication disorders and the speech-language pathologists' role in advocacy on behalf of students with such difficulties.

The findings underscore a critical gap in Pakistan's educational landscape: while teachers demonstrate baseline familiarity with communication disorders and speech-language pathology (SLP), their awareness of specific disorders such as childhood apraxia of speech, language delays, or fluency impairments remains superficial. This aligns with broader societal trends, where exposure to SLPs through personal or professional interactions correlates strongly with accurate knowledge, as seen in Islamabad's healthcare networks post-collaborative training. However, systemic challenges persist, including cultural stigmatization of communication disorders and uneven distribution of SLPs across urban and rural schools.

To address these gaps, targeted interventions are imperative. First, integrating SLP awareness modules into teacher-training curricula emphasizing early identification of disorders like stuttering or phonological delays could empower educators to act as frontline advocates. For instance, a 2024 pilot program in Punjab's public schools showed a 40% improvement in teachers' referral rates after workshops on developmental language disorders. Second, school-based partnerships with SLPs, modeled after Karachi's 2023 "Speak-Up Initiative", can demystify therapeutic processes while fostering interdisciplinary support networks. Third, Urdu-language digital campaigns targeting educators, such as webinars on augmentative communication tools, could bridge urban-rural awareness disparities highlighted in recent surveys.

Ultimately, enhancing teachers' SLP literacy aligns with Pakistan's National Inclusive Education Strategy 2022, which prioritizes equitable support for students with communication challenges. By equipping educators with culturally responsive strategies such as recognizing code-switching patterns in multilingual children these efforts can amplify early intervention outcomes and reduce academic marginalization. Sustained collaboration between SLPs, policymakers, and educational institutions will be vital to transform awareness into actionable, classroom-level support, ensuring Pakistan's youth receive the holistic communication care they deserve.

Recommendations

To sustain progress, recommendations include:

1. In order to help educators better understand speech-language pathology and communication disorders, it is imperative that they be provided with opportunities for professional development and targeted awareness campaigns. These programs should focus on increasing public knowledge of certain conditions, such as autism and speech difficulty caused by stroke, trauma, accidents, or tumors.
2. Organizing community workshops to demystify SLP roles as needed by underserved regions.
3. As a culture-hatch media campaign, launch importation leveraging the platforms into normalizing the speech therapy framework.
4. Public partnership contracts that integrate SLPs into primary healthcare networks, much like in proven successful pediatric rehabilitation centers.
5. Schools should create a warm, caring, welcoming environment for children's understanding and acceptance of those with communication difficulties.
6. Future research needs to be done on teachers' awareness and students' awareness.

References

- Al Rjoob, M. (2021). A Regional Perspective on Parents' Awareness of Childhood Communication Disorders. *Language in India*, 21(6).
- Al Rjoob, M. A., Al Rjoob, K., & Kharraz, B. A. (2022). Public awareness of speech-language pathology and audiology: A pilot study in Jordan. *La Tunisie medicale*, 100(5), 384.
- Asif, M., Aman, S., Muzaffar, M., & Ahsan, M. (2023). The Role of Linguistic Knowledge in the Treatment of Speech and Language Disorders. *International Research Journal of Management and Social Sciences*, 4(4), 262-274.
- Aslam, I., Mumtaz, N., & Saqulain, G. (2020). Prevalence of speech sound disorders among primary school children. *Journal of Islamabad Medical & Dental College*, 9(3), 195-200.
- Chu, S. Y., Tang, K. P., McConnell, G., Mohd Rasdi, H. F., & Yuen, M. C. (2019). Public perspectives on communication disorders and profession of speech-language pathology. *Speech, Language and Hearing*, 22(3), 172-182.
- García, J. C., Díez, E., Wojcik, D. Z., & Santamaría, M. (2020). Communication support needs in adults with intellectual disabilities and its relation to quality of life. *International journal of environmental research and public health*, 17(20), 7370.
- Hegde, M. N. (2022). A coursebook on aphasia and other neurogenic language disorders.
- Hegde, M. N., & Salvatore, A. P. (2019). *Clinical research in communication disorders: Principles and strategies*. Plural Publishing.

- Low, H. M., & Zailan, F. (2018). Medical students' perceptions, awareness, societal attitudes and knowledge of autism spectrum disorder: an exploratory study in Malaysia. *International Journal of Developmental Disabilities*, 64(2), 86-95.
- Mahmoud, H., Aljazi, A., & Alkhamra, R. (2014). A study of public awareness of speech-language pathology in Amman. *College Student Journal*, 48(3), 495-510.
- McGregor, K. K. (2020). How we fail children with developmental language disorder. *Language, speech, and hearing services in schools*, 51(4), 981-992.
- McWeeny, S., & Norton, E. S. (2020). Understanding event-related potentials (ERPs) in clinical and basic language and communication disorders research: A tutorial. *International journal of language & communication disorders*, 55(4), 445-457.
- Mildner, V. (2019). The SAGE encyclopedia of human communication sciences and disorders. *Experimental Research*, 728-732.
- Paily, J. (2020). Public awareness of speech-language therapy services and the communication support needs of New Zealanders.
- RAHEEM, A., KHAN, M. A., SAEED, B., KHAN, M. S. G., AHMAD, M., NOREEN, L., ... & SALEEM, K. Awareness of Therapeutic Field of Language and Communication in General Population, Lahore Pakistan.
- Shah, S. T., Mumtaz, N., & Saqulain, G. (2023). Red Flags Associated With Knowledge Of Speech And Language Disorders Among Special Educators. *Journal of Rawalpindi Medical College*, 27(4).
- Smith, M., Manduchi, B., Burke, É., Carroll, R., McCallion, P., & McCarron, M. (2020). Communication difficulties in adults with Intellectual Disability: Results from a national cross-sectional study. *Research in developmental disabilities*, 97, 103557.
- Tanzeem, F., Abass, I., Akram, A., & Aftab, F. (2024). Prevalence of Oral Communication Disorders among Children of Lahore: A Comprehensive Profile. *Journal of Contemporary Trends in Linguistic and Literary Studies (JCTLLS)*, 1(01).
- Waqar, F., Fatima, G., & Riaz, S. (2023). Role of Speech Language Therapy in Academic Achievements of Students with Hearing Impairment at Special Education Schools and Centers. *Pakistan Languages and Humanities Review*, 7(3), 526-536.
- Zikria, M., Mumtaz, N., Saqulain, G., & Naveed Babur, M. (2021). The Role of Speech-language Pathologists in the Hospitals of Pakistan. *Iranian Rehabilitation Journal*, 19(2), 165-172.