

Speech-Language Pathologists' Insights into Hearing Loss and Collaborative Practices with Audiologists

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Abstract: This study explored Speech-Language Pathologists' (SLPs) insights into hearing loss and their collaboration with audiologists. A mixed-methods approach was used, including an online survey of 50 SLPs and semi-structured interviews with 10 SLPs across clinical and educational settings in Pakistan. Results showed that 82% of SLPs reported a strong understanding of how hearing loss affects communication, but only 46% felt confident managing hearing devices, with just 38% having received formal training in this area. While 88% valued collaboration with audiologists, only 54% had regular professional interactions, and just 22% participated in joint case conferences. Thematic analysis of interview data highlighted three key themes: a strong need for continuing education on hearing technology, inconsistent collaboration experiences, and a desire for integrated systems such as shared digital records and scheduled meetings. Barriers identified included time constraints, separate service structures, and limited formal communication pathways. The study recommends enhancing training opportunities, establishing structured referral systems, and promoting integrated care models. Future work should explore the impact of improved collaboration on client outcomes and investigate audiologists' perspectives. Strengthening teamwork between SLPs and audiologists has the potential to significantly improve care for individuals with hearing loss.

Keywords: Speech-Language Pathologists, hearing loss, mixed method, collaboration, teamwork

INTRODUCTION

Hearing loss is one of the most common problems which can occur in people of any age and with different backgrounds. It may be caused by numerous things which include genetics, infections, exposure to noise, aging, or injuries (Daniel, 2007). A hearing loss may severely affect the communication, learning and everyday life of a person. Hearing loss can slow language acquisition and educational performance in children and cause social isolation, psychological problems and cognitive deterioration in adults (Blazer & Tucci, 2019; Lieu et al., 2020). Fortunately, the development of medicine and rehabilitation services provides a solution to people with hearing loss; the opportunities are hearing aids, cochlear implants, and speech-language therapy, which allows individuals to advance their communication skills and quality of life (Abrahams et al., 2023). Nonetheless, the provision of successful care to patients

with hearing loss should be coordinated among various specialists. Two important professionals that participate in this care include Speech-Language Pathologists (SLPs) as well as audiologists. SLPs assist clients to acquire speech, language and communication abilities, and audiologists determine the hearing loss as well as offer suitable hearing equipment (Warren et al., 2024; Wood et al., 2021). These professionals can provide superior and comprehensive care when they operate collectively. To illustrate, an audiologist could catch a child with hearing loss and then an SLP could offer a therapy which is aimed at developing a language in a child. Equally, an SLP can determine when a hearing device is not benefiting a client enough and refer him to additional audiological assessment (Ng et al., 2022; Richburg & Knickelbein, 2011). The need to do effective work among SLPs and audiologists is the basis of the study so that the results of the work with clients with hearing loss can be optimal.

However, the issue is that this cooperation at times is not very good or well-organized. There are also different obstacles that might hinder the collaboration between SLPs and audiologists. Such obstacles are low levels of training about hearing loss in the education of SLP-related programs, variations in professional cultures, time restrictions and the absence of regular communication systems (Ali, 2025; Muñoz & Blaiser, 2011). In most educational institutions and health care institutions, audiologists and SLPs occupy different departments, and it is thus not easy to work together regularly (Richburg & Knickelbein, 2011; Waqar, 2023). There are also SLPs who might experience insecurities behind some hearing cares like how to handle hearing equipment or when to send a client back to an audiologist. On the same note, audiologists are not aware of the extent of the role of SLP in sustaining communication. Such problems may lead to the lack of unified care and opportunities to manage clients in a better way (Peter et al., 2019; Zikria et al., 2021). This research is important to some extent in the sense that it can be used to rectify this mess. Based on understanding the way SLPs perceive hearing loss and how they already collaborate with audiologists, this study can help reveal the problems and the potential solutions. With increased cooperation among these professionals, a more coordinated care approach, anticipation, and earlier interceptions as well as enhanced communication outcomes to the hearing loss clients can be achieved (Skinner et al., 2022). Also, this research study would give insights into training programs of professionals and future policy choices that would result in hearing care teamwork.

The core aim of this study is to explore Speech-Language Pathologists' insights into hearing loss and their collaborative practices with audiologists. It is aimed at learning how SLPs perceive their roles in hearing loss management, how confident they are in their interactions with clients who use hearing aids, and what their experience was in terms of cooperation with audiologists. A part of the research is also identifying the primary obstacles that hinder the construction of effective collaboration, as well as proposing what can be done to improve the inter-professional cooperation. The emergence of the person-centered care concept is relevant to this because it emphasizes the appreciation of collaboration between disciplines to enhance service outcomes to clients with complex conditions. The study will enable us to contribute useful research to the field of education, clinical management, and policymaking. In the end, the increased cooperation between SLPs and audiologists will facilitate the development of communication skills and the quality of life of individuals with hearing impairments.

MATERIALS AND METHODS

This research prior to discussion will investigate the aspects of Speech-Language Pathologists (SLPs) concerning managing hearing loss and working in agreement together with audiologists using a mixed-methods approach. Qualitative and quantitative data were gathered to have a balanced picture of the current practices as well as the challenges. The study was carried out in January-March of 2025, and comprised SLPs who are employed in various workplaces around the state of Pakistan such as hospital facilities, independent clinics, special education facilities, and even regular schools. Purposive sampling was employed to identify the participants with the following requirements that they should be qualified SLPs, had already worked at least 1 year, and provided services to hearing loss clients within the last 12 months. 50 SLPs accepted to be included and participated in a survey, and 10 of them also participated in follow-up interviews.

The survey thrived to collect extensive knowledge related to SLPs knowledge of hearing loss, their confidence about dealing with hearing aids and cochlear implants among other hearing aids, how they have collaborated with audiologists, and obstacles encountered by the SLPs. A set of multiple-choice questions, the five point Likert-scale type (with an anchor point Strongly agree to strongly disagree), and some open questions where people could make additional comments, have all been included in the survey. Three senior SLPs and one audiologist constituted a panel to validate the questions to ascertain relevance and clarity of questions. The survey data was analyzed by descriptive statistics (percentages, frequencies and means) and the result is in Table 1 (which summarizes the demographics and professional backgrounds of participants) as well as Table 2 (findings on important matters about knowledge, level of confidence and practices about collaborations).

In addition to the survey, semi-structured interviews were conducted with 10 selected SLPs to gain deeper insights into their real-world experiences. Each interview lasted approximately 30–40 minutes and followed an interview guide that covered topics such as examples of successful or unsuccessful collaboration, communication methods with audiologists, challenges in inter-professional work, and suggestions for improvement. Interview recordings were transcribed and analyzed using thematic analysis, following Braun and Clarke’s six-step approach, to identify key themes. The main themes emerging from the interviews are illustrated in Figure 1 (a visual model of factors influencing collaboration between SLPs and audiologists). Ethical approval was obtained from the relevant institutional review board prior to data collection, and all participants provided informed consent. To ensure confidentiality, all participant data were anonymized during the analysis process.

RESULTS AND DISCUSSION

A total of 50 Speech-Language Pathologists (SLPs) completed the survey, reflecting a diverse group in terms of gender, experience, and work settings most (76%) were women, with an average of 6.2 years in practice. Participants worked in private clinics (60%), hospitals (24%), and educational settings (16%). All recent experience reported with clients who have hearing loss shown in Table 1. These demographics align with trends observed internationally, where SLPs frequently serve clients with hearing impairment across multiple environments (Hooper

et al., 2025; Kathard et al., 2007). Respondents showed strong awareness of how hearing loss affects communication: 82% reported a solid understanding of its impact on speech and language development. This finding is consistent with prior research showing that SLPs often recognize the need for interprofessional work in hearing impairment cases (Intezar et al., 2019; Minhas et al., 2022). Nonetheless, only 46% felt confident managing clients using hearing aids or cochlear implants, and under 40% had received formal academic training in these areas in Table 2. This gap echoes findings in Pakistan, who reported that SLPs displayed knowledge of basic hearing loss symptoms but had limited mastery of hearing aid technology and referral processes (Kathard et al., 2007; Zikria et al., 2021).

Table 1 Demographic Information of Participants and Professionals Background

Parameter	N	Percentage (%)
Gender		
Male	38	76
Female	12	24
Clinical Mean Experience		6.2 years
Workplace Sitting		
Private	30	60
Government	12	24
Schools	8	16
Clients with hearing loss (previous 6 months)		50

Table 2 Speech Language Therapist: Knowledge, Confidence and Collaboration

Item (s)	Percentage				
	SD	DA	N	A	SA
Understand how hearing loss affects communication	0	4	14	50	32
Confident managing clients with hearing devices	8	18	28	30	16
Received formal training in hearing devices	10	24	28	26	12
Value collaboration with audiologists	0	2	10	46	42
Have regular collaboration with audiologists	6	14	26	36	18
Collaborate through informal discussions	4	8	24	44	20
Collaborate through written reports	12	18	32	28	10
Participating in joint case conferences	18	28	32	18	4
Identify barriers: time constraints	0	6	22	48	24
Identify barriers: separate services	2	4	26	52	16

When asked about collaboration, 88% strongly agreed that working with audiologists is important; however, only 54% had regular professional interactions. Informal discussions (64%) and written reports (38%) were the most common forms of collaboration, whereas only 22% participated in joint case conferences. These findings closely mirror a U.S. study, where 60% of SLPs handled clients with hearing loss but just 40.2% reported active collaboration with audiologists (Aural Rehabilitation Clinical Practice Guideline Development et al., 2023).

Barriers identified in this study physical separation, scheduling conflicts, and lack of formal referral systems also reflect findings from multiple studies highlighting "access" as a primary barrier. Thematic analysis of interviews with 10 SLPs revealed three major themes, represented visually in 1 Need for Continuing Education SLPs requested more training in hearing technology, device management, and joint clinical decision-making. This echoes literature calling for interprofessional education to improve roles, responsibilities, and communication skills; Inconsistent Collaboration Experiences some participants praised effective teamwork, while others reported fragmented practices driven by organizational constraints (Abrahams et al., 2023). This variability aligns with global research showing similar mixed experiences 3 Desire for Integrated Systems participants advocated for shared digital records and scheduled case reviews. This aligns with ASHA guidance that strong communication and co-location are key to interprofessional practice (Hacker & Wessel, 1998; Wood et al., 2021).

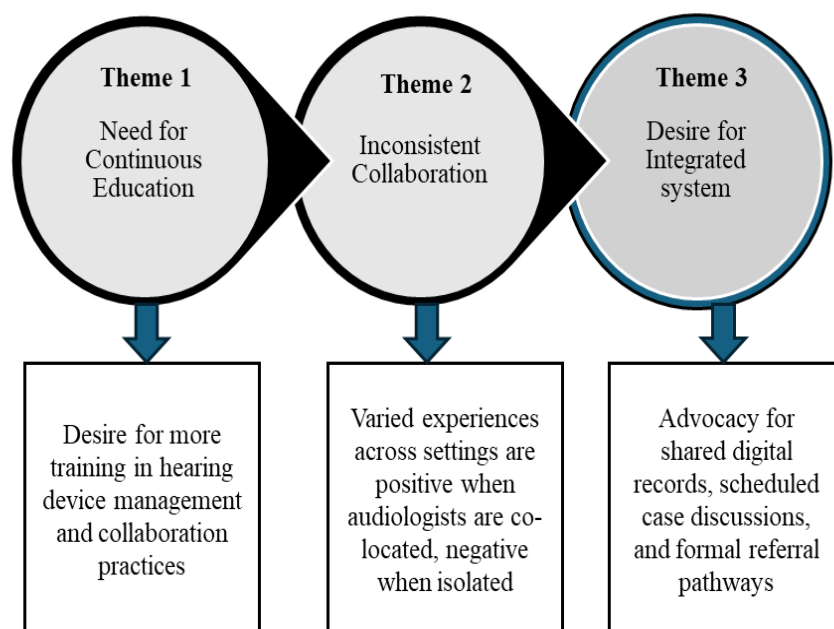


Figure 1 Thematic Analysis

These qualitative insights and quantitative results suggest that despite valuing teamwork, most SLPs face systemic barriers to consistent collaboration. The lack of formal referral pathways, limited technology training, and logistical hurdles prevent optimal joint care. Studies show such barriers can delay aural rehabilitation and negatively impact communication outcomes for clients with hearing loss (Warren et al., 2024). If collaboration improved through shared protocols, enhanced training, and regular multidisciplinary meetings SLPs and audiologists could better coordinate hearing aid fitting, auditory training, and speech services. This approach supports a growing body of evidence favoring interprofessional models in aural rehabilitation for both children and adults. In summary, our findings demonstrate that while SLPs understand the importance of managing hearing loss and value interprofessional work, actual collaboration remains limited (Ng et al., 2022; Warren et al., 2024). SLPs lack confidence in technical aspects of hearing device management and report inconsistent interactions with audiologists. These results mirror prior research conducted both globally and in Pakistan. To improve outcomes, SLP and audiology education must include more hearing-

tech training, and clinical settings should adopt shared record systems and routine case conferences (Ali, 2025; Allen & Mayo, 2020). Such improvements could reduce delays in intervention, improve continuity of care, and enhance the overall effectiveness of aural rehabilitation services.

CONCLUSION

This research reveals the perspectives of Speech-Language Pathologists on hearing loss and their partnering up with audiologists. The results conclude that SLPs have knowledge on the relevance of hearing loss on communication and can embrace teamwork; they however feel incompetent in the handling hearing aids since there is little formal preparation. Through cooperation of audiologists, there is a tendency of informal cooperation where time limits, segregated services, absence of regulated communication systems act as a wall. SLPs also communicated their desire to enhance professional development, as well as the more incorporative teamwork between them and the audiologists. Collaboration can be enhanced by improving training opportunities, instituting mutual referral patterns, shared records and frequent case discussion. These will enable both the professionals to provide more coordinated and effective care and eventually better results will be achieved in the clients with hearing loss.

RECOMMENDATIONS

The result of the study suggested that better-organized hearing equipment training by Speech-Language Pathologists (SLPs) must be obtained during their educational practice. And it is also recommended that continuous professional education should undergo. Formal referral routes and encouragement of the consideration of common digital records by a SLP and audiologists should be established by the institutions to enhance the circulation of information. Interdisciplinary meetings should be held regularly and together with the joint case conferences to facilitate collaboration. Healthcare organizations and schools ought to take into consideration co-locating services in which they can mitigate the obstacles presented by disparate work environments. Future studies should also tap on to the views of audiologists on collaborating to have an even ground. When using certain models of interprofessional training, research could also look at the difference in how these training models influence collaboration. The results of longitudinal studies could possibly be used to trace whether a better level of collaboration generates measurable improvement in levels of client communication. Lastly, rural and underserved regions demand study to ensure the problem of underserved settings is addressed in a low resource environment.

REFERENCES

- [1] Abrahams, K., Mallick, R., Hohlfeld, A. S.-J., Pillay, T., Suliaman, T., & Kathard, H. (2023). Emerging professional practices focusing on reducing inequity in speech-language therapy and audiology: a scoping review. *International Journal for Equity in Health*, 22(1), 43. <https://doi.org/10.1186/s12939-022-01815-0>

- [2] Ali, S. (2025). Perspectives Of Speech-Language Therapists On Hearing Loss And Collaboration with the Audiology Profession. *American Journal of Psychiatric Rehabilitation*, 136–141. <https://doi.org/10.69980/ajpr.v28i1.73>
- [3] Allen, S., & Mayo, R. (2020). Speech-Language Pathologists' Perceptions of School-Based Services for Children With Hearing Loss. *Language, Speech, and Hearing Services in Schools*, 51(2), 469–478. https://doi.org/10.1044/2019_LSHSS-19-00040
- [4] Aural Rehabilitation Clinical Practice Guideline Development, Basura, G., Cienkowski, K., Hamlin, L., Ray, C., Rutherford, C., Stamper, G., Schooling, T., & Ambrose, J. (2023). American Speech-Language-Hearing Association Clinical Practice Guideline on Aural Rehabilitation for Adults With Hearing Loss. *American Journal of Audiology*, 32(1), 1–51. https://doi.org/10.1044/2022_AJA-21-00252
- [5] Blazer, D. G., & Tucci, D. L. (2019). Hearing loss and psychiatric disorders: a review. *Psychological Medicine*, 49(6), 891–897. <https://doi.org/10.1017/S0033291718003409>
- [6] Daniel, E. (2007). Noise and Hearing Loss: A Review. *Journal of School Health*, 77(5), 225–231. <https://doi.org/10.1111/j.1746-1561.2007.00197.x>
- [7] Hacker, K., & Wessel, G. L. (1998). School-Based Health Centers and School Nurses: Cementing the Collaboration. *Journal of School Health*, 68(10), 409–414. <https://doi.org/10.1111/j.1746-1561.1998.tb06318.x>
- [8] Hooper, C., Hopf, S. C., & Crowe, K. (2025). The experiences of speech-language pathologists when collaborating with spoken language interpreters, multilingual families, and their children with hearing loss. *International Journal of Speech-Language Pathology*, 1–15. <https://doi.org/10.1080/17549507.2025.2452903>
- [9] Intezar, F., Khan, D., Noreen, H., & Ifthikhar, D. (2019). Awareness and Knowledge of Audiologists Regarding Benefits of Speech-Language Therapy for Hearing Impaired Individuals. *Journal of Riphah College of Rehabilitation Sciences*, 1. <https://doi.org/10.5455/JRCRS.2019070203>
- [10] Kathard, H., Naude, E., Pillay, M., & Ross, E. (2007). Speech-Language Pathology & Audiology Research and Practice. *The South African Journal of Communication Disorders*, 54(1), 5–19.
- [11] Lieu, J. E. C., Kenna, M., Anne, S., & Davidson, L. (2020). Hearing Loss in Children. *JAMA*, 324(21), 2195. <https://doi.org/10.1001/jama.2020.17647>
- [12] Minhas, N., Khan, M., & Fatima, M. (2022). The Knowledge of Allied Health Professionals (AHPs) about Speech Language Pathology/Therapy (SLP/T) in Pakistan. *Pakistan Journal of Humanities and Social Sciences*, 10(4). <https://doi.org/10.52131/pjhss.2022.1004.0292>
- [13] Muñoz, K., & Blaiser, K. (2011). Audiologists and Speech-Language Pathologists: Making Critical Cross-Disciplinary Connections For Quality Care in Early Hearing Detection and Intervention. *Perspectives on Audiology*, 7(1), 34–42. <https://doi.org/10.1044/poa7.1.34>
- [14] Ng, Z. Y., Waite, M., Ekberg, K., & Hickson, L. (2022). Clinicians' and Managers' Views and Experiences of Audiology and Speech-Language Pathology Service Provision for Culturally and Linguistically Diverse Families of Young Children With Hearing Loss. *Journal of Speech, Language, and Hearing Research*, 65(7), 2691–2708. https://doi.org/10.1044/2022_JSLHR-21-00378

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- [15] Peter, B., Dougherty, M. J., Reed, E. K., Edelman, E., & Hanson, K. (2019). Perceived Gaps in Genetics Training Among Audiologists and Speech-Language Pathologists: Lessons From a National Survey. *American Journal of Speech-Language Pathology*, 28(2), 408–423. https://doi.org/10.1044/2018_AJSLP-18-0069
- [16] Richburg, C. M., & Knickelbein, B. A. (2011). Educational Audiologists: Their Access, Benefit, and Collaborative Assistance to Speech-Language Pathologists in Schools. *Language, Speech, and Hearing Services in Schools*, 42(4), 444–460. [https://doi.org/10.1044/0161-1461\(2011/10-0011\)](https://doi.org/10.1044/0161-1461(2011/10-0011))
- [17] Skinner, K., Maxwell, B., Baskerville, A., & Milanović, J. (2022). Audiology, an Important Contributor to Interprofessional Holistic Care: An Interprofessional Collaborative Case Example. *American Journal of Audiology*, 31(1), 204–210. https://doi.org/10.1044/2021_AJA-21-00118
- [18] Waqar, F. (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(III). [https://doi.org/10.47205/plhr.2023\(7-III\)45](https://doi.org/10.47205/plhr.2023(7-III)45)
- [19] Warren, S. E., Lopez, L. C., Anthony, T., & Coco, L. (2024). Communication Public Health: An Integration of Audiology, Speech-Language Pathology, and Public Health. *Journal of Speech, Language, and Hearing Research*, 67(9), 3022–3039. https://doi.org/10.1044/2024_JSLHR-23-00491
- [20] Wood, C., Romano, M., Levites Strekalova, Y. A., Lugo, V. A., & McCormack, W. T. (2021). State of the Practice of Team Science in Speech-Language Pathology and Audiology. *Journal of Speech, Language, and Hearing Research*, 64(9), 3549–3563. https://doi.org/10.1044/2021_JSLHR-21-00072
- [21] 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. <https://doi.org/10.32598/irj.19.2.1335.1>