



Journal of Childhood Literacy and Societal Issues

Peer-reviewed, Open-access, HEC-recognized Y-category

Journal DOI: <https://doi.org/10.71085/joclsi>

P-ISSN: [3006-7863](#) E-ISSN: [3006-7871](#)



Parental Involvement and Its Impact on Speech Intelligibility after Speech Therapy of Children with Hearing Impairment

Syed Kamran Ali Razi¹

Aqsa Mehsood²

Muhammad Shahzad³

¹ Headmaster (Special Education), Govt. Special Education Centre, Shakargarh, Department of Special Education, Punjab, Pakistan.

² Researcher (Graduate), Govt. Training College for Teachers of the Deaf, Lahore, Department of Special Education, Punjab, Pakistan.

³ Speech-Language Pathologist, Rex Medical Center, Lahore.

Correspondence: Aqsa Mehsood, Email: aqsamehsood@gmail.com

Doi: <https://doi.org/10.71085/joclsi.04.01.68>

Article information

Article History:

Received: 2025-05-06

Received in revised form:
2025-05-28

Accepted: 2025-06-08

Published Online: 2025-06-20

Keywords:

Parental Involvement (PI);
Speech Intelligibility (SI);
Hearing Impairment (HI);
Speech Therapy; Family-
centered Intervention; Parental
Training

ABSTRACT

Parental involvement is nowadays crucial in successful curricular and co-curricular programs for children. Similarly, it is impactful in the speech intelligibility of children with hearing impairment after speech therapy. Therefore, the role of parental involvement in speech therapy and intelligibility was of special interest to study. The main objective of this quantitative study was to check the impact of parental involvement on the speech intelligibility of children with hearing impairment after speech therapy. A descriptive survey design was used, involving a sample of 50 parents. Data was collected through a self-developed close-ended questionnaire, which was analyzed using SPSS. Results showed a significant positive correlation between parental involvement and speech intelligibility ($r = 0.535$, $p < 0.001$). Factors such as the degree of hearing loss and time spent on speech exercises had a notable influence. The findings also highlight that active and consistent parental engagement through home practice, emotional support, and collaboration with therapists result in better speech outcomes. Specifically, parents who are trained and actively participate in reinforcing therapy strategies at home tend to have children with better speech intelligibility. This study supported the need of family-centered intervention models, parental training and access to resources in facilitating active parental involvement.



© 2025 by the Authors. Licensee Razi, Mehsood & Shahzad. This article is an open-access distributed under the terms and conditions of the Creative Commons Attribution (CC BY) License <https://creativecommons.org/licenses/by/4.0/>

Introduction

Background of the Study:

Hearing-impaired children often have difficulties in acquiring intelligible speech because hearing impairment, a partial or total loss to detect any sound either by one or both ears can affect their ability to comprehend speech and communicate effectively. While, speech intelligibility reflects the effectiveness of a speaker's communication that how well their speech is perceived by others. In this way, speech therapy intervention assists them in enhancing their ability to communicate effectively.

However, the success of speech therapy intervention is not only dependent on the sessions with a speech therapist. Parental involvement can also play a significant role in supporting the child during this process, which is defined by Fan and Chen (2001) as parents' concern towards children's academic performance, communication with both children and teachers about school, involvement in school activities, and parents imposing school-related rules at home. These are perspectives or aspects of parental involvement that parents can apply in the speech therapy intervention of their children.

Speech therapy helps people to overcome their difficulties in communication and achieve intelligible speech to the possible extent. Similarly, when parents take an active part in speech therapy, they help their children practice speech effectively at home. They also provide emotional support and motivation, which are important for consistent improvement in children. Parents who understand therapeutic goals of their children can better reinforce the techniques and exercises introduced by the therapist. This support assists the child to use new speech skills in daily life.

Research (Carney & Moeller, 1998) has shown that children with hearing impairment get benefit from the treatment given by audiologists and speech-language pathologists. Also, early intervening programs for hearing-impaired individuals have long-lasting positive impact on

their development. In this way, parental involvement or support can boost up this process, leading to higher confidence and better communication in social situations. It makes therapy more effective and helps maintain the progress made during therapy sessions.

Today, parental involvement in their children's speech therapeutic intervention or sessions can be initiated by family-centered intervention services. Like, Tomasello et al. (2010) concluded that providing family-centered services to families of individuals with impairments is an important component of high-quality early intervention. It assists families in developing informed decisions or plans of their children's early intervention process and encourages the professionals to consider the family an integral pillar in children's development. While to support the family-centered interventions by parental training, Giallini et al. (2021) concluded parental training as an essential part of the rehabilitation process of children with hearing impairment, as it assist parents to become active and more responsive in communicating with HI children, and helps in achieving significant progress in child's preverbal and verbal skills.

Objective and Significance of the Study:

The study concentrated on exploring the role of parental participation or involvement in speech therapy sessions of hearing-impaired children. However, parental involvement is of many types, given by Oranga et al. (2023) which includes volunteering at institution, guiding home-based learning, constant communication with institution, participating in decision-making processes, provision of learning resources, creation of safe home-based learning environments and modelling good behavior for children. Moreover, it also examines the parental involvement impacting speech intelligibility after speech therapy of hearing impaired children. It will analyze the outcomes of parent's involvement in speech therapy sessions of hearing-impaired children resulting better speech intelligibility. Studying parents' active participation and support in home-

based therapeutic exercises with their children in achieving intelligible speech.

The purpose of exploring this ongoing parental involvement and support can better assist speech therapists in utilizing the learned skills of individuals with hearing impairment in daily communication, which can result in boosting up the child's confidence and motivation towards speaking clearly. The study is also important to check the correlative impact of parent's involvement in speech therapy and speech intelligibility of hearing-impaired children. It can assist policy makers to organize family-centered intervention and parental training programs for enhancing speech intelligibility of hearing-impaired children. Understanding these aspects will help improve therapy outcomes and provide better support for children with hearing impairments.

Literature Review

While there were numerous research studies (Akellot & Bangirana, 2019; Adesokan & Giwa, 2022; Parveen et al., 2023; Paskaran & Yasin, 2020) on the role of parental involvement in academic achievements of students with hearing impairment, there was a gap in the literature regarding the role of parental involvement in speech therapy and its impact on speech intelligibility of children with hearing impairment. This study was organized to provide the literature and contribute valuable insights to the field.

Parental Involvement

Parental involvement is nowadays considered as an essential factor in successful child care and education programs. For hearing impaired children, it was significantly found by Adesokan and Giwa (2022) that academic achievement of students with hearing impairment are highly influenced by parental involvement (mean = 2.84). While Parveen et al. (2023) concluded parent's involvement (average mean score=1.38) and indicated its high percentage in developing significant impact on children's developmental experience and academic excellence.

As researches (Paskaran & Yasin, 2020; Yadav, 2015) show a strong and significant positive correlation ($p < 0.05$) between parental involvement and academic achievement of hearing-impaired students with regard to level of education, service and income of the parents, there is a study (Mutumburanzou, 2018) demonstrating the parents' role of crucial importance in language acquisition of hearing impaired children. Therefore, this is highlighting the significance of parent's involvement in children's every aspect of developmental milestones and excellence.

Erbasi et al. (2018) indicated the nature of parent's involvement as multifaceted and encompassing a broad range of practices and behaviors in providing intervention to hearing-impaired individuals. "Parents playing the central role" was significant in five themes of the 'nature of parental involvement' which were: (i) parents' back support; (ii) parents as 'case managers'; (iii) parents' consistent concern for child's language acquisition; (iv) parents' advocacy for all hearing-impaired children; and (v) parents serving numerous roles, but at last, they are parents. Hence, showing the multifaceted parental participation as a center of children's speech intervention.

Parental involvement in speech therapy: Impacting speech intelligibility

The role of parental involvement in speech therapy of hearing-impaired children was determined by Pappas et al. (2008) indicating that parental involvement varies across different phases of speech intervention. Most parents were present during assessment (84%) and intervention sessions (80%), but fewer were actively involved in decision-making. While 67% of speech-language pathologists (SLPs) engaged parents in setting goals, only 38% let them finalize goals. However, SLPs strongly encouraged home participation, with 95% regularly assigning home tasks to parents.

Emphasizing parental involvement, Baily (2001) described parental behaviors as the various tasks in which parents take part in their child's intervention

program. These behaviors ranged from basic tasks like admitting their child to sessions, to more active roles like attending therapy sessions and following professional's advices. At a higher level, parents may also engage in decision-making, share ideas with therapists, and support other parents. This highlights the different levels of parental involvement in therapy.

Latest review by Palavi et al. (2025) demonstrated crucial factors of the beliefs and actions surrounding parental involvement like; poverty, religion, socioeconomic status, stigma and manifestation of hearing impairment among minority populations. The development of parental behaviors and practices are significantly determined by family and societal culture. This review highlights the factors affecting parental involvement in the speech therapy intervention or sessions of their hearing-impaired individuals.

Moreover, Alias & Ramly (2021) found five factors on parental involvement in the speech activities of their children at home: i) perceived language acquisition, (ii) emotion, (iii) knowledge, (iv) children's achievements and (v) support. These are the factors motivating parents in continuously performing speech related activities at home. Additionally, speech therapist providing support and training about the conduction of successful speech related activities at home, would help in reinforcing speech acquisition and overcoming children's speech problems.

Kummerer & Reyna (2006) stated the mothers view about the speech and language acquisition of their children, which reported that language development was facilitated by primary parental role including; communication, explanation, questioning, teaching, reading, labeling, singing, and playing with their children. This emphasizes the parents' primary role in home-based speech therapy sessions with their children at home, by defining key elements. While, Pappas et al. (2016) revealed that parents mainly contributed or participated in delivering speech intervention, not in planning, within a therapist-led approach.

Parents valued their role and were satisfied with their involvement in speech therapy sessions.

Watkin et al. (2007) stated that the scores of parental participation rating scale revealed significant positive correlations with language and speech intelligibility scores, specifically for individuals with severe or profound permanent childhood hearing impairment. In this way, Ertmer (2011) stated that the rapid and global use of neonatal auditory screening, maximized the accessibility of parent-child intervening plans, and advanced assistive aids have maximized assurance which current hearing-impaired children can have better speech intelligibility.

Sheikh et al. (2021) concluded that survey on parental awareness showed 33.3% parents (including both father & mother) as 'strongly agreed', and 53.3% as 'agreed' that the speech therapy would be beneficial for their child. While the findings regarding parent's involvement revealed that 46.7% parents as 'agreed', and 33.3% 'strongly agreed' about their child's lively participation in speech therapy process. Moreover, Gibbard (1995) revealed the results showing significantly greater achievement in the expressive language abilities of the experimental group in comparison with control group. So, it was showed that parent-based speech intervention model are effective.

Baudonck et al. (2010) revealed that the pre-lingually hearing-impaired children with cochlear implant (CI) is very close to the normally hearing (NH) children in speech intelligibility, while the hearing-impaired children with hearing aid (HA) still show a decreased mean speech intelligibility. This highlights the parental support regarding the availability of advanced assistive devices for their hearing impaired children in developing their speech clear or intelligible.

Asghar et al. (2021) stated that overall, most parents were not very responsive to the speech therapy needs of their hearing-impaired children with cochlear implant, only 40.55% seeking help from speech-language therapists. Among them, 84.23% continued with speech therapy sessions

for their hearing-impaired individuals. This research also showed a strong correlation between regular speech therapeutic sessions and early speech-language acquisition in children.

Tambyraja (2020) indicated in study that considerable variability in how frequently speech-language pathologists (SLPs) engaged in communication regarding homework completion with the parents of children, but school-based speech-language pathologists (SLPs) were significantly less likely to interact in such follow-up. This study emphasized the varied frequency of involvement by parents in the speech therapy sessions of their children. Nittouer et al. (2020) stated the importance of Parental Language Input (PLI) in the long-term spoken language abilities of hearing-impaired children, but the style or way of input which is most impactful varies depending on the severity of risk for speech and language. This study highlighted the input of speech-language by parental involvement towards their children.

Klatte et al. (2019) concluded that four themes were seen in the experiences of speech-language therapists' (SLTs) with the interaction of parents, including mutual understanding, creating positive correlation between SLT and parent, parental empowerment, and restrictions. While, speech therapists act out a crucial part in engaging parents in speech therapy, training of therapists should be done. Kummerer (2012) stated strategies or plans to implement collaborative, family-centered language intervention with Hispanic parents-children pairs. It included basic strategies like building a trusted connection, appreciating parents as child's expert, developing goals mutually, accommodating parents' tasks, including support in mother language, and encouraging parental guidance, advocacy and empowerment.

Chao et al. (2006) demonstrated that intervention group's children outperformed the control group's children on both tests, indicating family-centered intervention an effective way for advocating parents in identifying and implementing strong solutions for their children's difficulties, especially when done as a professional collaboration. Tabor

(2011) stated parental involvement is crucial throughout speech-language intervention in incorporating the researched based functional speech therapy. It was also illustrated that parents of children with language problems act effectively within therapeutic treatment in many ways by the SLP's guidance. Findings revealed the impact of parent's training, further showed better communication and efficient learning by children when engaging their parents in normal setups. The focus on parental participation all over the therapeutic process can be more crucial when engaging with infants. The recommendation of study about parent's training was made to assess the impact of parental involvement all over the speech-language intervening process.

These studies underline the importance, frequency, need and role of parent's involvement in the speech therapeutic sessions of hearing-impaired children. Also highlighted the impact of parent's involvement on speech intelligibility of these children. While many studies showed the need and importance of family-centered interventions and parental training to increase the functional parental involvement.

Research Questions

- i. What is the role of parental involvement in speech therapy for hearing-impaired children?
- ii. What is the impact of parental involvement on speech intelligibility after speech therapy of hearing-impaired children?

Methodology

Descriptive survey design was applied to investigate the impact of parental participation or involvement in speech therapy and the speech intelligibility of hearing-impaired children after speech therapy. The population for this study was consisted of all the parents of 6 to 12 years old hearing-impaired children who have received speech therapy sessions. A sample of this study was 50 parents of 6 to 12 years old hearing-impaired children from private speech therapy

clinics in Lahore. Purposive sampling technique was utilized in selecting a sample.

Instrument or Research Tool

A self-developed close-ended questionnaire of 5-point Likert scale (Never as '1', Rarely as '2', Sometimes as '3', Often as '4' and Always as '5') was designed after a literature review by researcher under the supervision of a research supervisor. This research tool was consisted of 9 items of demographic information and 20 items related to the parental involvement in speech therapy of hearing-impaired children and the impact of this involvement in speech intelligibility of hearing-impaired children.

The questionnaire's content was given to experts' panel of the field with the help of supervisor. It was validated by special education teachers, speech-language therapists, psychologists and educationists. The reliability was examined on the basis of responses of the 10 teachers of hearing impairment field, in which the internal consistency

was assessed on SPSS. The Cronbach's alpha value was .854. Ten parents (which were not a part of this research) were selected for the pilot testing. A questionnaire was given to each parent to respond to the questions.

Data Collection and Analysis

After validating and pilot testing, the validated questionnaires were sent to the parents of hearing-impaired children in the Google form to fill questions properly. The collected data of the 50 parents was put into the Statistical Packages of Social Sciences (SPSS) for the analysis of collected data.

Results

A self-developed close-ended questionnaire consisted of 20 items related to the study was used to collect data about parental involvement and speech intelligibility of hearing-impaired children. In this way, the T-test and ANOVA was applied to analyze the collected data thoroughly.

Table 1. *t-test applied to Parental Involvement (PI) & Speech Intelligibility (SI)*

	Variable	N	Mean	S.D	Correlations	Sig.
PAIR 1	SI	50	17.70	4.042	.535	.000
	PI		18.14	4.214		

In Table 1, a T-test was used to assess the correlation between parental involvement (PI) and speech intelligibility (SI). The analysis revealed a positively strong and statistically significant correlation between PI and SI ($r = 0.535$, $p < 0.001$).

Table 2.1. *Speech Intelligibility (SI) by Child' age.*

		Sum of Squares	Df	Mean Square	F	Sig.
SI	Between Groups	83.501	2	41.751	2.737	.075
	Within Groups	716.999	47	15.255		
	Total	800.500	49			

Table 2 (2.1, 2.2,...2.6)

One-way analysis of variance (ANOVA) was applied to analyze the collected data regarding parental involvement and speech intelligibility of children with hearing impairment in Table 2 (2.1, 2.2, 2.3, 2.4, 2.5, and 2.6).

Table 2.1 shows that a one-way ANOVA was conducted to examine the effect of child's age on speech intelligibility (SI). The results indicated no

statistically significant difference in SI across different age groups ($F = 2.737, p = 0.075$).

Table 2.2. *Parental Involvement (PI) by Child's age.*

		Sum Of Squares	Df	Mean Square	F	Sig.
PI	Between Groups	172.380	2	86.190	5.807	.006
	Within Groups	697.640	47	14.843		
	Total	870.020	49			

In Table 2.2, one-way ANOVA was performed to analyze the impact of child's age on parental involvement (PI). This analysis revealed a

significant effect of age on PI ($F = 5.807, p = 0.006$).

Table 2.3. *Speech Intelligibility (SI) by degree of hearing loss.*

		Sum Of Squares	Df	Mean Square	F	Sig.
SI	Between Groups	140.005	2	70.003	4.981	.011
	Within Groups	660.495	47	14.053		
	Total	800.500	49			

In Table 2.3, the effect of the degree of hearing loss on speech intelligibility (SI) of children with hearing loss was analyzed using one-way ANOVA. The results showed a statistically

significant difference in speech intelligibility (SI) based on the degree of hearing loss ($F = 4.981, p = 0.011$).

Table 2.4: *Parental Involvement (PI) by degree of hearing loss.*

		Sum Of Squares	Df	Mean Square	F	Sig.
PI	Between Groups	57.859	2	28.929	1.674	.198
	Within Groups	812.161	47	17.280		
	Total	870.020	49			

In Table 2.4, results showed no significant effect of the degree of hearing loss on PI ($F = 1.674, p = 0.198$) after applying a one-way ANOVA to

investigate a relationship between the degree of hearing loss and parental involvement (PI) of children with hearing impairment.

Table 2.5: *Speech Intelligibility (SI) by average time.*

		Sum Of Squares	Df	Mean Square	F	Sig.
SI	Between Groups	177.361	3	59.120	4.364	.009
	Within Groups	623.139	46	13.547		
	Total	800.500	49			

In Table 2.5, one-way ANOVA was employed to determine if the average time spent on speech exercises influenced speech intelligibility (SI). The

analysis revealed a significant effect of average time on SI scores ($F = 4.364$, $p = 0.009$).

Table 2.6: *Parental Involvement (PI) by average time.*

		Sum Of Squares	Df	Mean Square	F	Sig.
PI	Between Groups	71.373	3	23.791	1.370	.264
	Within Groups	798.647	46	17.362		
	Total	870.020	49			

In Table 2.6, the relationship between the average time spent on speech exercises and parental involvement (PI) was also examined using one-way ANOVA. The results indicated no significant effect of average time on PI ($F = 1.370$, $p = 0.264$).

Discussion

The findings align with previous literature emphasizing the significance of parental involvement in the speech therapy of children with hearing impairment. Many studies (Baily, 2001; Erbas et al., 2018; Pappas et al., 2008) have shown that parental participation in speech therapy can positively impact the speech and language clarity of their children. The study further supports the findings by demonstrating a significantly strong correlation between parental involvement and speech intelligibility. When parents take active part in sessions by following home plans and maintain regular communication with therapists, their children show intelligible speech.

The study also highlighted that while parental involvement may vary with the child's age, other factors like degree of hearing loss or duration of therapy do not significantly impact the level of parent's involvement. However, the time spent in therapy did improve speech intelligibility. These results align with the findings of Watkin et al. (2007) and Alias & Ramly (2021), who indicated that both the quality of therapy and parental support play a key role in improving speech outcomes. Moreover, cultural and socioeconomic factors as discussed by Palavi et al. (2025) can affect how much parents involve in therapy. The discussion also reflects on the value of parental training and equipping parents with tools to support their child at home, as mentioned by Kummerer (2012) and Tabor (2011).

Overall, the findings suggested to design therapy programs in which parents can actively involve at all stages. Speech-language pathologists or therapists should work to build strong partnerships

with families by offering clear guidance for home practice and support parents for decision-making in their children's speech therapy.

Limitations and Future Research

This study had some limitations which should be considered for future researches. The sample size was limited and data was collected from a specific group of participants which may not represent all hearing impaired children and their families. The study also relied on self-reported data from parents which may involve personal bias or incomplete responses.

For future research, larger and more diverse samples can be used to better understand the role of parental involvement across different cultures and communities. Studies should also explore the impact of specific types of parental involvement such as home activities, goal setting, and participation in therapy planning. Future research can examine how parental training programs can improve their involvement and lead to better speech outcomes. Long-term studies may also help to measure the lasting impact of parental involvement on children's communication skills.

Conclusion

The findings highlighted the significant role of parental involvement in the speech therapy of hearing impaired children. A strong and statistically significant positive correlation ($r = 0.535$, $p < 0.001$) was detected between parental involvement and speech intelligibility. This supports that parental involvement positively impacts speech intelligibility after speech therapy. It clearly demonstrates that when parents are actively involved (through attending therapy sessions, practicing speech strategies at home, and maintaining communication with therapists), their children show significantly greater progress in developing intelligible speech.

Findings also revealed that parental involvement varies with the child's age ($F = 5.807$, $p = 0.006$), suggesting that age may influence how actively parents involve in the therapy process of their

hearing impaired children. However, the degree of hearing loss ($F = 1.674$, $p = 0.198$) and average time spent in therapy ($F = 1.370$, $p = 0.264$) did not significantly affect parental involvement but the amount of time spent in speech therapy was significantly related to improvements in speech intelligibility ($F = 4.364$, $p = 0.009$). The study also reveals that various elements such as the parent's education level, socioeconomic background, training, and belief in therapy can impact the degree or level of parental involvement.

Overall, these findings show that parental involvement acts out as a crucial factor in enhancing speech intelligibility of hearing-impaired children, regardless of age or hearing loss severity. Therefore, stimulating parental involvement in the speech therapy is essential for improving therapeutic outcomes of hearing-impaired children.

Recommendations

- Speech-language pathologists or therapists should actively involve parents in therapy planning and implementation of their hearing-impaired children. It will help them observe techniques and apply them accurately at home.
- Therapeutic institutions should develop structured and practical training sessions to educate parents about effective speech therapy techniques. Parental training should be prioritized.
- Therapy centers and schools should adopt a family-centered approach in the speech-language intervention of hearing-impaired individuals.
- A use of online tools like mobile apps and virtual sessions will help parents to stay connected with therapists and practice therapy at home.
- Long-term studies are recommended to evaluate the sustained impact of parental involvement over several years, particularly as their children grow older and transition to different educational stages.

- Future researches should focus on comparing different types of parental involvement (e.g., home practice, emotional support, communication modeling) to identify which strategies provide the most improvement in speech intelligibility.

Author Contributions

Syed Kamran Ali Razi: Conceptualization (equal), Methodology (equal), Quantitative Analysis, Writing – original draft, Writing –review & editing

Aqsa Mehsood: Methodology (equal), Analysis, Writing –review& editing

Muhammad Shahzad: Methodology (equal), Analysis, Writing –review& editing

Declaration of Conflicting Interest

The authors declared no potential conflicts of interest with respect to research, authorship, and or publication of this article.

Funding Statement

We did not receive any funding for this project.

Acknowledgement

This research study really acknowledges the healthy participation of all respondents and professionals. It also appreciates the efforts of the journal publishing team named JOCLSI and CCLLL in assisting during the approval process of this article.

References

- Adesokan, A., & Giwa, B. P. (2022). Perceived Factors Influencing the Academic Performance of Students with Hearing Impairment in Inclusive Settings. *International Journal of Academic Management Science Research*, 6(9), 326-33.
- Akellot, J., & Bangirana, P. (2019). Association between parental involvement and academic achievement of deaf children at Mulago school for the deaf, Kampala, Uganda. *African health sciences*, 19(2), 2270-2281. [10.4314/ahs.v19i2.53](https://doi.org/10.4314/ahs.v19i2.53)
- Alias, A., & Ramly, U. (2021, April). Parental involvement in speech activities of speech delayed child at home. In *2nd International Conference on Technology and Educational Science (ICTES 2020)* (pp. 217-222). Atlantis Press. [10.2991/assehr.k.210407.241](https://doi.org/10.2991/assehr.k.210407.241)
- Asghar, A., Dawood, T., Saulain, G., Irum, A., Khan, R. Z., Ch, H. S., & Anwar, N. (2021). Parental compliance for speech therapy of their hearing-impaired children using cochlear implants. *Journal of Fatima Jinnah Medical University*, 15(2), 58-62. <https://doi.org/10.37018/HKZN3939>
- Bailey Jr, D. B. (2001). Evaluating parent involvement and family support in early intervention and preschool programs. *Journal of Early intervention*, 24(1), 1-14. <https://doi.org/10.1177/105381510102400101>
- Baudonck, N., Dhooge, I., & Van Lierde, K. (2010). Intelligibility of hearing impaired children as judged by their parents: A comparison between children using cochlear implants and children using hearing aids. *International Journal of Pediatric Otorhinolaryngology*, 74(11), 1310-1315. <https://doi.org/10.1016/j.ijporl.2010.08.011>
- Carney, A. E., & Moeller, M. P. (1998). Treatment efficacy: Hearing loss in children. *Journal of Speech, Language, and Hearing Research*, 41(1), S61-S84. <https://doi.org/10.1044/jslhr.4101.s61>
- Chao, P. C., Bryan, T., Burstein, K., & Ergul, C. (2006). Family-centered intervention for young children at-risk for language and behavior problems. *Early Childhood Education Journal*, 34, 147-153. <https://doi.org/10.1007/s10643-005-0032->
- Erbasi, Ennur, Nerina Scarinci, Louise Hickson, and Teresa YC Ching. "Parental involvement in the care and intervention of children with hearing loss." *International journal of audiology* 57, no. sup2 (2018): S15-S26. <https://doi.org/10.1080/14992027.2016.1220679>
- Ertmer, D. J. (2011). Assessing speech intelligibility in children with hearing loss: Toward revitalizing a valuable clinical tool. [https://doi.org/10.1044/0161-1461\(2010/09-0081\)](https://doi.org/10.1044/0161-1461(2010/09-0081))
- Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational psychology review*, 13, 1-22. <https://doi.org/10.1023/A:1009048817385>
- Giallini, I., Nicastri, M., Mariani, L., Turchetta, R., Ruoppolo, G., de Vincentiis, M., ... & Mancini, P. (2021). Benefits of parent training in the rehabilitation of deaf or hard of hearing children of hearing parents: A systematic review. *Audiology Research*, 11(4), 653-672. <https://doi.org/10.3390/audiolres11040060>
- GIBBARD, D. (1995). Parental involvement in language intervention: a model. *International Journal of Language & Communication Disorders*, 30(S1), 205-211. <https://doi.org/10.1111/j.1460-6984.1995.tb01667.x>
- Klatte, I. S., Harding, S., & Roulstone, S. (2019). Speech and language therapists' views on parents'

- engagement in Parent–Child Interaction Therapy (PCIT). *International journal of language & communication disorders*, 54(4), 553-564. <https://doi.org/10.1111/1460-6984.12459>
- Kummerer, S. E., & Lopez-Reyna, N. A. (2006). The role of Mexican immigrant mothers' beliefs on parental involvement in speech—Language therapy. *Communication Disorders Quarterly*, 27(2), 83-94. <https://doi.org/10.1177/15257401060270020601>
- Kummerer, S. E. (2012). Promising strategies for collaborating with Hispanic parents during family-centered speech-language intervention. *Communication Disorders Quarterly*, 33(2), 84-95. <https://doi.org/10.1177/1525740109358453>
- Mutumburanzou, P. (2018). The Role of Parents in the Language Development of Children with Hearing Impairment. *Development*, 7(1), 119-128. <http://dx.doi.org/10.6007/IJARPED/v7-i1/3990>
- Nittrouer, S., Lowenstein, J. H., & Antonelli, J. (2020). Parental language input to children with hearing loss: Does it matter in the end?. *Journal of Speech, Language, and Hearing Research*, 63(1), 234-258. https://doi.org/10.1044/2019_JSLHR-19-00123
- Oranga, J., Matere, A., & Nyakundi, E. (2023). Importance and types of parental involvement in education. *Open Access Library Journal*, 10(8), 1-9. <https://doi.org/10.4236/oalib.1110512>
- Palavi, L. A., Holt, E. A. L., & Nosa, V. (2025). A scoping review on the nature of parental involvement among Pacific and minority populations with hearing loss. *Journal of the Royal Society of New Zealand*, 55(3), 721-753. <https://doi.org/10.1080/03036758.2024.2399359>
- Pappas, N. W., McLeod, S., McAllister, L., & McKinnon, D. H. (2008). Parental involvement in speech intervention: A national survey. *Clinical linguistics & phonetics*, 22(4-5), 335-344. <https://doi.org/10.1080/02699200801919737>
- Parveen, Z., Kashif, M., & Abbas, M. (2023). Enhancing Motivation, Interest and Academic Achievement in Students with Hearing Impairment through Parental Involvement: An Action Research Inquiry. *Journal of Development and Social Sciences*, 4(3), 316-328. [http://dx.doi.org/10.47205/jdss.2023\(4-III\)32](http://dx.doi.org/10.47205/jdss.2023(4-III)32)
- Paskaran, T., & Yasin, M. H. M. (2020, July). Parental Support In The Learning Of Students With Hearing Impaired At Home. In *International Conference on Special Education In South East Asia Region 10th Series 2020* (pp. 405-414). Redwhite Press. <https://doi.org/10.32698/GCS-04318>
- Sheikh, N., Saeed, B., ur Rehman, A., Khan, S. G., & Tufail, M. (2021). Awareness of parents of hearing-impaired children about the importance of speech-language therapeutic interventions. *Journal of Fatima Jinnah Medical University*, 15(2), 63-66. <https://doi.org/10.37018/VAUO4413>
- Tabor, L. M. (2011). The effects of parental training on early intervention in speech-language pathology. *Research Papers*, 115.
- Tambyraja, S. R. (2020). Facilitating parental involvement in speech therapy for children with speech sound disorders: A survey of speech-language pathologists' practices, perspectives, and strategies. *American Journal of Speech-Language Pathology*, 29(4), 1987-1996. https://doi.org/10.1044/2020_AJSLP-19-00071
- Tomasello, N. M., Manning, A. R., & Dulmus, C. N. (2010). Family-centered early intervention for infants and toddlers with disabilities. *Journal of Family Social Work*, 13(2), 163-172. <https://doi.org/10.1080/10522150903503010>

- Watkin, P., McCann, D., Law, C., Mullee, M., Petrou, S., Stevenson, J., ... & Kennedy, C. (2007). Language ability in children with permanent hearing impairment: the influence of early management and family participation. *Pediatrics*, 120(3), e694-e701. <https://doi.org/10.1542/peds.2006-2116>
- Watts Pappas, N., McAllister, L., & McLeod, S. (2016). Parental beliefs and experiences regarding involvement in intervention for their child with speech sound disorder. *Child Language Teaching and Therapy*, 32(2), 223-239. <https://doi.org/10.1177/0265659015615925>
- Yadav, S. K. (2015). Parental Involvement in Academic Activities of Children with Hearing Impairment. *Journal of Disability Management and Rehabilitation*, 1(1), 29.