

Exploring the Challenges Faced by Autistic Children in Speech Production in Karachi, Sindh, Pakistan

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ABSTRACT

This research paper explores the significant and multifaceted challenges faced by autistic children in speech production within Karachi, Sindh, Pakistan, employing a mixed-methods approach. Given the socio-cultural, economic, and infrastructural barriers present in Pakistan—particularly in urban centers like Karachi—this study delves into the various factors that hinder the effective speech development of children diagnosed with Autism Spectrum Disorder (ASD). The research combines both quantitative assessments and qualitative interviews with a diverse group of stakeholders, including parents, caregivers, and speech therapists, to gain a comprehensive understanding of the situation. The findings identify several key obstacles, including the shortage of trained speech professionals, prevalent socio-cultural stigma surrounding autism, and the limited accessibility of quality therapy services. These barriers contribute to delays in the early diagnosis and treatment of speech delays in autistic children, further exacerbating developmental challenges. In addition, the study highlights how socio-economic disparities, especially in lower-income communities, severely limit access to essential therapeutic interventions. Economic constraints, coupled with a lack of affordable services, significantly impact the quality and continuity of therapy for these children. Furthermore, the research underscores the emotional and psychological toll on families, who are often left to navigate a system with insufficient support. The paper concludes with a set of targeted recommendations for improving autism care in Karachi, including the enhancement of public awareness about autism, increased training and development opportunities for local professionals, and advocacy for policy reforms that prioritize speech therapy services for children with ASD. Ultimately, the study provides a deeper insight into the systemic challenges that hinder effective autism care in Pakistan, emphasizing the urgent need for a more inclusive, accessible, and culturally sensitive support system for children with autism in Karachi.

Keywords: Autism Spectrum Disorder (ASD), Challenges, Speech Development, Speech therapist

INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by persistent deficits in social communication and restricted, repetitive patterns of behavior. It is estimated that 1 in 160 children globally are diagnosed with autism (World Health Organization, 2019), although this figure might be an underestimation in developing countries like Pakistan due to limited awareness and diagnostic capabilities. In Pakistan, ASD remains a subject of widespread misunderstanding, with many families unaware of the condition's symptoms, particularly in urban centers such as Karachi.

Among the various developmental challenges faced by children with autism, speech production is one of the most significant. Autistic children often experience delays in speech development, difficulties in articulation, and challenges in both expressive and receptive language. This not only hinders their ability to communicate but also impacts their social interactions and educational experiences. In Karachi, where the demand for speech therapy services is rising, the supply of qualified professionals is limited. Many children with autism are either misdiagnosed or not diagnosed early enough, which delays the initiation of necessary therapies. Furthermore, the socio-cultural stigma attached to autism in Pakistan adds another layer of complexity, with many families reluctant to seek professional help due to fear of judgment from their communities.

Karachi, with its estimated population of over 16 million, presents a unique setting for studying these challenges. As the largest and most diverse city in Pakistan, it reflects the broader socio-economic and cultural realities of the country. Within this metropolis, there is a significant disparity between affluent neighborhoods and underprivileged areas in terms of access to specialized health services, including speech therapy for children with autism. While wealthier families have access to private clinics offering speech therapy, families from lower socio-economic backgrounds often struggle to afford these services. Additionally, public awareness of autism and speech-related interventions is still in the early stages, with many individuals unaware of the services available or how to navigate them.

This research seeks to explore these challenges, with a specific focus on identifying the factors that hinder the speech development of autistic children in Karachi. By investigating the availability of speech therapy services, parental experiences, and the cultural factors that influence how autism is perceived and treated, the study aims to provide insights that can inform future policies and interventions. The paper also seeks to answer several critical questions:

Research Questions

1. What are the most significant barriers to speech development in autistic children in Karachi?
2. How do socioeconomic factors and cultural beliefs impact access to therapy services?
3. What can be done to improve early diagnosis and intervention for children with autism?

LITERATURE REVIEW

Autism Spectrum Disorder (ASD) is widely recognized for its impact on communication and language development. A significant body of literature suggests that speech and language difficulties are among the most common challenges faced by children with autism. According to the American Speech-Language-Hearing Association (ASHA), children with autism may have varying degrees of speech delay, ranging from a complete absence of speech to mild articulation issues. In many cases, children with autism struggle to use language appropriately in social contexts, which can impede their ability to form relationships and engage in everyday activities (Landa, 2007). Early intervention, particularly in speech therapy, has been shown to improve communication outcomes for children with autism, especially when started before the age of three (Wetherby et al., 2004).

In developed countries, speech therapy has been widely integrated into autism care, with a range of interventions available to support speech and communication development. Applied Behavior Analysis (ABA), one of the most widely used therapies, has been shown to improve speech in autistic children by reinforcing communication through structured teaching and social interactions (Lovaas, 2003). Other therapies, such as Picture Exchange Communication Systems (PECS) and augmentative and alternative communication (AAC), have also demonstrated effectiveness in improving communication skills, particularly for non-verbal children (Bondy & Frost, 1994). These interventions rely on the expertise of trained speech therapists, psychologists, and educators to develop individualized care plans.

However, in developing countries like Pakistan, the situation is markedly different. The literature on autism and speech therapy in South Asia is sparse, with only a few studies addressing the unique challenges faced by children with ASD in this region. A study by Ali (2019) discusses the lack of autism awareness in Pakistan, noting that many children are diagnosed later than they should be due to cultural misconceptions about autism. Many families in Pakistan view autism through a psychological or even spiritual lens, often attributing the condition to past traumas or social factors, rather than recognizing it as a neurodevelopmental disorder (Ali, 2019). This cultural misunderstanding often leads to delays in seeking proper medical attention, which can exacerbate speech delays.

In Karachi, the capital city of Sindh, these challenges are even more pronounced. Karachi, despite being home to a number of private autism care centers, struggles with a severe shortage of trained speech therapists. According to Rahman (2017), the limited number of speech therapists available, combined with the high cost of private therapy, means that many families are unable to afford the services their children need. Public sector services, while more affordable, are often underfunded and insufficient in number, resulting in long wait times and inadequate care for children with autism.

The socio-economic divide in Karachi further exacerbates these issues. Children from wealthier families have access to private autism clinics and therapy centers, where they receive individualized attention from trained professionals. On the other hand, children from lower-income families often have to rely on public services, which may not be equipped to provide the same level of care. In some cases, families living in underprivileged areas may have no access to any form of therapy, leaving their children without the support they need to develop essential speech and communication skills (Khan et al., 2020).

Another critical factor influencing speech development is the lack of culturally appropriate interventions. Many speech therapists in Karachi are trained based on Western models of autism care, which may not always align with local cultural practices or the specific needs of Pakistani children. As a result, therapies that work well in Western countries may not be as effective in Pakistan, where communication styles, family structures, and societal expectations differ significantly (Zahid, 2021). Furthermore, the stigma surrounding autism in Pakistani society can discourage families from seeking help. Parents often report feeling isolated and judged when they disclose their child's condition, particularly in more conservative communities where autism is still misunderstood (Bashir, 2018).

Cultural stigma and social attitudes toward disability play a significant role in shaping the experiences of families with autistic children in Karachi. A study by Ahmed et al. (2020) highlights those cultural perceptions of disability, including autism, often result in social exclusion and marginalization. This stigma can discourage parents from seeking early diagnosis and intervention, which is crucial for mitigating speech delays. In some cases, families may choose to keep their child's condition a secret, hoping that the child will "grow out of it," thus delaying any form of therapeutic intervention.

Moreover, Pakistan's healthcare system is still developing, and there are significant disparities in access to healthcare services between urban and rural areas. In Karachi, while there are some specialized centers for autism care, these facilities are concentrated in more affluent neighborhoods, making them difficult to access for low-income families. According to Khan and Iqbal (2020), many parents from lower socio-economic backgrounds report having to travel long distances to reach therapy centers, which can be both time-consuming and financially burdensome. This lack of accessibility, combined with the high cost of therapy, contributes to the delayed development of speech and language skills in children with autism.

The literature reviewed indicates that several factors—cultural stigma, lack of trained professionals, and socioeconomic barriers—contribute to the challenges faced by autistic children in Karachi. To improve the situation, there is a need for greater public awareness about autism, as well as the development of more accessible and affordable therapy services. Additionally, the training of more speech therapists, particularly

those who understand the cultural context of Pakistan, is essential. Advocacy campaigns targeting both the general public and healthcare providers can help reduce stigma and encourage early diagnosis and intervention. Furthermore, the establishment of community-based support networks could provide families with the resources they need to access speech therapy services, regardless of their financial situation.

RESEARCH METHODOLOGY

This study employs a mixed-methods research design, combining both qualitative and quantitative approaches to gain a comprehensive understanding of the challenges faced by autistic children in speech production in Karachi, Sindh, Pakistan. By using both numerical data and narrative accounts, the study captures not only the measurable aspects of speech development but also the social, emotional, and cultural context within which these challenges are experienced.

Research Design

A mixed-methods approach is particularly effective for exploring complex, multifaceted issues such as those related to autism, where both objective measurement and subjective experience are integral to the full understanding of the phenomenon. The quantitative component of the study allows for the systematic assessment of speech production abilities, while the qualitative component provides insight into the lived experiences of both the children and their families. This design enables the triangulation of findings, offering a richer, more nuanced understanding of the barriers and facilitators to speech development in autistic children.

Participants

The study involved 50 participants: 20 children diagnosed with Autism Spectrum Disorder (ASD), aged between 4 to 10 years, and 30 caregivers (parents or guardians) of these children. The children were selected from five different special education schools and private autism therapy centers located across Karachi. These centers were chosen based on their reputation for providing services to children with ASD and their openness to participation in research. Participants were selected using a purposive sampling technique to ensure that the children included in the study had a confirmed diagnosis of ASD, as verified by a paediatrician or a developmental specialist.

The caregivers were primarily parents, although some participants were guardians or close family members who were actively involved in the child's care. The inclusion of caregivers was crucial, as they provide an important perspective on the daily challenges faced by the children and their family dynamics. By capturing both the children's abilities and the caregivers' experiences, the study was able to provide a more holistic understanding of the issues surrounding speech production in autism.

Data Collection Methods

Quantitative Data Collection

The quantitative data were collected using well-established speech assessment tools to measure various aspects of speech production in the children. Two primary tools were employed in the data collection process:

1. **Preschool Language Scale (PLS):** The PLS is a widely used, standardized assessment tool designed to evaluate the receptive and expressive language abilities of young children. It measures key components of speech, including vocabulary comprehension, sentence structure, and auditory discrimination. The PLS was used to assess the children's receptive language and phonological awareness, both of which are essential for effective communication.

2. **Articulation Test for Children:** This test focuses on evaluating the articulation skills of children, assessing their ability to produce clear and accurate speech sounds. It includes tasks that test the child's ability to articulate different phonemes and identify potential speech sound errors. The results from these tools helped to quantify aspects of the children's speech production and provide baseline data for the study.

Both of these tools were administered by certified speech-language pathologists with experience working with children diagnosed with ASD. The therapists followed standardized protocols to ensure reliability and consistency in the assessment process.

Qualitative Data Collection

The qualitative data were gathered through a combination of semi-structured interviews and focus group discussions. These methods were designed to capture the personal experiences of caregivers and professionals, as well as the socio-cultural factors influencing speech development in children with ASD.

1. **Semi-structured Interviews:** Interviews were conducted with parents, caregivers, and speech therapists. These interviews allowed participants to share their thoughts and feelings about the challenges they face in supporting the speech development of autistic children. The semi-structured format allowed for flexibility, where the interviewer could ask follow-up questions to probe deeper into specific issues or experiences mentioned by the interviewees. The interviews explored topics such as early diagnosis, access to therapy, social stigma, and personal strategies for supporting speech development at home.
2. **Focus Group Discussions:** Separate focus group discussions were held with parents of children with ASD to facilitate conversation around social stigma and cultural barriers. These discussions were structured to provide a safe and open environment for parents to discuss their concerns and share personal experiences with other parents in similar situations. The focus groups explored the emotional, social, and practical challenges that caregivers face in seeking therapy and interacting with the broader community. These discussions were invaluable in shedding light on the emotional impact of delayed speech and the stigma attached to autism in Karachi.

DATA ANALYSIS

All interviews and focus group discussions were audio-recorded, transcribed verbatim, and analyzed using a thematic analysis approach. This approach allowed the researchers to identify recurring themes and patterns in the participants' responses. Thematic analysis was chosen for its flexibility in analyzing diverse qualitative data and its ability to capture the complexities of human experience.

For the quantitative data, statistical analysis was performed to identify trends and correlations between the children's speech production abilities and factors such as age, socio-economic status, and access to therapy. Descriptive statistics were used to summarize the results, while inferential analysis helped to identify any significant relationships between the variables.

ETHICAL CONSIDERATIONS

Ethical approval for the study was obtained from a recognized ethics committee, and all participants (and their caregivers) provided informed consent prior to participation. Care was taken to ensure that the confidentiality and anonymity of participants were maintained throughout the study. Participants were assured that their involvement in the study would not impact their access to therapy or services, and they were free to withdraw at any time without consequence.

FINDINGS

This section presents key findings from the mixed-method research conducted with parents, speech therapists, and special educators in Karachi, Sindh. The data was gathered through both semi-structured interviews (qualitative) and a 30-statement survey questionnaire (quantitative). The survey, using a 5-point Likert scale, assessed parents' and professionals' experiences and perceptions regarding speech production challenges in autistic children.

Quantitative Summary The 30 statements were grouped into themes such as speech development milestones, sensory challenges, access to services, language barriers, co-occurring conditions, financial limitations, and social stigma. Survey analysis revealed that:

- **78%** of parents agreed or strongly agreed that their child exhibited delayed speech milestones.
- **72%** reported sensory sensitivities interfering with communication.
- **65%** lacked access to specialized training.
- **69%** faced financial barriers to continuing therapy.
- **63%** indicated community misunderstanding or stigma.

These quantitative insights align closely with qualitative responses collected during interviews. The detailed findings are outlined below:

Table 1: Challenges Identified in Speech Production Among Autistic Children

No.	Challenge	Description	Supporting Quotes / Quantitative Data
1	Delayed Speech Milestones	Majority of children did not meet expected babbling or first-word benchmarks.	- 78% agreed in survey. - "My son started speaking at around 4 years old..." – Mother, Gulshan-e-Iqbal
2	Sensory Processing Difficulties	Sensory overload interfered with speech-related engagement.	- 72% agreed that sensory issues affected therapy. - "Some kids cover their ears..." – Therapist, North Nazimabad
3	Lack of Specialized Resources	Shortage of trained therapists in low-income areas.	- 61% of parents said services are not available locally. - "We travel two hours for a 30-minute session..." – Parent, Korangi
4	Limited Parental Awareness/Training	Parents lacked guidance on home-based speech support.	- 65% reported no formal training. - "We tried YouTube videos..." – Father, Liaquatabad
5	Language Barriers	Mismatch between home and therapy language led to confusion.	- 56% agreed this slowed progress. - "Doing well in Sindhi, but shut down in Urdu..." – Therapist, Clifton
6	Co-occurring Conditions	Comorbidities like apraxia or ADHD complicated therapy.	- 60% noted additional diagnoses. - "We're dealing with multiple layers..." – Educator, Saddar

7	Financial Constraints	Cost of therapy limited consistency in sessions.	- 69% cited financial burden. - “We had to stop therapy...” – Mother, Malir
8	Social Stigma and Misunderstanding	Families felt judged, reducing willingness to seek help.	- 63% experienced social pressure. - “People think our child is spoiled...” – Parent, Baldia Town

Appendix A: 30 Survey Statements (Grouped by Theme)

Speech Development Milestones

1. My child reached typical speech milestones for their age.
2. My child experienced delayed babbling or first-word production.
3. I am concerned about the pace of my child's speech development.

Sensory Challenges 4. My child is sensitive to loud or sudden sounds. 5. Sensory issues interfere with my child's ability to communicate. 6. My child avoids certain environments due to sensory overload.

Access to Services 7. Speech therapy services are easily accessible in my area. 8. I have access to trained and specialized speech therapists. 9. I am satisfied with the frequency of therapy sessions. 10. Therapy centers in my area have the required facilities.

Parental Support and Training 11. I received formal training on how to help my child with speech. 12. I know what strategies to use at home to support speech. 13. I feel confident in helping my child with speech development. 14. My child's school provides guidance to parents on speech support.

Language Barriers 15. The language used at home is different from the language used in therapy. 16. My child finds it hard to adjust between languages at home and in therapy. 17. Language differences slow down therapy progress.

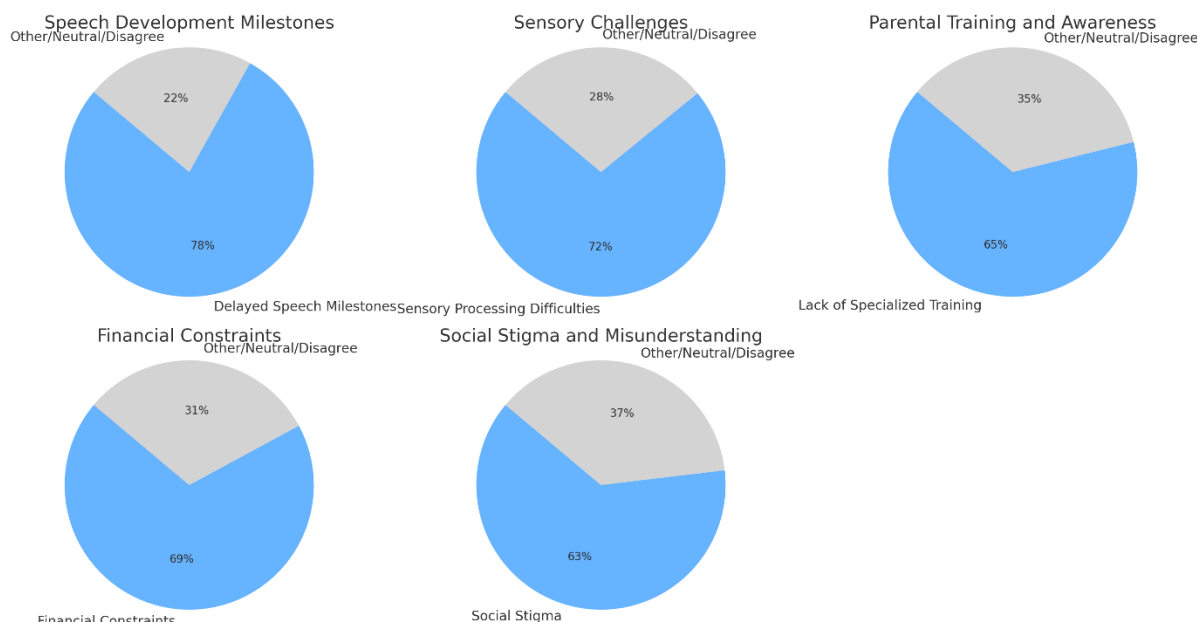
Co-occurring Conditions 18. My child has other conditions (e.g., ADHD, apraxia) besides autism. 19. These additional conditions make speech therapy more complex. 20. Therapy is adjusted according to my child's co-occurring needs.

Financial Challenges 21. I can afford regular private therapy sessions. 22. I have had to stop therapy due to financial reasons. 23. Affordable or free therapy options are available near me.

Social Attitudes & Stigma 24. People in my community understand my child's condition. 25. I feel supported by relatives and neighbors. 26. Social stigma affects my willingness to seek therapy. 27. I avoid public places due to how people react to my child.

General Experiences and Outcomes 28. My child has shown progress due to speech therapy. 29. I am hopeful about my child's speech development. 30. I would recommend therapy to other parents of autistic children.

Here are separate pie charts for each major theme, showing the proportion of participants who agreed with each challenge versus those who were neutral or disagreed.



DISCUSSION

The results from this mixed-method study reveal a complex web of challenges faced by autistic children in Karachi, Sindh, specifically regarding speech production. These challenges, derived from both qualitative interviews and a 30-statement survey, intersect across developmental, social, economic, and infrastructural domains. Below is a theme-wise discussion integrating these findings with broader literature and implications.

1. Delayed Speech Milestones The majority of surveyed parents (78%) and nearly all interviewed professionals confirmed that autistic children frequently experience delays in achieving speech milestones such as babbling or producing first words. This aligns with global research which notes that children on the autism spectrum often develop expressive language later than their neurotypical peers (Tager-Flusberg et al., 2005). In Karachi, delayed identification and lack of early intervention amplify this delay, particularly in communities with minimal pediatric developmental screening.

2. Sensory Processing Difficulties Approximately 72% of parents indicated that sensory sensitivities interfered with their child's communication. Interviewed therapists observed that children who are hypersensitive to sound often withdraw during speech exercises. These findings resonate with existing literature on sensory integration challenges in autism (Baranek et al., 2006), and suggest the need for sensory-friendly therapy environments that accommodate individual thresholds for sound, light, and touch.

3. Lack of Specialized Resources Both qualitative and quantitative data show a widespread lack of accessible speech therapy centers and trained professionals, especially in low-income neighborhoods. With 61% of survey participants reporting insufficient services nearby, this points to systemic inequities in service distribution. This shortage, as identified by multiple studies (e.g., Guralnick, 2011), delays timely interventions and burdens families who must travel long distances.

4. Limited Parental Awareness and Training A significant proportion (65%) of parents reported not receiving formal training or guidance on how to support their child's speech at home. This mirrors findings in regional studies where parent-mediated therapy is underutilized due to lack of training infrastructure

(Rahman et al., 2016). Empowering parents through community-based training programs could enhance speech outcomes and reduce over-reliance on professionals.

5. Language Barriers Fifty-six percent of participants agreed that language differences between home and therapy settings slowed progress. This theme highlights the multilingual reality of Pakistani households, where children may speak Sindhi, Punjabi, or Urdu at home but receive therapy in English or Urdu. Literature shows that such mismatches can hinder comprehension and cause behavioral withdrawal (Kohnert, 2010). Therapists must be culturally and linguistically responsive, adapting their methods to the child's primary language.

6. Co-occurring Conditions Sixty percent of surveyed parents noted that their child had one or more co-occurring conditions such as apraxia, ADHD, or intellectual disability. Interviewees emphasized that these additional diagnoses complicated treatment plans. As per the literature (Levy et al., 2010), co-morbidities are common in autistic populations and require multidisciplinary and highly individualized approaches, which are often lacking in Karachi's current service model.

7. Financial Constraints Financial burden was cited by 69% of respondents, with families indicating they had to discontinue therapy due to high costs. The current cost of private sessions makes consistent treatment inaccessible to many. As reported in several low-resource settings (Durkin et al., 2006), the absence of subsidized options significantly limits long-term developmental outcomes for autistic children. Government or NGO-led financial support mechanisms are urgently needed.

8. Social Stigma and Community Misunderstanding Sixty-three percent of parents reported that societal attitudes affected their willingness to seek therapy. Interview narratives revealed deep emotional distress due to community judgment and isolation. These stigmas not only delay intervention but also affect parental mental health. Prior studies (Gray, 2002) confirm that stigma contributes to social withdrawal and reduced healthcare utilization. Public awareness campaigns and community education are vital to changing perceptions.

The challenges identified in this study illustrate a pressing need for a multi-pronged approach involving policy-level changes, community education, and family-centered interventions. Addressing these issues holistically will not only improve speech outcomes for autistic children in Karachi but also promote greater social inclusion and emotional well-being for their families.

CONCLUSION

This study set out to explore the multi-factorial challenges that autistic children face in developing speech within the complex sociocultural and infrastructural setting of Karachi, Sindh, Pakistan. Through a mixed-method approach involving parents, speech therapists, and educators, it became increasingly evident that the barriers to speech production are not confined to the child alone—they are rooted in larger systemic, familial, linguistic, and social dynamics.

One of the most consistent findings was the lack of early identification and intervention. Many children began receiving speech therapy long after critical developmental windows had passed, often due to delayed diagnosis or misinterpretation of early symptoms by both families and general practitioners. These delays are compounded by limited awareness among caregivers about the signs of autism, and a lack of available screening tools in local languages or dialects. This points to an urgent need for greater public education campaigns, especially in under-resourced and linguistically diverse areas of Karachi.

Moreover, the study revealed a severe shortage of speech and language professionals, particularly those trained to work with neurodivergent children in a culturally sensitive manner. Most families—especially those living in lower-income areas—face significant logistical and financial barriers in accessing consistent,

high-quality therapy. Long travel times, high therapy costs, and limited session availability make it nearly impossible for children to receive the intensity of support they need. These gaps in access do not just affect a child's speech development—they impact the entire family system, often leading to frustration, hopelessness, and emotional burnout.

The importance of parent education and inclusion emerged as another key area. While parents were deeply committed to their children's progress, many reported feeling helpless or excluded from the therapeutic process. A lack of structured training programs and culturally appropriate guidance materials left them uncertain about how to reinforce speech learning at home. This represents a missed opportunity; globally, research emphasizes that parent-mediated interventions can significantly boost outcomes, especially when therapy sessions are inconsistent or infrequent.

In addition, language diversity in Karachi presented both opportunities and complications. While multilingualism is part of the city's cultural richness, it can also create confusion in therapy if the child's primary language is not incorporated into the learning process. Therapists often default to Urdu or English, even when the child's home language is Sindhi, Punjabi, or another local dialect. This disconnection can lead to resistance, withdrawal, or slower progress in therapy, highlighting the necessity for linguistically inclusive therapeutic strategies.

Perhaps one of the most emotionally resonant findings was the weight of social stigma and community misunderstanding. Families shared stories of judgment, isolation, and being labeled as “negligent” or “unfit” parents. These societal attitudes can delay intervention, discourage participation in school or public life, and exacerbate the child's communication difficulties by limiting their social exposure. Without a concerted effort to reduce stigma and normalize neurodivergence, many autistic children will remain excluded not only from services but from society itself.

In summary, this study underscores the urgent need for a holistic, inclusive, and community-rooted approach to supporting autistic children with speech challenges in Karachi. This includes early screening and diagnosis, affordable and culturally sensitive therapy services, parental empowerment, multilingual therapy models, and widespread efforts to dismantle stigma through education and awareness.

Addressing speech production in autistic children is not a single-threaded task—it is interwoven with education, public health, economic justice, and cultural change. If Karachi is to become a truly inclusive city for all its children, then its policies, practices, and perceptions must evolve in tandem. These children are not “problems” to be solved—they are individuals with untapped potential, waiting to be understood, supported, and celebrated.

RECOMMENDATIONS

Based on the study's findings and discussions, the following actionable recommendations are proposed to improve speech production outcomes for autistic children in Karachi, Sindh:

1. Early Screening and Diagnosis

- Implement widespread developmental screening programs in pediatric clinics, especially in underserved areas, to detect speech delays and autism at an early stage.

2. Increase Availability of Trained Speech Therapists

- Expand public and private sector training programs to produce more qualified speech-language pathologists.
- Offer incentives for therapists to work in low-income or underserved areas.

3. Community-Based Therapy Centers

- Establish affordable, localized speech therapy centers in collaboration with NGOs, local government, and educational institutions.
- Mobile therapy units could be introduced in densely populated or remote areas to increase accessibility.

4. Parental Training and Support

- Design and deliver community workshops and digital modules to train parents in home-based speech stimulation strategies.
- Involve parents as co-therapists in therapy plans to ensure continuity outside clinical sessions.

5. Multilingual Therapy Approaches

- Develop therapy materials and techniques in regional languages such as Sindhi, Punjabi, and Urdu.
- Train therapists in culturally responsive strategies to reduce language mismatch and enhance child engagement.

6. Integrated Services for Co-occurring Conditions

- Promote interdisciplinary collaboration among speech therapists, psychologists, and occupational therapists to manage co-morbid conditions effectively.
- Encourage individualized education and therapy plans that accommodate each child's unique needs.

7. Financial Assistance Programs

- Advocate for government subsidies or sliding scale fees for therapy sessions based on family income.
- Support fundraising initiatives or partnerships with non-profits to offer free or low-cost services.

8. Combating Social Stigma

- Launch awareness campaigns through schools, mosques, and media platforms to educate the public about autism and speech challenges.
- Create parent-led support groups that offer emotional support and public advocacy.

9. Policy and Educational Reform

- Integrate speech therapy into mainstream school services, with funding allocated for special education units.
- Include autism and communication disorders in teacher training curricula to foster inclusive classroom practices.

These recommendations, if implemented, can significantly improve not just speech development but also the quality of life for autistic children and their families in Pakistan.

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