

Development of Communication Guidelines for Stutterers

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Abstract

To explore the current effective intervention practices for stuttering in Pakistan. The design is qualitative exploratory. A phenomenological qualitative design was used to investigate the lived experience and expert views of SLPs. Five practitioners with a minimum of five years of clinical practice in fluency disorders were identified by purposive sampling. Semi-structured interviews were used to capture rich data for communication problems, therapy approaches, and key ingredients for guideline development. Interviews were audio-recorded, verbatim transcribed, and analyzed according to Braun and Clarke's six step thematic analysis procedure to produce recurring patterns and key themes. The five key themes found in the analysis were: (1) Communication Challenges, including social, academic, and vocational difficulties; (2) Types of Errors, for example repetitions, blocks, and prolongations; (3) Therapy and Treatment Approaches, highlighting the importance of fluency shaping and counselling; (4) Individual Differences, with emphasis on motivation and home environment; and (5) Expert Views, calling for the creation of self-help, parent, and awareness-based guideline sections. The research generated an evidence-based model of communication recommendations specific to Pakistani stutterers, with a focus on individualized therapy, psychosocial support, and cultural sensitivity. The guidelines could improve the fluency of communication, self-esteem, and social integration of people who stutter.

Keywords: Communication Disorders, Content Analysis, Fluency Shaping, Phenomenology, Qualitative Research, Self-Help, Speech Therapy, Stuttering

Introduction

Stuttering is a complicated disorder of speech fluency that affects more than 70 million people worldwide and has a strong connection with the quality of life of an affected person beyond speech fluency (Li et al., 2023). It is a neurodevelopmental disorder that is manifested through the deviation of the normal flow of speech that is often accompanied by repetitions, prolongations, and blocks and results in significant psychological and social difficulties (Wu, 2023). Although such disfluencies are typical of daily speech, when their frequency and intensity are higher in people with stuttering, they can have an urgent influence on the interactions and the use of voice-activated technologies (Mujtaba et al., 2024). Stuttering is estimated to occur in about 1% of the total population of the world, with demonstrated differences in subpopulations, like children and males, (Ameer et al., 2024) (Lea et al., 2023). Although stuttering is a common disorder, society has not yet developed a thorough grasp of it and technology has not yet created adaptations to the disorder, which can result in great communication and emotional discomfort in the patients (Alnashwan et al., 2023). This void emphasizes a strong necessity to develop elaborate guidelines on the community that will not only enhance the societal awareness and empathy but also help to incorporate the inclusive practices into the technological design and interpersonal communication (Lea et al., 2023) (Coalson et al., 2021). These recommendations are intended to reduce the widespread stigmatization and discrimination that people with stutter frequently experience and thus facilitate conditions in which their communicational requirements will be acknowledged and accommodated (Ghai & Mueller, 2021). In particular, these guidelines would resolve the significant role of stuttering and its influence on the automated services and employment in the first place, where the biases of the automatic speech recognition system often result in sidelining (Mujtaba et al., 2024). Moreover, there are no publicly available and sufficiently annotated datasets of speech of the stutterers, which is a major challenge in creating the accessible automatic speech recognition systems, continuing to limit them in recognition of speech with

disfluency (Liu et al., 2023) (Mujtaba et al., 2024). A research was done Akhtar, S et al (2021) on "Cultural Factors in the Assessment and Treatment of Stuttering". This study looked into how Pakistani culture affects how stuttering is diagnosed and treated. Speech-language pathologists and other specialists who work with people who stammer in Pakistan participated in the study through interviews. The results made clear how important cultural beliefs, norms, and values are in affecting how stuttering is perceived and treated. For stuttering to be effectively treated in the Pakistani cultural setting, the study emphasized the necessity for culturally relevant diagnostic and intervention procedures. A study was done by Arshad et al (2020) on Parental Perception and Attitudes towards Stuttering in Pakistani Children. This study investigated Pakistani parents' perceptions and attitudes about their children's stuttering. The study's mixed-methods approach included both quantitative surveys and in-depth interviews with parents of stuttering children. According to the results, parents' views towards their child's stuttering ranged from supportive to concerned, and they had varying levels of knowledge and comprehension of it. The study emphasized how crucial it is to inform parents about stuttering and offer them the necessary direction and assistance. Stuttering is a big issue in Pakistan, as is the requirement for guidelines for communication to manage it. Pakistan is one of several countries in the world where people suffer from stuttering, a speech impairment. In order to offer suitable assistance and intervention for people who stutter, it is crucial to comprehend the justification for the want for communication guidelines. The first step in promoting societal knowledge and comprehension of stuttering is the need for communication guidelines. Frequently held beliefs and stigma surrounding stuttering result from this condition. In order to change people's perceptions of stuttering as a speech issue rather than a character flaw or weakness, communication guidelines will be established. These recommendations can aid in dispelling misconceptions, lowering discrimination, and fostering an environment that is welcoming and accepting of those who stutter. In order to encourage early detection and assistance for children who stammer, communication guidelines are also essential. Early intervention is essential for effective management because stuttering frequently starts in childhood. Communication guidelines can give parents, carers, and educators the knowledge they need to see the symptoms of stuttering and get prompt medical attention. Positive emotions, avoidant tendencies, and communication problems that could last throughout adulthood can be avoided with early intervention. Thirdly, communication guidelines are essential for instructing speech-language pathologists and other medical practitioners in how to assess and treat stuttering patients using evidence-based practices. These guidelines provide a framework to guarantee that professionals have access to the most recent research, evaluation instruments, and treatment modalities. To ensure that people obtain accurate diagnoses and treatment plans that are customized to their unique needs, communication guidelines assist standardize the evaluation process. Additionally, addressing the psychosocial and emotional effects of stuttering is made easier by guidelines for communication. Social anxiety, low self-esteem, and restrictions on social interaction can all be caused by stuttering. People who stutter can learn coping skills and enhance their general quality of life by implementing recommendations that emphasize fostering self-acceptance, efficient communication techniques, and counselling help. In order to help people who stutter fully engage in society and develop, communication guidelines can also offer advice on how to create supportive environments in the workplace and in educational institutions. Furthermore, the creation of communication guidelines is necessary given the frequency of stuttering in Pakistan. Although there is a lack of accurate information regarding the prevalence of stuttering in Pakistan, estimates from other countries are thought to be compatible with Pakistani data. In order to create culturally appropriate communication standards, it is essential to comprehend the distinct cultural, linguistic, and social aspects that affect stuttering in the Pakistani environment. These recommendations can take into account the particular difficulties and requirements of stutterers in Pakistan, ensuring that intervention methods are successful and current. The promotion of awareness, early detection and intervention, professional speech therapy guidance, treating psychosocial effects, and taking into account the unique context of Pakistan are the main reasons for the need for communication guidelines for managing stuttering in Pakistan. For people who stammer, these recommendations can promote empathy, offer support, and help with efficient communication. By creating communication guidelines, Pakistan may build a more accepting society that values speech variation and gives those who stutter the tools they

need to communicate successfully and confidently. The objective of the research is to explore the current effective intervention practices for stuttering in Pakistan.

Method

A qualitative exploratory design was used to understand deeply the expert's views on building guidelines for communication among people who stutter in Pakistan. Research was carried out at the Department of Speech and Language Pathology, Center for Clinical Psychology, University of the Punjab, Lahore, from March 2022 to February 2023. A phenomenological study aimed to investigate the lived experiences and professional views of speech-language pathologists (SLPs) about successful communication management practices for stutterers. The constructivist research paradigm framed the inquiry, focusing on subjective meaning and the co-construction of meaning between the researcher and the participants. Five licensed SLPs were recruited using purposive sampling. The sample size was determined based on data saturation, which was achieved when no new information or themes emerged during the data analysis. Participants were recruited from public and private settings to promote diversity in clinical experience and exposure.

Inclusion Criteria: Experts with a postgraduate qualification in speech-language pathology, have at least five years of experience in clinical work with fluency disorders, and are currently practicing in clinical or academic environments in Pakistan.

Exclusion Criteria: Experts with less than five years of experience, non-practicing speech therapists for stuttering management, or those who did not want to participate were excluded. Data were gathered using face-to-face semi-structured interviews, each lasting 20–30 minutes, held in agreed settings to provide comfort and privacy. The interview guide comprised open-ended questions to investigate communication difficulties, typical speech errors, therapeutic strategies, and key information to inform guideline development. Written informed consent, including permission for audio recording, was obtained from all participants before data were collected. Anonymity, voluntary participation, and the freedom to withdraw at any point were ensured for participants. Audio sessions were transcribed verbatim shortly after every session. Field notes were also kept to record contextual information as well as nonverbal signals. Data were hand analyzed utilizing Braun and Clarke's six-step thematic analysis framework: familiarization, coding, theme generation, review, definition, and report writing. Iterative reading, condensing, and coding of meaningful units identified patterns. Themes were agreed on after consensus and verification through member checking with participants to check for credibility. Trustworthiness of the data was attained through reflexivity, peer debriefing, and maintaining an open audit trail. The research work was conducted following ethical considerations and was duly approved by the Departmental Doctoral Program Committee (DDPC). Furthermore, the department's Ethical Committee has reviewed and approved the research, confirming that there is no harm in conducting this study.

Results

This research was carried out to create communication guidelines for stutterers, specifically in accordance with Pakistani culture. Interviews with SLP experts were conducted. The type of research was qualitative. The study of the interviews was done using content analysis. Categories and themes were produced as a result of this analysis.

Communication Challenges

All of the experts underscored that stuttering greatly hinders effective communication and affects various areas of life, including social, school, and occupational functioning. Participants pointed out that stuttering clients usually struggle with starting speech, sustaining fluency throughout longer stretches, and typically ending speech. Such interruptions cause avoidance, emotional distress, and decreased involvement in everyday conversation.

One expert clarified:

"Most stutterers flinch at the beginning of a sentence... even when they do have something to say, they shy away from situations in which they may stutter."

Experts also mentioned that communication anxiety and fear of negative judgment make these issues worse, creating a cycle of withdrawal from society. In all interviews, the participants concurred that stuttering goes beyond speech mechanics, impacting confidence, self-esteem, and general quality of

life.

Figure 1



This chart represents the theme of communication challenges associated with stuttering, including the categories mentioned below and their percentages based on the SLP experts' suggestions.

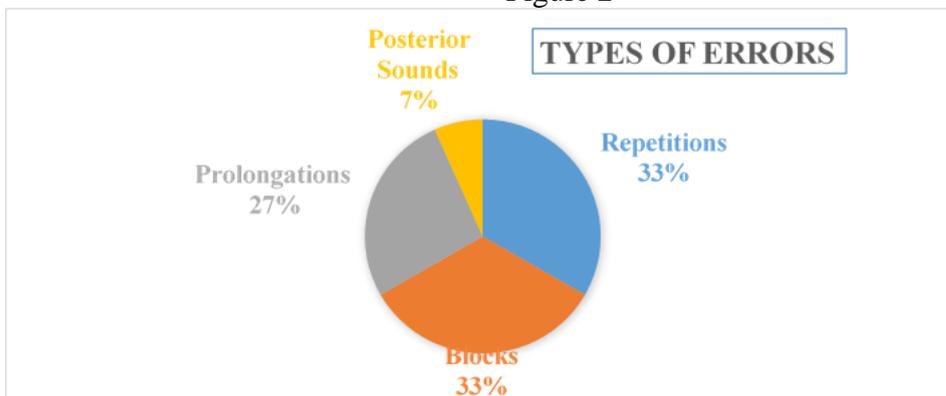
Theme 2: Types of Errors

All five experts universally identified repetitions, blocks, and prolongations as the most frequent speech disfluencies in Pakistani stutterers. These were outlined as central features interfering with fluency and intelligibility. Some participants also mentioned issues with posterior sounds or in high-pressure speech tasks.

"Repetitions and blocking are most common... especially when clients are tense or trying to speak fast," explained one clinician.

Experts emphasized the need to distinguish between these types of errors to create personalized therapy goals and focused exercises within the guidelines.

Figure 2



This chart represents the theme of types of errors in stuttering, which includes repetitions, blocks, prolongations, and posterior sound errors.

Theme 3: Therapy and Treatment Approaches

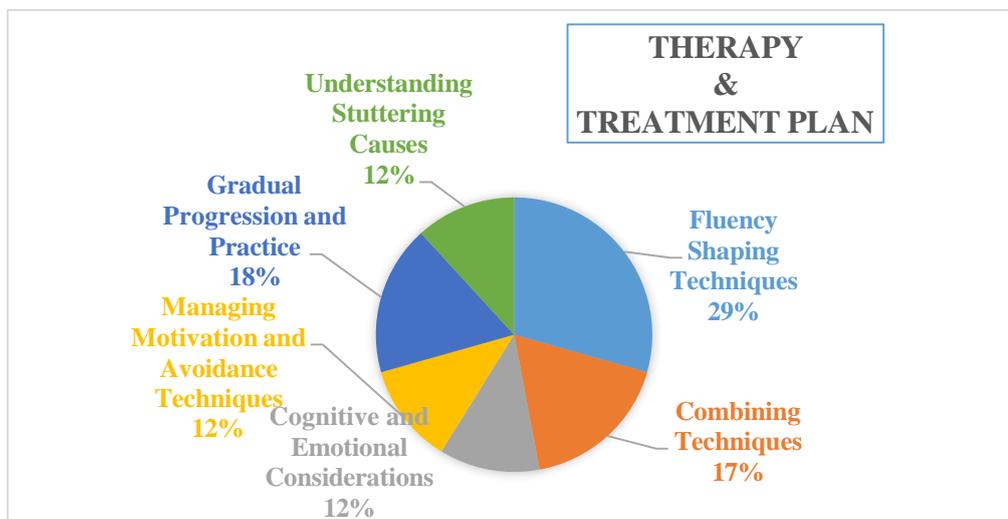
Participants reported on various therapeutic strategies used in treating stuttering, with a high degree of consensus on fluency shaping therapy as the optimal intervention. Strategies like prolonged speech, easy onset, breathing control, and tapping techniques were all frequently cited. Several experts also promoted combining direct and indirect methods, specifically highlighting the requirement to support both speech production and emotional control.

"Treatment must not only involve speech drills but also attack the thoughts and feelings that

cause stuttering to persist," one expert added.

Counseling, motivation development, and environmental manipulation (e.g., classroom support, family attitudes) were deemed to be essential for successful outcomes. Experts also emphasized the importance of follow-up plans and strategies for generalizing gains to ensure that fluency is maintained in real-life situations.

Figure 3



This chart represents the theme of therapy and treatment plans for stuttering, including the suggestions of SLP experts mentioned below, along with their percentages.

Theme 4: Individual Differences

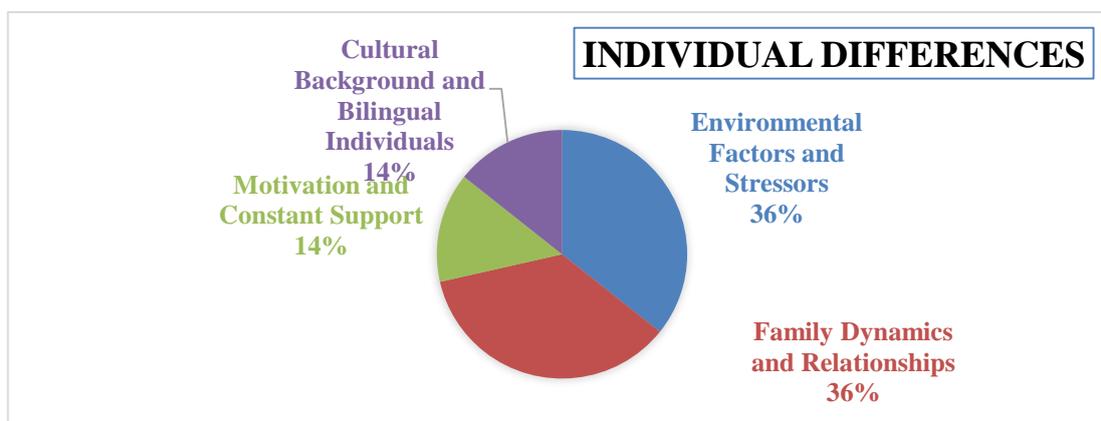
While some professionals felt that cultural and linguistic variation has little impact on therapy success, others emphasized the role of individual differences in determining treatment effectiveness. Motivation level, home environment, personality characteristics, and bilingual language requirements were seen as essential moderating variables.

"Each client is different; what is appropriate for one may not be so for another."

An SLP explained, pointing to the necessity of adaptable, client-based guidelines.

Experts concurred that individualized therapy planning, ongoing counseling, and family education are essential elements of an effective stuttering management model.

Figure 4



This chart represents the theme of individual differences among stutterers, including the categories suggested by the experts mentioned below.

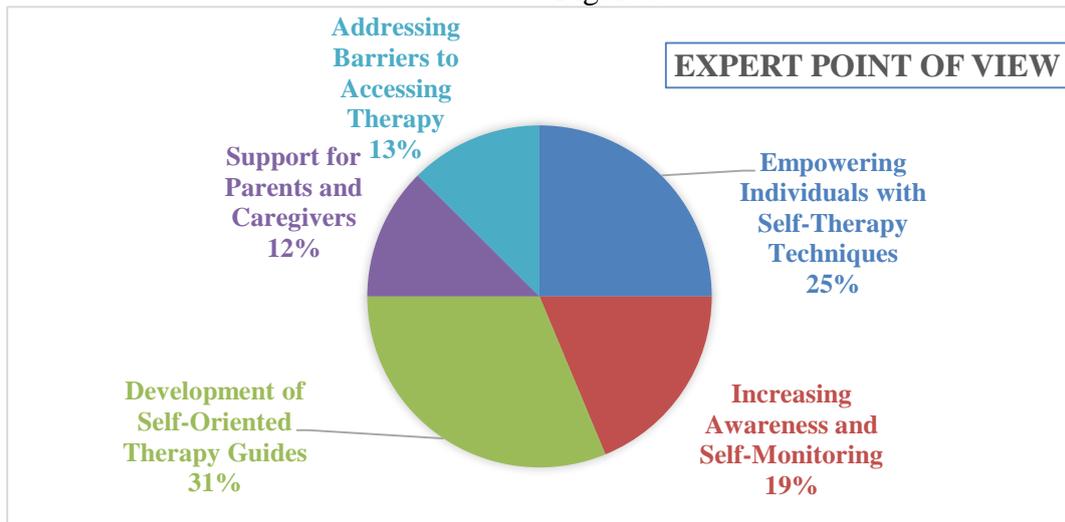
Theme 5: Expert Views for Guideline Development

Experts suggested that the communication guidelines should serve as a handy self-help and reference guide for both caregivers and stutterers. Some of the suggestions made were to develop: A self-help section with daily rules of communication, relaxation, and fluency exercises; A section on parental guidance to communicate supportive behaviors. Preventive guidelines for stuttering relapse prevention and fluency upkeep. One participant suggested:

"It should be a self-help guidebook that not only assists stutterers in therapy but also informs them on how to cope alone."

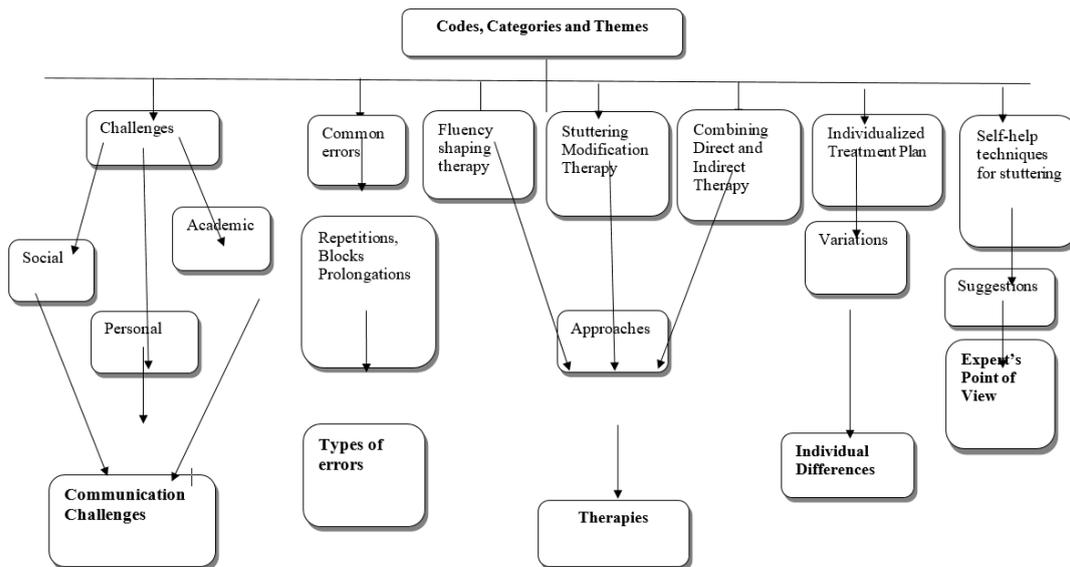
Another added that the guide should include awareness and educational features to minimize stigma and ensure societal integration.

Figure 5



This chart represents the theme of communication challenges associated with stuttering, including the categories mentioned below and their percentages based on the SLP experts' suggestions.

Flow chart was made according to the results



Discussion

The current research was an attempt to address the communication issues faced by Pakistani stuttering

individuals and suggest realistic, evidence-based principles of enhancing speech fluency and general communication efficacy. The results indicated that stuttering has a serious impact on the confidence of an individual to communicate, socialize, and experience emotions. These findings can be compared with the existing literature, which highlights that stuttering is not a single issue of speech fluency, but a complex disorder with psychological, social, and emotional aspects (Bloodstein and Bernstein Ratner, 2014). Repetitions, blocks, and prolongations were the most common found speech disfluencies, which are fundamental features that disrupt smoother speech and coherent speech production (Yaruss and Quesal, 2016). These interruptions usually cause problems with articulation and may lead to frustration, embarrassment, and communication failure. The respondents and professional speech-language pathologists (SLPs) emphasized that these disruptions in fluency are experienced in many different communication settings, including in everyday discussions and in formal speeches, and they have an impact on academic, social and occupational performance. In line with other research literature, the results highlight that stuttering is more than a speech mechanism and has far reaching psychosocial consequences (Craig, 2003; Guitar, 2014) One of the main themes that were identified after interviews with SLPs was that stuttering has a powerful influence on the confidence of communication. Stutterers possess increased anxiety and fear of being negatively evaluated, which in turn can result in the avoidance of social and speaking ones (Hernandez, 2005; Langevin, 2009). These kinds of avoidance can strengthen the communication fear and withdrawal, which makes the circle of fear and more lack of participation. In addition, social stigma and lack of understanding regarding stuttering lead to increased emotional distress, which adds to discrimination and shame. Such stigmatization can further marginalize the stuttering persons and limit their chances of integrating into the social sphere and expressing themselves in the Pakistani context where there is limited awareness on communication disorders. Professional and educational settings were also found to be severely challenging. Some of the regular causes of anxiety amongst stutterers in the classroom setting include presentations, group activities, and interviews (Boyle, 2007; Van Borsel, 2001). The fear of stuttering in such an environment can exacerbate speech disturbances, which affect performance and suppress career growth. This leads to the focus of the study regarding the necessity of specific therapeutic approaches that do not only help to attain speech disfluency management but also to increase self-confidence, coping skills, and the ability to resist communication demanding situations. The most common types of therapeutic techniques that were recommended by SLPs were fluency shaping, one-word breathing, direct and indirect therapy, and structured breathing exercises. Easy onset and gentle voicing were the techniques of fluency shaping that were discovered to be beneficial in minimizing repetitions and extensions (Guitar, 2014). One-word breathing method was especially found helpful in the creation of rhythmical speech and better control of breathing (Smith, 2007). Direct therapy was mainly aimed at the mechanical side of speech production and indirect therapy was aimed at changing emotional and cognitive attitude to stuttering. Both of the methods turned out to be the most effective as they considered both the physical and psychological aspects of stuttering (Onslow, 2009; Packman, 2009). The breathing exercises were also promoted as one of the main elements of therapy as they enhance the ability to coordinate respiration and phonation. The SLPs also stated that regular practice of the controlled breathing assists speech fluency and contributes to stress management in speaking situations (Wuyts et al., 2001). These exercises are combined with fluency shaping and one-word breathing exercise, which make communication patterns more relaxed and confident. A second important thing discovered during the interviews with the experts was that individual differences play a significant role in defining the success of therapy. The nature of disfluencies, age, motivation, emotional reactivity, and cognitive-linguistic capabilities were discovered as the critical variables which affected the results of therapy (Zotan, 2006). The cultural background and bilingualism are also influential factors of the effectiveness of the therapy. Language-specific patterns of fluency and the relationship between language switching and stuttering are two issues that SLPs should take into account in Pakistan, where bilingual communication is widespread. These results are consistent with the current body of knowledge that holds that a client focused and individualized intervention is more effective than a rigid and standardized therapeutic plan (Hernandez, 2005; Vanryckeghem and Brutten, 2005). Formulation of the communication strategies that rely on these results is an important move towards

improving access to therapy and facilitating inclusivity to the Pakistani stutterers. The guidelines proposed include self-therapy methods, involvement of parents and caregivers and accessibility of delivery methods like teletherapy. The promotion of self-therapy will help people to track their improvement, implement fluency strategies on their own, and develop a feeling that they have control over their communicative difficulties (Yaruss & Quesal, 2016). On the same note, the delivery of supportive environment at home through the involvement of parents and caregivers enhances therapeutic benefits and minimizes stress on individuals with stuttering (Guitar, 2014). The presence of obstacles to accessing therapy became a critical matter in the Pakistani context. Most of them have economic limitations or live in regions that do not have specialized services in speech-language pathology. Thus, engagement of low cost/distant therapy solutions, support circles, and educational materials can be included in the guidelines to make the intervention more inclusive and sustainable. These are essential in ensuring that there is fair access to speech therapy, as well as enhancing the general state of living of the stuttering individuals (Hernandez, 2005).

Conclusion

Overall, the research has emphasized that stuttering is a complex disease that needs multidimensional approach to treatment. The combination of evidence-based methodologies, a customized treatment strategy, and convenient delivery systems is the basis of successful communication principles. These guidelines can make a difference in Pakistan by improving speech fluency, emotional resilience, and social engagement of people who stutter by integrating fluency-shaping methods with psychological assistance and self-therapy instruments. The research also emphasizes that these guidelines need to be revised and adapted periodically in accordance with the changing research and clinical practices. These guidelines can still be an effective tool in raising awareness, empathy, and inclusion of people with a stutter by remaining flexible and cultural sensitive.

Limitations of the study

The study has certain limitations that should be acknowledged.

- The sample size and geographical coverage were relatively limited, which may impact the generalizability of the findings.
- Additionally, the reliance on self-reported data and individual perceptions may introduce bias in the results.
- The success of the guidelines heavily relies on the self-awareness and willingness of individuals who stutter to actively engage in self-help strategies.
- The guidelines primarily focus on stuttering as a communication disorder, and their impact on underlying psychological or emotional factors might need further exploration to achieve more comprehensive outcomes.
- Due to the dynamic nature of stuttering, the guidelines may require periodic updates to accommodate evolving research and advancements in the field of speech-language pathology.

Conflict-of-interest Statement

The author has no conflicts of interest to declare. I have seen and agree with the manuscript contents, and there is no financial interest to report. I certify that the submission is original work and is not under review at any other publication.

Authors' Contributions

- **Rida Faqeer Muhammad:** Conceptualization, methodology, data collection, formal analysis, and original draft writing.
- **Nayab Iftikhar:** Supervision, project administration, validation, review, and manuscript editing.
- **Maham Ikram:** Data curation, software, visualization, and writing review and editing.

Each author has read and approved the final version of the manuscript.

References

Alnashwan, R., Alhakbani, N., Al-Nafjan, A., Almudhi, A., & Al-Nuwaiser, W. M. (2023).

- Computational Intelligence-Based Stuttering Detection: A Systematic Review [Review of *Computational Intelligence-Based Stuttering Detection: A Systematic Review*]. *Diagnostics*, 13(23), 3537. Multidisciplinary Digital Publishing Institute. <https://doi.org/10.3390/diagnostics13233537>
- Ameer, H., Latif, S., & Latif, R. (2024). Optimizing Multi-Stuttered Speech Classification: Leveraging Whisper's Encoder for Efficient Parameter Reduction in Automated Assessment. *arXiv (Cornell University)*. <https://doi.org/10.48550/arxiv.2406.05784>
- Bloodstein, O. (2008). *A handbook on stuttering* (6th ed.). Thomson Delmar Learning.
- Bloodstein, O., & Bernstein Ratner, N. (2014). *A handbook on stuttering* (7th ed.). Delmar Cengage Learning.
- Boyle, M. P. (1997). Personal perspectives of people who stutter on the impact of stuttering on their lives and the benefits of therapy. *Journal of Fluency Disorders*, 22(4), 299–318. [https://doi.org/10.1016/S0094-730X\(97\)00020-2](https://doi.org/10.1016/S0094-730X(97)00020-2)
- Boyle, M. P. (2007). Psychological characteristics and perceptions of stuttering of adults who stutter with and without support group experience. *Journal of Fluency Disorders*, 32(4), 253–273. <https://doi.org/10.1016/j.jfludis.2007.03.001>
- Brutten, G. J., & Shoemaker, D. J. (2005). *The modification of stuttering*. Prentice-Hall.
- Coalson, G. A., Crawford, A., Treleaven, S., Byrd, C. T., Davis, L., Dang, L., Edgerly, J., & Turk, A. (2021). Microaggression and the adult stuttering experience. *Journal of Communication*
- Craig, A. (2003). The impact of stuttering on the quality of life of adults who stutter. *Journal of Fluency Disorders*, 28(2), 87–98. [https://doi.org/10.1016/S0094-730X\(03\)00010-7](https://doi.org/10.1016/S0094-730X(03)00010-7)
- Ghai, B., & Mueller, K. (2021). *Fluent: An AI Augmented Writing Tool for People who Stutter*. 1. <https://doi.org/10.1145/3441852.3471211>
- Guitar, B. (2014). *Stuttering: An integrated approach to its nature and treatment* (4th ed.). Lippincott Williams & Wilkins.
- Hancock, K. (2003). The role of speech blocks in the development and persistence of stuttering. *Clinical Linguistics & Phonetics*, 17(7), 523–536. <https://doi.org/10.1080/0269920031000080089>
- Hernandez, A. (2005). Emotional and cognitive aspects of stuttering: Implications for treatment. *Contemporary Issues in Communication Science and Disorders*, 32, 1–9.
- Langevin, M. (2009). The peer responses of children to the stuttering of classmates. *Journal of Fluency Disorders*, 34(2), 122–136. <https://doi.org/10.1016/j.jfludis.2009.05.001>
- Lea, C., Huang, Z., Narain, J., Tooley, L., Yee, D., Tran, D. T., Georgiou, P., Bigham, J. P., & Findlater, L. (2023). *From User Perceptions to Technical Improvement: Enabling People Who Stutter to Better Use Speech Recognition*. 1. <https://doi.org/10.1145/3544548.3581224>
- Li, F., Xiong, Z., Li, X., & Fan, M. (2023). *CoPracTter: Toward Integrating Personalized Practice Scenarios, Timely Feedback and Social Support into An Online Support Tool for Coping with Stuttering in China*. 1. <https://doi.org/10.1145/3544548.3581309>
- Mujtaba, D. F., Mahapatra, N. R., Arney, M., Yaruss, J. S., Herring, C., & Bin, J. (2024). Inclusive ASR for Disfluent Speech: Cascaded Large-Scale Self-Supervised Learning with Targeted Fine-Tuning and Data Augmentation. *arXiv (Cornell University)*. <https://doi.org/10.48550/arxiv.2406.10177>
- Onslow, M. (2009). *The Lidcombe program of early stuttering intervention: A clinician's guide*. Pro-Ed.
- Packman, A. (2009). Theory and therapy in stuttering: A complex relationship. *Journal of Fluency Disorders*, 34(4), 187–200. <https://doi.org/10.1016/j.jfludis.2009.09.003>
- Ratner, N. B. (2008). Current issues in speech fluency and stuttering. *Folia Phoniatica et Logopaedica*, 60(5), 251–258. <https://doi.org/10.1159/000170075>
- Smith, A. (2007). Developmental stuttering: A review of behavioral and biological perspectives. *Trends in Cognitive Sciences*, 11(12), 517–524. <https://doi.org/10.1016/j.tics.2007.10.002>
- Tran, Y., Blumgart, E., & Craig, A. (2003). Subjective distress associated with chronic stuttering. *Journal of Fluency Disorders*, 28(1), 17–31. [https://doi.org/10.1016/S0094-730X\(02\)00118-6](https://doi.org/10.1016/S0094-730X(02)00118-6)

- Van Borsel, J. (2001). Stuttering and bilingualism: A review. *Journal of Fluency Disorders*, 26(3), 179–205. [https://doi.org/10.1016/S0094-730X\(01\)00102-6](https://doi.org/10.1016/S0094-730X(01)00102-6)
- Vanryckeghem, M., & Brutten, G. J. (2005). The Speech Situation Checklist: Self-description of speech difficulty. *Journal of Fluency Disorders*, 30(2), 97–118. <https://doi.org/10.1016/j.jfludis.2005.01.001>
- Wu, S. (2023). “*The World is Designed for Fluent People*”: Benefits and Challenges of Videoconferencing Technologies for People Who Stutter. 1. <https://doi.org/10.1145/3544548.3580788>
- Wuyts, F. L., De Bodt, M. S., & Van de Heyning, P. H. (2001). The dysphonia severity index: An objective measure of vocal quality based on a multiparameter approach. *Journal of Speech, Language, and Hearing Research*, 44(4), 796–809. [https://doi.org/10.1044/1092-4388\(2001\)062](https://doi.org/10.1044/1092-4388(2001)062)
- Yaruss, J. S., & Quesal, R. W. (2016). *Overall assessment of the speaker’s experience of stuttering (OASES): Manual*. Pearson.
- Yuhai, R. (2016). Standardized therapeutic approaches in stuttering management: Evidence-based practices in speech-language pathology. *International Journal of Speech-Language Pathology*, 18(3), 205–214. <https://doi.org/10.3109/17549507.2015.1112839>
- Zotan, D. (2006). Individual differences in stuttering therapy outcomes: Implications for clinical practice. *Journal of Communication Disorders*, 39(5), 350–367. <https://doi.org/10.1016/j.jcomdis.2005.12.001>