



Original Article

Potential Obstacles to Achieve Successful Outcomes Following Stuttering Interventions

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ABSTRACT

Stuttering is a common speech problem affecting all age groups. Speech-language pathologists face barriers in attaining favourable therapeutic results. Identification of these barriers could help attain therapy results. **Objectives:** To identify the perceived barriers that speech-language pathologists encounter in achieving successful outcomes following stuttering interventions. **Methods:** The current qualitative study was conducted at Riphah International University from September 2023 to February 2024. A sample of n=10 speech-language pathologists was taken from Rawalpindi and Islamabad using purposive sampling. The sample included qualified speech-language pathologists of both genders, any age, practicing for at least 05 years with clients having fluency disorder. The study involved semi-structured interviews with the option of face-to-face and online interviews using an interview guide. Information obtained was transcribed followed by thematic analysis. **Results:** The study revealed six major themes including collaborative approaches in intervention and the role of various professionals, Patient engagement and empowerment for successful intervention outcomes, empowering families for effective communication and support in successful intervention, strengthening speech-language pathologists' practices, therapeutic accessibility and holistic approach to stuttering intervention. The findings demonstrated that speech-language pathologists understanding of stuttering especially their unique roles within it, is somewhat restricted due to barriers including i). Diverse perspective held by the speech-language pathologists, ii) Clinical challenges, iii) Systematic and environmental factors and iv) lack of collaboration and support. **Conclusions:** It was concluded that speech-language pathologists perceive the following main barriers i) Diverse perspectives held by the speech-language pathologists, Clinical challenges, Systematic and environmental factors and lack of collaboration and support.

INTRODUCTION

Stuttering or stammering is a speech disorder that features disruptions or interruptions in the flow of speech, characterized by repetitions of words, sounds, or syllables; prolongations of sounds; or blocks in speech. Stuttering can vary in severity and may be associated with secondary behaviours like facial twitching or erratic body movements [1]. Patients with stuttering (PWS) are managed by speech therapy. A speech-language pathologist (SLP) tries to make a PWS fluent and enhance his/ her communication. An SLP may use breathing exercises, relaxation techniques, and controlled speaking. In addition, SLPs

also deal with the psychological and emotional aspects of stuttering to build confidence in a stuttering patient by using different strategies [2]. Stuttering is commonly seen between 3-8 years of age and is usually cured before puberty. It is not uncommon in adulthood. Distinguishing stuttering from dysfluency in infancy can be quite challenging [3]. The beginning of Stuttering and its persistence most likely result from a complicated and multi-faced disease impacted by so many interrelated causes, which may result from a confluence of factors like environment, neurologic and hereditary with stuttering



being a heterogeneous disorder having diverse etiologies [4]. There isn't yet a Food and Drug Administration agency-recognized medicine for treating stuttering, despite some evidence in favor of medicines with dopamine-blocking effects [5]. SLPs rely on methods like syllable stretching, soft starting of speech, and diaphragmatic breathing [6], with barriers perceived by SLPs in stuttering management [7]. Stuttering is a common speech problem affecting all age groups being highly prevalent in pre-school children (5%) with males being more commonly affected [8]. Stuttering though common in younger age groups, may also persist into adulthood with prevalence in adults being estimated around 1% [9]. Though stuttering is low in adulthood, stuttering has a very high lifetime prevalence of around 5 to 10% [10]. A local study reported a prevalence of 11% with a higher prevalence in males in the 5 to 18 years old population [11]. While a 24% prevalence of stammering among speech issues has been reported in another local study [12]. There is a lack of comprehensive data regarding nationwide prevalence in Pakistan, hence, there is a need to research to obtain local data on stuttering in Pakistan [13]. Speech-language pathologists are key in the management of stuttering with skills to evaluate, diagnose and treat stuttering utilizing a wide variety of methods and tactics to cater to stuttering. The skills, knowledge, and advice of SLPs are crucial for stutterers to achieve fluency and speech confidence [14]. Even though SLPs do provide effective therapeutic interventions, however, they may face several barriers to attaining favourable results. Including external factors i.e., patients' motivation level and access to therapeutic services but internal factors as well like bias and belief regarding stuttering, hence it is necessary to understand the SLP's point of view regarding the management of stuttering as well as to enhance therapeutic services [15].

Stuttering remains a persistent communication disorder affecting individuals across all age groups, where effective management depends heavily on speech-language pathologists (SLPs). However, despite the availability of various therapeutic approaches, successful outcomes are often hindered by multiple perceived barriers within clinical, environmental, and systemic contexts. The existing literature has largely focused on treatment techniques and patient outcomes, while limited attention has been given to the lived experiences and professional challenges of SLPs, particularly in low-resource settings like Pakistan. This study aims to identify the perceived barriers that speech-language pathologists (SLPs) encounter in achieving successful outcomes following stuttering interventions. To explore such barriers six step data analysis as framed by Braun and Clarke, 2006 is required including i) Data Familiarization, ii) code generation, iii) Developing themes, iv) Review of themes, v)

determination of the significance of these themes, vi) reporting [16]. The current study is of immense importance since finding barriers and roadblocks will result in overall improvement in patient care and help in research as well as help develop approaches to overcome the hurdles faced by SLPs during stuttering.

METHODS

The qualitative research design was conducted at Riphah College of Rehabilitation and Allied Health Sciences, Riphah International University, and National Institute of Rehabilitation Sciences, Islamabad over 6 months from 1st September 2023 to 29th February 2024, following ethical approval of the Research Ethics Committee vide Reference no RCRAHS-ISB/REC/MS-SLP/01628. The study recruited a sample of n=10 SLPs from Islamabad and Rawalpindi, Pakistan using non-probability purposive sampling. A sample size of n=11 was calculated using the Qualitative Sample Size Calculator [17], with a no-show-up rate=0.10. However, a sample of n=10 was used as one participant later refused consent and dropped out. The sample included SLPs of both genders and any age who have been practicing for at least 05 years with clients having fluency disorder and had a postgraduate diploma or higher qualification in speech-language pathology. While SLPs with a caseload of fluency with any comorbid condition like speech sound disorders, and language disorders were excluded from the study. The interview guide was created in the English language by literature search and tested with two SLPs to assess how the formulated questions led to discussion. It contained easy and comprehensible questions with the probes. Research participants were approached through email and phone calls. They were briefed and provided essential information about the study. Following this, a meeting was arranged with the participants who indicated interest in the study. Informed consent was taken from the interested participants before the interview. Semi-structured interviews were conducted with the option of face-to-face or online depending upon feasibility. The interview included seven questions with probes. These questions focused on the therapist's perceptions regarding successful outcomes following therapy including potential obstacles, the role of a speech therapist, caregiver factors, client factors, and collaboration with other professionals. For each question, ample time was allowed for the participant to give a response and interviews were recorded using a digital recorder after obtaining permission from the participant. Prompts were utilized to obtain essential information. Additionally, written notes were also maintained. Information obtained was transcribed for further analysis of data maintaining the confidentiality of the participant throughout the research. The data were analyzed for

speech therapists' perceptions as regards possible barriers to successful treatment results after the intervention was done as per the following six phase steps for thematic analysis as described by Braun and Clarke after transcribing audio recordings and written text. This was done to ensure that interview content was easy to access for analysis; i) To familiarize, the data records of interview transcripts were read and reread, which helped me understand the depth and breadth of the responses of the SLPs; iii) Thematic coding was conducted to find out recurring themes, their patterns, and key concepts, and codes were assigned to particular data segments that reflected common themes relating to the barriers; iv) The coded segments were categorized into broad categories depending upon the identified themes which involved organizing coded data into categories with meaningfulness and coherence to detect the range of barriers perceived by SLPs; v) the, the data were coded and categorized for interpreting the findings was analyzed, involving delving further into the thematic content, identification of the relationship among various themes, and conclusions were drawn vi) and finally the analyzed content was compiled into comprehensive report highlighting identified themes, important findings and insights gathered from SLPs perceptions. Frequency and Percentages were calculated for demographic variables. SPSS Version 26 was used for data analysis.

RESULTS

The current research to explore the speech therapist's perception regarding potential obstacles to achieving successful outcomes following stuttering intervention utilized a sample of n=10 participants with the majority 6 (60%) female with 5 (50%) having qualified in both SLP and Psychology and remaining 5 (50%) in SLP alone. Most 5 (50%) had experience of 9-11 years (Table 1).

Table 1: Demographic Characteristics of Sample Population (n=10)

Variables	Category	n (%)
Gender	Male	4 (40)
	Female	6 (60)
Masters	SLP and Psychology	5 (50)
	SLP	5 (50)
Experience	5 to 8	1 (10)
	9 to 11	5 (50)
	11 to 15	2 (20)
	16 to 20	2 (20)

The study revealed six (06) major themes including i) collaborative approaches in intervention and the role of various professionals, ii) Patient engagement and empowerment for successful intervention outcomes, iii) Empowering families for effective communication and support in successful intervention, iv) Strengthening SLP practices and addressing societal challenges in Pakistan v)

therapeutic accessibility, vi) holistic approach to stuttering intervention across the lifespan (Table 2).

Table 2: Themes and Subthemes

Themes	Sub-Themes	Codes /Keywords	Representative Quotes
Collaborative Approaches in Intervention and the Role of Various Professionals	Enhancing Communication	SLPs Play the Main Role	SLPS Have to Give Solutions to Stuttering Patients.
	Multidisciplinary Team	Teamwork	Teamwork Makes the Therapy More Effective.
	Bridging the Communication Gap	SLPS Expertise	An SLP Should be an Expert to Build Connections and Conduct Control Sessions
	Fostering A Learning Environment	Teacher's Concern	If the Teacher Motivates the Child and Gives Attention to Him, He Can be cured.
	Understanding the Emotional and Psychological Aspects	Interference of Psychologists	Only Psychologists Can Deal with Those Patients Who Have Stuttering Because of Anxiety
	Demystifying the Roles and Contributions of SLPS, Psychologists, and Other Professionals in Intervention	Medication for Brain Weakness	They Give Them Medicines for Brain Weakness
	Co-Occurring Psychological Conditions	Patient Motivation	If the Patient Is Motivated, Then Definitely He Will Overcome His Disorder.
Patient Engagement and Empowerment For Successful Intervention Outcomes	Encouraging Patient Participation and Active Involvement in Therapy	Motivated Intervention	He Can Overcome This Disorder If He Intentionally Complies with the Guidelines
	Addressing Resistance to Therapy	Duration of Treatment	They Do Not Come Due to Long Duration
	Relapse After Treatment	Relapse	They Relapse After the Treatment
	Engagement and Regularity in Intervention	Chance of Recovery	Regular Follow-Up Improves the Chances of Recovery

Empowering Families for effective communication and support in successful Intervention	Encouraging Patient Participation and Active Involvement in Therapy	Motivated Intervention	He Can Overcome This Disorder If He Intentionally Complies with the Guidelines.
	Addressing Resistance to Therapy	Duration of Treatment	They Do Not Come Due to Long Duration
	Relapse After Treatment	Relapse	They Relapse After the Treatment
	Engagement and Regularity in Intervention	Chance of Recovery	Regular Follow-Up Improves Chances of Recovery
Bolstering SLP Practices	Knowledge Gap	Lack of Knowledge	A Lot of Knowledge Gaps among SLPS Exists
	Lack of Accurate Information About SLPS in Pakistani Society	Muscular Disorder	This Is Only a Disease of the Muscles, Weakness, Or Ghostly Shadow.It Was His Grandfather and Uncle That Caused This Issue
	Advancement in Research and Training Speech-Language Pathology	Seminar	Seminars and Meetings On Specific or Important Cases
	Social Stigmatization	Criticized	Society Mock, Criticize Tags and Make Their Parodies
Therapeutic Accessibility	Financial Distress	Financial Issues	Those People Who Have Financial Issues Cannot Afford Therapy.When the Patient Starts Recovery, ParentsLeave Therapy Because They Cannot Afford It.
	Addressing the Skilled SLP Shortage	Qualified SLPS	In Small Cities, There Are No SLPS. If There Are Then They Are Not Well Qualified
	Enhancing Accessibility of Therapy Clinics	Big Cities Transportation Issues	Parents Who Bring Their Children from Far Away Face Transportation Problems
A Holistic Approach to Stuttering Intervention Across the Lifespan	Age Factor	Early Age	It Is Very Easy to Overcome This Disorder in Early Age as Compared to Adulthood.
	Generalization of Goals Across Natural Settings	Techniques	They Will Not Generalize the Rules in Different Settings, they will not succeed

DISCUSSION

The current study revealed six themes regarding barriers that speech-language pathologists (SLPs) encounter in achieving successful outcomes following stuttering interventions. According to Iqbal *et al.*, there is a significant association between stuttering awareness and self-therapy, which reveals that the patient is better able to cope and find therapy techniques helpful for him, hence a better outcome [18]. Empowering families can result in establishing a strong supporting network. This will also result in developing resilience and bringing positive changes [19]. According to Bishop and High, the visibility of stigma impacts strategies chosen to seek support [19]. Also, it was essential to boost the knowledge of SLPs by applying current research in SLPs for all such disorders [20]. As regards the theme "Holistic approach to stuttering intervention across the lifespan", the current study revealed that compared to adulthood it is much easier to overcome stuttering at an early age, which complies with the literature [21].

The study revealed the SLP's view of the following main barriers: Environmental barriers and systemic support issues exist which according to SLPs affect therapy results. This was also evident from a local study involving an internally displaced population, where the environmental conditions resulted in increased prevalence of stammering and it made their treatment even more

difficult [22]. SLPs also face clinical challenges as they have to cater to avoidance behaviours, manage conditions which co-occur, and treatment needs to be adopted for a diverse populace as well as navigate individualized intervention plans. This complies with literature on issues like overt stuttering behaviour, different views of stutters, and the main outcome for stuttering not established [15]. SLPs also realize the need for specialized training and confidence. A current study revealed that deficient Collaboration and support barriers. This complies with literature where collaboration between PWS and SLP is essential and goals and procedures may be framed and followed by both and support is important and useful in cutting down the negative influence of stuttering [23].

CONCLUSIONS

It was concluded that SLPs perceive the following main barriers i) Diverse perspectives held by the SLPs, Clinical challenges, Systematic and environmental factors and lack of collaboration and support.

Authors' Contribution

Conceptualization: GS

Methodology: AH

Formal analysis: AH

Writing and Drafting: STS

Review and Editing: STS, GS

All authors approved the final manuscript and take responsibility for the integrity of the work

Conflicts of Interest

All the authors declare no conflict of interest.

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