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Exploring the Experience of Stuttering Management and Treatment Adherence in Adults Who Stutter

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Original Article

Abstract

Introduction: Stuttering, as a speech fluency disorder, can profoundly affect quality of life (QoL), social communication, and mental health in adults. Effective stuttering management and treatment adherence are considered key factors in the success of rehabilitation programs for individuals who stutter. This study aimed to explore the experience of stuttering management and treatment adherence in adults who stutter.

Materials and Methods: This qualitative study employed conventional content analysis. Fifteen adults who stutter, aged 18 to 62 years, with a stuttering history of at least 6 months, were purposively recruited using maximum variation sampling. Data were collected through semi-structured, in-depth interviews and continued until theoretical saturation was reached. Conventional qualitative content analysis was employed for data analysis.

Results: Data analysis yielded six categories: self-concept reconstruction and emotional management, behavioral strategies, supportive factors, treatment motivation, continuity challenges, and therapeutic relationship quality. Successful stuttering management results from the interaction between reconstructed self-concept, effective behaviors, and environmental support. Treatment adherence, beyond techniques, depends on the quality of the therapeutic relationship, structural flexibility, and attention to psychosocial barriers.

Conclusion: Stuttering management and treatment adherence among adults who stutter are multidimensional phenomena that depend on individual, social, and therapeutic factors. Integrating these lived experiences into the design of rehabilitation programs can improve treatment adherence and QoL in this population.

Keywords: Stuttering; Stuttering management; Treatment adherence; Qualitative study; Adults

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Introduction

Language, as the most important tool for conveying thoughts and establishing communication, plays a fundamental role in human interactions and contributes to the development of fluent and effective speech (1). Speech comprises various dimensions, including respiration, phonation, articulation, and speech fluency (2). Communication disorders are generally classified into three main domains: speech, language, and hearing disorders. Speech disorders primarily arise from difficulties with speech sound production, speech fluency, and the manner of verbal expression and word production (3). Speech fluency is one of the primary components of normal speech, and any disruption in

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the continuity, rate, timing, or motor planning of speech may lead to disfluency and stuttering (4, 5). Adults who stutter experience involuntary disruptions such as syllable repetitions, speech blocks, sound prolongations, and avoidance of certain words (6). If this disorder persists, therapeutic intervention becomes necessary, and its timely management can prevent the stabilization and chronicity of speech difficulties (7, 8). In this regard, speech-language pathologists play a crucial role in improving the communication and quality of life of individuals who stutter by designing and implementing treatment programs tailored to their individual needs (9).

Stuttering treatment approaches for adults are generally categorized into two groups: those that focus on the cognitive and emotional aspects of stuttering and on managing the stuttering experience, and those that target speech fluency through speech-modification techniques (2). Given the emotional, psychological, and social consequences of stuttering, the management of this disorder is of considerable importance (10). Many individuals who stutter may experience increased anxiety, reduced self-confidence, and feelings of hopelessness (11). Therefore, techniques such as desensitization, acceptance of stuttering, and the reduction of physical and emotional tension help improve individuals' attitudes toward stuttering and reduce its negative impact (12). Simultaneously, evaluating the effectiveness of therapeutic interventions and actively involving individuals in setting treatment goals have become key components of evidence-based practice (13). Studies have shown that integrating speech modification techniques with cognitive-behavioral approaches not only improves speech fluency but also enhances quality of life, increases self-efficacy, reduces social anxiety, and improves individuals' adaptation to stuttering (14). Self-management–based techniques, including strengthening eye contact, self-disclosure about stuttering, the purposeful use of voluntary stuttering, maintaining and consciously monitoring moments of stuttering, reducing and eliminating avoidance behaviors, and increasing frustration tolerance, play an effective role in the management of stuttering and in improving individuals' adaptation to this disorder (15). The success of these approaches is achieved when individuals can establish effective and satisfying communication despite their stuttering (16). However, various factors, including social support, motivation, self-management, treatment acceptance, and adherence to therapy sessions, influence the success of stuttering management, and resistance to treatment may reduce its effectiveness (12, 17).

Treatment adherence is one of the key determinants of the success of therapeutic interventions (18). Individuals who demonstrate greater responsibility in following their treatment program are generally more successful in maintaining treatment gains. In contrast, nonadherence to treatment increases the likelihood of relapse or worsening of stuttering (17). The World Health Organization defines treatment adherence as the extent to which an individual's behavior corresponds to treatment recommendations and lifestyle modifications (19). Regular attendance at rehabilitation sessions not only enhances treatment effectiveness but is also cost-effective (20).

In contrast, nonadherence to treatment is associated with numerous economic, psychological, social, and therapeutic consequences for individuals, their families, and the healthcare system. It may even lead to misinterpretation of the effectiveness of therapeutic interventions (18, 21). Despite the importance of this issue and the numerous studies conducted on treatment adherence in conditions such as diabetes, cancer, chronic diseases, and heart failure (22-25), the existing evidence regarding the experience of treatment adherence among adults who stutter, particularly within the Iranian population, remains limited. Moreover, most previous studies have focused on factors associated with treatment success rather than on individuals' experiences of the treatment process and adherence to it (26).

Given the limited evidence on how adults who stutter experience the treatment process and the factors that influence its continuation or discontinuation, an exploratory study appears necessary. Therefore, the present study employed conventional content analysis to explore and gain an in-depth understanding of the experiences of adults who stutter throughout the treatment process, including stuttering management and treatment adherence.

Materials and Methods

This qualitative study employed a conventional content analysis approach based on the method proposed by Graneheim and Lundman. The study population consisted of adults who stutter living in Tehran, aged 18 to 62 years. The diagnosis of stuttering was established based on the clinical judgment of a speech-language pathologist and a history of receiving speech-language therapy services. No standardized instrument was used to assess stuttering severity in this study, as the aim of the research was to explore the experiences of individuals who stutter rather than to measure stuttering severity. All participants had developmental stuttering, and individuals with acquired or neurogenic stuttering

resulting from neurological disorders or brain injury were excluded from the study. At the time of the interviews, participants were at different stages of the treatment process; some were actively receiving speech-language therapy from their speech-language pathologist, whereas others had discontinued treatment or were not receiving any treatment at the time of the study. None of the participants received therapeutic services from the researcher during the study. Purposive sampling with maximum variation was employed. In the first stage, eligible participants were selected from among clients attending speech-language therapy clinics based on the study inclusion criteria. Subsequently, to recruit additional eligible participants, snowball sampling was used, whereby some participants introduced other individuals who met the inclusion criteria to the researcher. In addition, the researcher simultaneously continued to recruit new participants through speech-language therapy clinics. Throughout the sampling process, the final selection of participants was based on the inclusion criteria and aimed to maximize variation in age, sex, duration of stuttering, treatment history, and treatment status at the time of the interview. Data collection continued until data saturation was reached. After 13 interviews, indications of data saturation were observed; however, to ensure that no new codes would emerge, two additional interviews were conducted. Ultimately, data analysis was conducted using 15 interviews. Data were collected through in-depth semi-structured interviews. Each interview lasted between 60 and 90 minutes. All interviews were conducted in a quiet setting chosen by the participants (a speech-language therapy clinic, a public library, or a home) to provide them with greater comfort and security. Prior to each recorded interview, a few minutes of informal conversation were held to establish rapport and reduce participants' initial anxiety. The interview guide was developed from a literature review, and three speech-language pathology experts confirmed its content validity. Sample interview questions included: "Please describe your experience of living with stuttering," "What has your experience of stuttering treatment been like?" "What factors have contributed to the continuation or discontinuation of your treatment?", and "What factors have made stuttering management easier or more difficult for you?" Follow-up questions were asked according to participants' responses to gain a deeper understanding of their experiences. All interviews were audio-recorded and transcribed verbatim immediately after each session. Data analysis was conducted manually, without software. The data were analyzed using conventional content analysis following the steps proposed by Graneheim and Lundman. These steps included repeated reading of the interview transcripts, identification of meaning units, condensation of meaning units, initial coding, comparison of codes based on similarities and differences, formation of subcategories, and, finally, extraction of the main categories (27). To ensure the trustworthiness of the data, Lincoln and Guba's criteria, including credibility, transferability, dependability, and confirmability, were taken into consideration. Credibility was established through the researcher's prolonged engagement with the data, repeated reading of the interview transcripts, and continuous review of the coding process. Transferability was enhanced through maximum variation sampling and by providing a detailed description of participants' characteristics. Furthermore, meticulous documentation of the data analysis procedures and the coding process enhanced the dependability and confirmability of the findings (28). This study was conducted after obtaining approval from the Ethics Committee of Iran University of Medical Sciences under the ethics code IR.IUMS.REC.1404.131. Prior to the interviews, the study's objectives and procedures were explained to all participants, and written informed consent was obtained from each participant. Participants were also assured that their information would remain confidential, that the audio recordings and research data would be used solely for research purposes, and that they had the right to withdraw from the study at any stage without any consequences.

Results

In this study, the participants' demographic characteristics, including age, sex, educational level, occupation, history of stuttering, stuttering severity, and history of speech-language therapy, were examined. The participants were 15 adults who stutter, aged 18 to 62 years, all of whom had stuttered since childhood. The severity of stuttering was classified into four levels—mild, mild to moderate, moderate to severe, and severe—based on the speech-language pathologist's clinical assessment and the participants' self-assessment. In addition, some participants had previously received speech-language therapy, whereas others had not. The participants' demographic characteristics are presented in Table 1.

Following the analysis of data obtained from in-depth interviews with 15 adults who stutter, 19 subcategories were identified and organized into 6 main categories within two overarching domains: "Stuttering Management" and "Treatment Adherence."

Table 1. Demographic Characteristics of the Study Participants

Sex	Age	Education	Occupation	History of Stuttering	Stuttering Severity*	History of Speech-Language Therapy
Male	23	High school diploma	Content creator	Since childhood	Severe	Yes
Female	39	PhD student	Occupational therapist	Since childhood	Severe	Yes
Male	25	Bachelor's degree	Software engineering instructor	Since childhood	Mild to moderate	Yes
Female	18	High school diploma	Unemployed	Since childhood	Moderate to severe	No
Male	37	Bachelor's degree	Car showroom employee	Since childhood	Mild to moderate	Yes
Male	36	Bachelor's degree	Architect	Since childhood	Mild	Yes
Female	31	Master's degree	Homemaker	Since childhood	Mild to moderate	No
Male	20	High school diploma	Barista	Since childhood	Moderate to severe	Yes
Female	26	Bachelor's degree	Electrical engineering instructor	Since childhood	Mild to moderate	Yes
Male	62	Bachelor's degree	Financial consultant	Since childhood	Mild to moderate	No
Female	28	High school diploma	Jeweler	Since childhood	Severe	Yes
Male	27	Associate degree	Shopkeeper	Since childhood	Severe	Yes
Female	35	Master's degree	Employee	Since childhood	Mild to moderate	Yes
Female	43	Master's degree	University faculty member	Since childhood	Mild	Yes
Male	28	Bachelor's degree	Freelancer	Since childhood	Moderate to severe	Yes

*Stuttering severity was determined based on the speech-language pathologist's clinical assessment and the participants' self-assessments and was not measured with a standardized instrument

The "Stuttering Management" domain comprised three main categories: "Self-Perception and the Internal Consequences of Stuttering," "Emotional Management and Attitudinal Change," and "Behavioral Strategies for Coping with Stuttering." The "Treatment Adherence" domain also comprised three main categories: "Support Network," "Challenges in Initiating and Maintaining Treatment," and "Therapeutic Relationship and Complementary Interventions." The extracted categories and subcategories are presented in Table 2.

Findings Related to the Stuttering Management Domain

The findings in this domain describe the experiences of adults who stutter in managing the speech-related, psychological, and behavioral challenges associated with stuttering. These findings are presented in three categories: Self-Perception and the Internal Consequences of Stuttering; Emotional Management and Attitudinal Change; and Behavioral Strategies for Coping with Stuttering.

Category 1: Self-Perception and the Internal Consequences of Stuttering

Participants reported that stuttering had influenced the way they perceived themselves. Many stated that, throughout different stages of their lives, they experienced a discrepancy between the image they held of themselves and their experience of speaking. Some participants described this experience as a duality between the "ideal self" and the "real self," or between the "fluent self" and the "self who stutters."

One participant stated:

"For years, I thought stuttering was my entire identity; it felt like an innate disability that there was no escaping." (P6)

Another participant described this experience as follows:

"There was one 'me' inside who wanted to speak fluently and confidently, and another 'me' on the outside who got stuck on words. It took me years to realize that my identity was something beyond those moments of getting stuck." (P2)

Table 2. Domains, Categories, and Subcategories Extracted from Adults Who Stutter's Experiences of Stuttering Management and Treatment Adherence

Domain	Categories	Subcategories
Stuttering Management	Self-Perception and the Internal Consequences of Stuttering	Formation of identity and self-concept related to stuttering (the discrepancy between the "ideal self" and the "real self").
		Psychological and emotional consequences (anxiety, shame, and rebuilding self-esteem).
	Emotional Management and Attitudinal Change	Cognitive and emotional strategies (mental focus, relaxation, and acceptance).
		Attitudinal change and personal growth (focusing on success and adaptation).
	Behavioral Strategies for Coping with Stuttering	Personal developmental trajectory and changes in stuttering severity over the lifespan.
		Coping and self-regulation strategies (from avoidance to easy speech).
		Individual barriers to stuttering management (emotional vulnerability, limited social interaction, and cognitive traps).
		Positive treatment outcomes (reduced stuttering, increased social interaction, and independent functioning).
Treatment Adherence	Support Network	The role of supportive factors (self-esteem, assertiveness, and positive self-talk).
		The role of family and social support (parental reactions and peer involvement).
	Challenges in Initiating and Maintaining Treatment	Challenges in generalizing treatment to real-life situations (cognitive and social barriers).
		Structural and access-related barriers (time, cost, insurance, and long travel distance).
		Motivations for continuing treatment (positive experiences, treatment gains, and self-expression).
		Reasons for discontinuing or not initiating treatment (distrust, monotony, and the difficulty of exercises).
	Therapeutic Relationship and Complementary Interventions	Quality of the therapeutic relationship and therapist empathy.
		The role of a complementary psychotherapist.
		Technology and online therapy (preference for online or face-to-face treatment and the role of virtual platforms in treatment adherence).
		Experiences with complementary and alternative interventions (medical treatments, spiritual approaches, music, and self-treatment).

In addition, participants described the psychological and emotional consequences of stuttering. Anxiety before speaking, feelings of shame in communicative situations, and reduced self-esteem were among the experiences that were repeatedly mentioned during the interviews. Some participants also explained that, over time and through successful communication experiences, their self-perception had changed, enabling them to rebuild their self-esteem to some extent.

One participant described the experience of a stuttering moment as follows:

"The thing is, it is like you are out in the middle of a desert and you need your phone, but the signal keeps coming and going... When the signal keeps dropping in and out, it drives your brain crazy, and you think, 'Oh no, the signal has gone again.'" (P1)

Another participant stated:

"The worst part is not the stuttering itself; it is that moment when you want to speak, and you know you are going to get stuck. Your heart starts racing, you sweat, and your mind goes blank. Then comes the embarrassment." (P15)

Category 2: Emotional Management and Attitudinal Change

Participants described various strategies for managing the emotions associated with stuttering and reducing its impact on their daily lives. These strategies included focusing on the content of speech rather than the manner of speaking, remaining calm, accepting stuttering, and using positive self-talk. Some participants reported that applying these strategies helped them feel a greater sense of control in communicative situations.

One participant considered writing about emotions to be an effective strategy for emotional management and stated:

"My therapist held an emotional intelligence class for us... Writing things down helped me a lot in acknowledging my emotions, and it enabled me to understand how to respond in similar situations." (P12)

In addition, some participants referred to a gradual change in their attitudes toward stuttering. They explained that, over time, they had become more focused on their abilities, achievements, and adaptation to life circumstances, and had come to

accept stuttering as part of their life experience.

One participant stated:

"You know, stuttering is not a person's only defining characteristic... But you have to learn that by accepting it, you can learn to live with it." (P7)

Category 3: Behavioral Strategies for Coping with Stuttering

Participants described a wide range of behavioral experiences in managing stuttering throughout their lives. They reported fluctuations in the severity of their stuttering across different stages of life and in various situations, and referred to using a range of strategies to manage it. These strategies ranged from avoiding certain words or communicative situations to using techniques such as easy speech, reducing speech rate, and consciously applying therapeutic techniques.

One participant described the changes in stuttering severity over the course of life as follows:

"Honestly, there have been periods in my life when my stuttering was very severe, and just as much, there have also been times when I experienced very little stuttering." (P10)

Another participant stated:

"Now I no longer avoid certain words. I try to get through them by pausing a little and stretching the sounds. Sometimes I even stutter on purpose just to prove to myself that I am not going to die!" (P5)

Alongside these strategies, participants also identified factors that made it difficult to use them. Fear of being judged by others, difficulty regulating emotions, limited social interactions, and negative thoughts were among the barriers described in their experiences.

One participant stated:

"The first time I tried to use my therapy techniques in front of other people, I felt as though everyone was staring at me and judging me. It took me a long time to gain control over myself and manage the situation." (P8)

Many participants also reported positive treatment outcomes, noting that, in addition to reducing the severity of stuttering, treatment increased their participation in social interactions, enhanced their self-confidence, and improved their independence in communication.

One participant stated:

"During the first ten years of my life, two particular sentences had a profound impact on me... When I speak at conferences without stuttering or with only minimal stuttering, I feel a sense of power and control... Every time I overcome an old fear, my self-confidence grows." (P3)

Findings Related to the Treatment Adherence Domain

The findings in this domain describe participants' experiences regarding the factors influencing the initiation, continuation, and discontinuation of stuttering treatment. These findings are presented under three categories: Support Network, Challenges in Initiating and Maintaining Treatment, and Therapeutic Relationship and Complementary Interventions (Table 2).

Category 1: Support Network

Participants described both personal and social support as important factors in adapting to stuttering and continuing treatment. They explained that characteristics such as self-esteem, assertiveness, and positive self-talk helped them participate in communicative situations with greater confidence, cope more effectively with stuttering-related challenges, and remain motivated to continue treatment.

One participant described this experience as follows:

"The truth is that even with stuttering, you can still find a way to do your job and communicate with others. Once I started speaking despite my stuttering, I realized I should not let it stop me from taking action or getting things done. My own experience has shown me that, through practice and by putting yourself in real-life situations, you can learn to manage it and build self-confidence." (P14)

In addition to individual factors, participants highlighted the role of family and social support. Support from family members, acceptance by those around them, encouragement to continue treatment, and support from friends and peers were among the factors they believed facilitated treatment adherence and created opportunities to apply the strategies they had learned in real-life situations.

One participant stated:

"My mother never finished my sentences for me. She always waited for me to get the word out myself. That patience made me realize that what I had to say was worth listening to." (P7)

Another participant added:

"Family plays a huge role in building self-confidence. My family would tell me, 'You can do it. Go ahead.' Hearing 'You can do it, even with stuttering' has a tremendous impact on a child's mind." (P13)

Category 2: Challenges in Initiating and Maintaining Treatment

Participants described a wide range of barriers to initiating and continuing stuttering treatment. They referred to cognitive and social factors, as well as structural barriers, that influenced their decisions to begin treatment and remain engaged in it. Part of these experiences related to the difficulty of applying therapeutic strategies in real-life situations.

Participants explained that although they were able to use the techniques they had learned in the therapeutic setting, applying these strategies in everyday situations—particularly when experiencing stress, fearing judgment from others, or interacting with unfamiliar people—was challenging.

One participant stated:

"I try to use the techniques, but sometimes I just cannot. If you keep practicing and reminding yourself, it really helps. These techniques have to become part of your life. You should not stop doing your speech therapy exercises, because once you stop, the problem comes back." (P2)

In addition, participants referred to structural barriers that affected treatment continuation. Treatment costs, limited insurance coverage, lack of time, geographical distance, and difficulty accessing specialized services were among the factors that made it difficult for some participants to continue treatment.

One participant stated:

"It would be great if speech-language therapy services were covered by insurance. That would encourage more people to seek help from speech-language pathologists." (P9)

Alongside these challenges, many participants reported that observing positive changes in their speech and communication, as well as experiencing progress during the course of treatment, increased their motivation to continue attending therapy sessions.

One participant described a particular experience as a turning point in treatment and said:

"I remember a work meeting where I would usually stay silent and just listen. That day, for the first time, I shared my opinion. It might not have seemed important to anyone else, but when I walked out of that meeting, I felt that, for the first time in a long while, I had not let my stuttering decide whether I would speak or not. That small moment gave me the motivation to continue therapy." (P14)

In contrast, some participants identified disappointment with treatment outcomes, the repetitive nature of therapy exercises, the difficulty of completing therapeutic assignments, and a decline in hope for improvement as reasons for discontinuing treatment or not returning to therapy.

One participant explained the reason for discontinuing treatment as follows:

"Sometimes I felt that my speech therapy exercises had become too repetitive and boring. I felt like I needed some variety, but I did not know how to make that happen. The problem was that I never brought it up with my speech-language pathologist, and then I suddenly gave up on continuing therapy." (P11)

Category 3: Therapeutic Relationship and Complementary Interventions

Participants reported that the quality of the therapeutic relationship and the use of complementary interventions influenced their experience of treatment. Many emphasized that the therapist's empathy, acceptance, mutual understanding, and ability to create a safe environment were important factors in building trust and fostering active engagement in the therapeutic process. Some also stated that such a therapeutic relationship increased their motivation to continue attending therapy sessions.

One participant described this experience as follows:

"What made me continue treatment was the feeling that each session picked up exactly where the previous one had ended. My speech-language pathologist remembered me, did not forget my concerns, and made me feel that I truly mattered. That was what made me trust them and talk about things I had never told anyone before." (P5)

Some participants also described either receiving psychotherapy alongside speech-language therapy or being referred to a psychotherapist. They considered psychotherapy beneficial for addressing the emotional and psychological aspects associated with stuttering.

One participant stated:

"In my opinion, treatment for a person who stutters should combine speech-language therapy and psychology. It should not focus only on the words—it should also work on my mind and emotions, because a large part of my stuttering is psychological." (P9)

Other participants described their experiences with online therapy. They identified easier access, time savings, and the ability to maintain treatment continuity as advantages of this approach. In contrast, others preferred face-to-face therapy because they felt it facilitated a more effective therapeutic relationship. In addition, several participants reported using complementary and alternative interventions, including pharmacological treatment, spiritual practices, music, and self-treatment.

One participant described their experience with online therapy:

"I am currently receiving online therapy, and it is much easier for me. I have been able to stick with treatment, and I would say I have improved by about 50%, mainly because it is online and I do not have to deal with the difficulties of traveling. If online therapy had not been available, I probably would not even have considered getting treatment." (P11)

Another participant described their experience with complementary interventions:

"At the beginning, before I started treatment, my

anxiety and heart palpitations were really severe. My sister-in-law told me I should see a neurologist. So I did, and now I am under a doctor's care and taking medication. Since I started the medication, my anxiety has improved a lot." (P4)

Discussion

This study was conducted to explore the experiences of stuttering management and treatment adherence among adults who stutter. The findings demonstrated that the experiences of these individuals extend beyond speech disfluency and represent a multidimensional phenomenon that can be understood within two overarching domains: Stuttering Management and Treatment Adherence. Within the Stuttering Management domain, identity-related, emotional, and behavioral dimensions were prominent in participants' experiences. In the Treatment Adherence domain, individual, familial, therapeutic, and structural factors were found to influence the initiation and continuation of treatment.

One of the central findings of the present study was the role of self-concept and identity in the lived experiences of adults who stutter. The findings indicated that, for these individuals, the experience of stuttering extends beyond speech disfluency and is accompanied by a conflict between the "ideal self" and the "real self," anticipatory anxiety, feelings of shame, and avoidance of communicative situations. This finding is consistent with Rogers' (1959) theory of self-concept, which proposes that incongruence between the real self and the ideal self is a major source of emotional conflict and anxiety (29). The experiences of the participants in the present study also suggest that the discrepancy between their ideal self-image and their experience of stuttering contributed to identity conflicts and reduced self-acceptance. Therefore, Rogers' theory of self-concept appears to provide an appropriate framework for explaining the psychological dimensions of the stuttering experience in adults. This finding is also consistent with the results of the study by Alatwi and Ghood (2025), which demonstrated that a substantial proportion of the challenges experienced by individuals who stutter are related not merely to speech disfluency but also to the impact of stuttering on personal identity, social participation, and self-perception (12). It appears that when individuals perceive that their abilities and potential are obscured by their stuttering, the discrepancy between their ideal self-concept and their lived experience becomes greater. This discrepancy may, in turn, affect their self-esteem, social relationships, and personal decision-making. This interpretation is consistent with findings from other studies in the field of stuttering. Gerlach et al. (2021), by introducing the concept of a "concealable stigmatized identity," demonstrated that identity-related constructs, including identity centrality, play an important role in the psychological well-being of individuals who stutter (30). Similarly, in a qualitative study of Spanish adults who stutter, Dean and Medina (2021) reported that the stigma associated with stuttering directly influences the formation of personal identity (31). The consistency of these findings with those of the present study suggests that the reconstruction of identity is a fundamental component of adaptation to stuttering and that this process appears to be a shared experience across different cultural contexts. Accordingly, addressing the identity-related dimensions of stuttering, alongside reducing speech disfluency, may represent an important focus of therapeutic interventions for adults who stutter.

Beyond the identity-related dimensions, the present study's findings indicated that stuttering management is a multidimensional process and not limited to speech techniques alone. Participants reported that acceptance of stuttering, emotional regulation, and changes in attitudes toward the stuttering experience provide the foundation for the effective implementation of behavioral strategies. This finding is consistent with the results of studies by Hart et al. (2024) and Medina and Perez (2022), which have emphasized the central role of acceptance-based interventions in stuttering management (14, 32). Hart et al. (2024) demonstrated that integrating Acceptance and Commitment Therapy (ACT) with traditional fluency-shaping techniques improves psychological flexibility and reduces stuttering-related behaviors (14). Similarly, Medina and Perez (2022), in their qualitative study of 88 adults who stutter, introduced the concept of the "acceptance continuum" and demonstrated that acceptance is a dynamic, gradual process that lays the foundation for behavioral change (32). This finding is consistent with the present study's results, as participants also reported that, as long as they were engaged in a continuous struggle with stuttering, the use of speech techniques was limited in effectiveness for them. However, after accepting stuttering as a part of their life experience, they were able to apply these strategies with greater confidence and consistency. This suggests that acceptance is not merely an outcome of treatment but can also serve as a foundation for the effective use of therapeutic strategies. Therefore, simultaneous attention to the emotional and psychological dimensions of stuttering, alongside training in speech techniques, may enhance the effectiveness of

therapeutic interventions.

Furthermore, the findings of the present study indicated that, from the perspective of adults who stutter, stuttering management extends beyond modifying speech patterns and requires emotional regulation and changes in attitudes toward stuttering. Participants identified strategies such as maintaining calmness, focusing on the message of speech, acceptance, and positive self-talk as effective factors in stuttering management. This finding is consistent with the results of the study by Moazzeni et al. (2025), which emphasized the role of emotional factors in stuttering management (17). Overall, it can be concluded that acceptance of stuttering does not imply surrendering to the disorder; rather, it refers to reducing internal conflicts, increasing psychological flexibility, and adopting a more realistic attitude toward oneself. This process can facilitate better adaptation and more effective management of stuttering. Furthermore, participants reported that the successful application of cognitive and behavioral strategies not only reduced stuttering severity but also enhanced self-confidence, social participation, and self-efficacy in communication. These findings suggest that therapeutic interventions for adults who stutter should extend beyond teaching speech techniques to address self-concept reconstruction, acceptance of stuttering, and emotional regulation to achieve more sustainable and comprehensive treatment outcomes.

The findings of the present study indicated that treatment adherence among adults who stutter is a dynamic and multidimensional process that extends beyond attending therapy sessions or completing speech exercises and is influenced by the interaction of individual, familial, social, therapeutic, and structural factors. Participants described treatment adherence as a continuous process of maintaining motivation, overcoming barriers, and transferring therapeutic skills to real-life situations. This interpretation is consistent with the perspective of Shojaei and Mahmoudi (2021), who consider treatment adherence to be the result of interactions among cognitive, emotional, social, and environmental factors (33).

One of the most important findings of the present study was the central role of support networks in treatment continuation. Participants reported that factors such as self-esteem, assertiveness, positive self-talk, and hope for improvement, along with family support, social acceptance, and encouragement from others, strengthened their motivation to continue treatment. In addition, a therapeutic relationship based on trust, empathy, and mutual understanding contributed to increased treatment commitment and sustained participation in the therapeutic process. The findings of studies by Firoozabadi et al. (1404), Abiz et al. (1401), and Moazzeni et al. (2025) have also emphasized the importance of individual, familial, and therapist support in enhancing treatment adherence (17, 34, 35). Overall, it appears that support networks play an important role in treatment continuation by enhancing psychological safety, increasing self-efficacy, and maintaining motivation.

The findings of this study also demonstrated that multiple challenges accompany treatment adherence. Participants identified difficulties in transferring learned skills to real-life situations, treatment costs, time constraints, insufficient insurance coverage, and limited access to specialized services as the most important barriers to treatment continuation. These findings are consistent with those of Alatwi and Ghood (2025), who indicated that treatment success does not solely depend on learning speech techniques; rather, the ability to apply these skills in daily life and the availability of appropriate conditions for accessing therapeutic services also play a critical role in treatment continuation (12). Furthermore, experiencing progress during treatment, increased self-confidence, improved social relationships, and observing the effectiveness of interventions were among the most important factors that strengthened motivation to continue treatment. In contrast, disappointment with treatment outcomes, the repetitive nature of therapy sessions and exercises, and perceptions of treatment ineffectiveness were among the factors that led to reduced adherence or treatment discontinuation. These findings indicate that maintaining motivation to continue treatment depends not only on individual characteristics but also on the quality of the therapeutic experience and on individuals' perceptions of treatment effectiveness.

Another important finding of the present study was the role of therapeutic relationship quality, complementary interventions, and technology use in treatment adherence. Participants emphasized the importance of therapist empathy, respect, active involvement, and the establishment of a trust-based therapeutic relationship, a finding consistent with the results of Moazzeni et al. (17). The development of such a relationship appears to provide the sense of safety and trust necessary for individuals' active participation in the treatment process and strengthens treatment continuation. In addition, some participants considered using psychotherapy, spiritual approaches, and other supportive interventions alongside speech-language therapy beneficial for better management of the emotional and psychological dimensions of

stuttering. This finding is consistent with the results of Moniga et al. (2019) (36). In addition, many participants considered online therapy a positive experience due to reduced geographical limitations, time efficiency, and improved access to services. However, some participants still preferred face-to-face therapy because they perceived it as more effective for establishing communication with the therapist.

Overall, the findings of the present study indicate that treatment adherence among adults who stutter results from the interaction of individual, familial, social, therapeutic, and structural factors. Accordingly, interventions that, in addition to teaching speech skills, focus on strengthening support networks, establishing effective therapeutic relationships, addressing the psychological dimensions of stuttering, and reducing barriers to accessing therapeutic services may provide a foundation for improving treatment adherence and enhancing treatment outcomes in these individuals. Furthermore, the findings of this study highlight the necessity of adopting a multidimensional, person-centered approach to stuttering management that addresses speech-related, psychological, and social dimensions simultaneously.

Limitations

One limitation of this study is that the findings are based on the lived experiences of 15 adults who stutter within the cultural and social context of Iran. Therefore, although sampling continued until data saturation was achieved, the transferability of the findings to other cultural contexts and healthcare systems should be considered with caution. Furthermore, the data were collected from participants' personal narratives and perceptions; thus, they may have been influenced by individual differences in how experiences are expressed, events recalled, and personal interpretations of the treatment process.

On the other hand, despite efforts to select participants with diverse demographic characteristics and treatment experiences, the perspectives of individuals who were unwilling to participate in the study or who had different experiences of stuttering management and treatment adherence may not have been reflected in the findings. However, the diversity of participants in terms of age, sex, stuttering severity, treatment history, and occupational status, along with sampling until data saturation and the use of strategies to enhance research trustworthiness, contributed to strengthening the credibility of the findings.

Recommendations

Based on the findings of this study, future research is recommended to examine the effectiveness of interventions that, in addition to teaching speech techniques, focus on acceptance of stuttering, emotion regulation, self-concept reconstruction, and enhancement of communication self-efficacy. Furthermore, considering the prominent role of support networks in treatment continuation, the design and evaluation of family-centered interventions and peer-support-based programs may be valuable directions for future studies.

Moreover, investigating the effectiveness of integrated speech-language and psychological intervention models, as well as comparing face-to-face, online, and hybrid treatment approaches to improve treatment adherence, may provide valuable practical evidence to guide service delivery for adults who stutter. In addition, conducting quantitative and longitudinal studies to examine the relationships among the factors identified in this study, as well as developing and validating specific instruments to assess treatment adherence in individuals who stutter, may advance knowledge in this field and inform the design of evidence-based interventions.

Conclusion

This study was conducted to explore the experiences of stuttering management and treatment adherence among adults who stutter and demonstrated that successful stuttering management and sustained treatment adherence are multidimensional and dynamic processes that extend beyond speech fluency modification. The findings indicated that acceptance of stuttering, self-concept reconstruction, emotional regulation, use of behavioral strategies, access to support networks, quality of the therapeutic relationship, and adequate access to treatment services are among the most important factors influencing stuttering management and continuation of treatment.

In contrast, barriers such as social stigma, emotional difficulties, challenges in generalizing therapeutic skills to real-life situations, economic constraints, and inadequate access to services may disrupt the treatment process and increase the likelihood of treatment discontinuation. The findings of this study highlight the necessity of adopting a comprehensive, person-centered, and interdisciplinary approach to treating adults who stutter—one that addresses not only speech techniques but also the cognitive, emotional, social, and environmental dimensions of the stuttering experience.

Furthermore, strengthening the therapeutic alliance, promoting active family involvement, incorporating psychological services alongside speech-language

therapy, and developing innovative service delivery methods, such as online therapy, may improve treatment adherence and enhance communication outcomes and quality of life among these individuals. Given that qualitative studies on treatment adherence among adults who stutter, particularly within the Iranian context, remain limited, the findings of this study may provide deeper insight into the lived experiences of these individuals and serve as a foundation for designing more comprehensive therapeutic interventions, developing supportive programs, and conducting future research in this area.

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Conflict of Interest

The authors did not have a conflict of interest.

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