Original Article

Comparative Study in Adults who Stutter with and without Social Anxiety

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ABSTRACT

Background: Stuttering, a complex fluency disorder, often coexists with social anxiety, impacting individuals' communicative competence and quality of life. The intersection of these conditions can exacerbate the challenges faced by adults who stutter, influencing their social participation, educational and professional success, and social status.

Objective: The study aimed to elucidate the relationship between stuttering and social anxiety in adults and to determine the extent to which social anxiety affects stuttering severity across various social situations.

Methods: A cross-sectional analysis was conducted with 80 adults, split into two groups based on the presence (30 participants) or absence (50 participants) of social anxiety. Data were collected on stuttering frequency and severity during common social interactions such as using a telephone, eating, and speaking in public. Stuttering severity was classified as none, mild, moderate, or severe. Statistical analysis was employed to compare the prevalence of stuttering across different social scenarios between the two groups.

Results: The presence of social anxiety was associated with higher instances of no stuttering during telephone use (86.7%), small group activities (60%), and eating in public (56.7%). In contrast, participants without social anxiety showed higher rates of mild stuttering in these situations (62%, 68%, and 50%, respectively). Social anxiety did not correlate with moderate or severe stuttering in any assessed situation.

Conclusion: Social anxiety in adults who stutter correlates with a reduced frequency of stuttering in certain social situations. However, the absence of social anxiety is associated with an increased occurrence of mild stuttering. These findings suggest that social anxiety may have a mitigating effect on stuttering severity, highlighting the need for integrated clinical approaches to address both speech and psychological aspects of stuttering.

Keywords: Stuttering, Social Anxiety, Fluency Disorders, Speech, Communication, Cross-Sectional Studies, Adult

INTRODUCTION

Stuttering, a speech disorder, is marked by involuntary disruptions in speech, severely impacting effective communication. Originating in early childhood during speech and language development, stuttering is characterized by unintended interruptions like syllable repetitions, prolongations, sound blockings, and word substitutions or avoidances (1). About 4-5% of children are affected, with a typical onset between ages 2 and 5 (2). Notably, recent studies reveal that 8.5% of 3-year-olds experience stuttering, with the cumulative incidence rising to 11% by age 4, though only 6.3% demonstrate natural recovery in the first-year post-onset (2, 3).

The responsiveness to stuttering treatments diminishes over time, often resulting in a persistent issue into adulthood. This chronic nature of stuttering is speculated to be interlinked with social anxiety disorders (4). Negative experiences stemming from stuttering, such as bullying, social exclusion, and peer victimization, are common in early childhood (5-7). These adversities can lead to shame, low self-esteem, withdrawal, and poor academic performance, factors similarly associated with social anxiety. Indeed, adults who stutter have reported retrospective adverse impacts of stuttering on their lives (8).

The etiology of stuttering has been linked to various psychosocial elements, including suppressed emotions and internal conflicts. Some theories suggest that individuals who stutter might exhibit psychological differences compared to non-stutterers (9-11). One

notable theory is the two-factor theory by Butten and Shoemaker, which associates stuttering with a disruption in speech due to classically conditioned negative emotions (8).

Extensive research in adults indicates a common association between stuttering and social anxiety. Studies have explored cognitive-behavioral aspects of social anxiety, including information processing, emotion regulation, and the impacts of self-focused attention and post-event processing. These findings have significant implications for the treatment and future research of social anxiety disorders (12).

This study delves into the relationship between social anxiety disorders and childhood victimization among adults who stutter. We compare 36 adults who stutter with 36 non-stuttering adults, using the Retrospective Bullying Questionnaire to assess experiences across different life stages (13). Our findings suggest that adults who stutter exhibit higher levels of social interaction anxiety and fear of negative evaluation. Notably, childhood victimization correlates with poorer psychosocial outcomes in adulthood, regardless of stuttering status (14).

Prior research on stuttering and social anxiety, though extensive, often overlooks cultural, religious, and ethnic variances. Our study addresses this gap by focusing specifically on the Pakistani context to understand how these factors influence adults who stutter, with and without social anxiety (15-18).

The primary objective of our past research was to examine the relationship between stuttering and social anxiety in adults within the unique cultural and ethnic context of Pakistan, a perspective largely overlooked in previous studies (19). Recognizing the global link between these conditions, we aimed to explore whether the patterns observed in Western populations were mirrored in Pakistan, paying special attention to the influence of childhood victimization and its long-term psychosocial impacts. This study was driven by the need to inform culturally sensitive treatment and support strategies for stuttering and associated social anxiety disorders, addressing both the global knowledge gap and the specific needs of the Pakistani population (20, 21).

MATERIAL AND METHODS

A cross-sectional study design was employed to investigate the relationship between stuttering and social anxiety among adults. This approach allowed for the observation and analysis of data from a specific point in time.

The study was conducted over a period of six months. Participants were recruited from three key locations: Riphah Rehabilitation Center, Lahore; Mayo Hospital, Lahore; and DHQ Toba Tek Singh. These sites were chosen for their relevance to the study population and accessibility. Purposive sampling, a non-probability sampling technique, was utilized to select participants who met specific criteria. The sample size comprised 80 individuals, calculated using an online calculator to achieve a 95% confidence interval and a 5% margin of error, ensuring sufficient power for the study (22).

Inclusion criteria specified participants aged 19 to 35 years, actively seeking speech treatment for stuttering or anxiety related to stuttering, and without any prior treatment for stuttering in the six months preceding the study. Exclusion criteria were set to omit individuals with any known mental or physical health conditions that could confound the study's findings. Two primary tools were employed for data collection. The Liebowitz Social Anxiety Scale (LSAS), a clinician-rated scale, was used to assess the range of social anxiety and performance situations feared and avoided by patients with social phobia (23). This scale comprises 24 items divided into two subscales evaluating social interaction and performance situations. The Stuttering Severity Instrument (SSI) scale was utilized to measure the level of stuttering severity among participants (20, 22, 24).

Prior to data collection, permission was obtained from the institutions involved. In line with ethical research practices, written informed consent was obtained from all participants after thoroughly explaining the study's nature and purpose. Assurance of confidentiality and the exclusive use of information for research purposes were communicated to all participants.

Data collected from the study were analyzed using the Statistical Package for the Social Sciences (SPSS), version 25. This software facilitated the application of appropriate statistical methods to interpret the findings effectively.

RESULTS

The results of the study indicate a clear age-related trend in the experience of social anxiety among participants. The majority of participants who reported experiencing social anxiety were within the age range of 26-30 years. In contrast, those in the younger age bracket of 19-25 years predominantly reported an absence of social anxiety.

In terms of stuttering severity, there was a notable correlation with the presence of social anxiety. Participants who experienced social anxiety predominantly reported mild levels of stuttering. On the other hand, participants who did not experience social anxiety tended to report very mild levels of stuttering. This suggests that while stuttering is present across the board, its severity may be exacerbated by the presence of social anxiety, especially in the 26-30 age group.
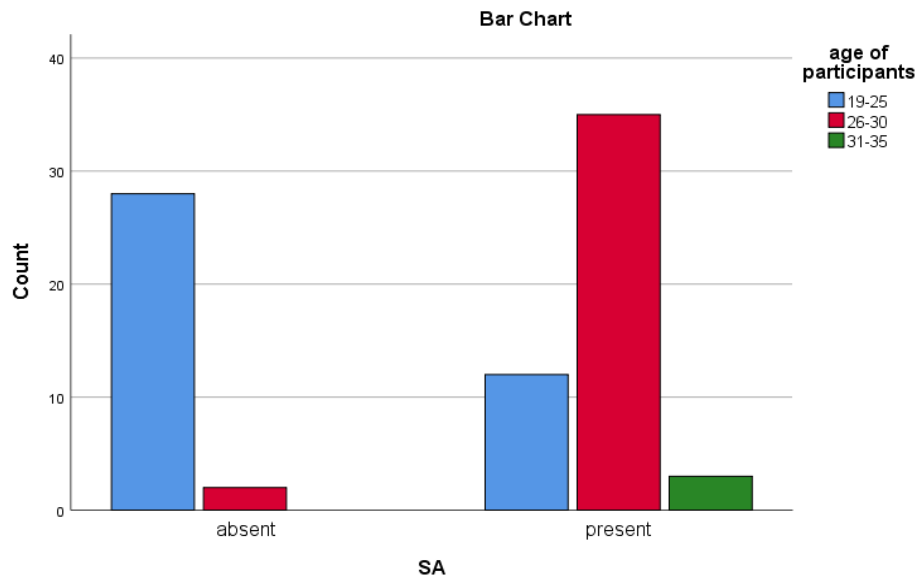
Figure 1 Age of Participants

These findings highlight the potential interplay between age, social anxiety, and the severity of stuttering, suggesting that as individuals in the studied age range mature, the impact of social anxiety on stuttering becomes more pronounced. This could inform targeted interventions for stuttering that also address underlying social anxieties, particularly for adults in their late twenties.
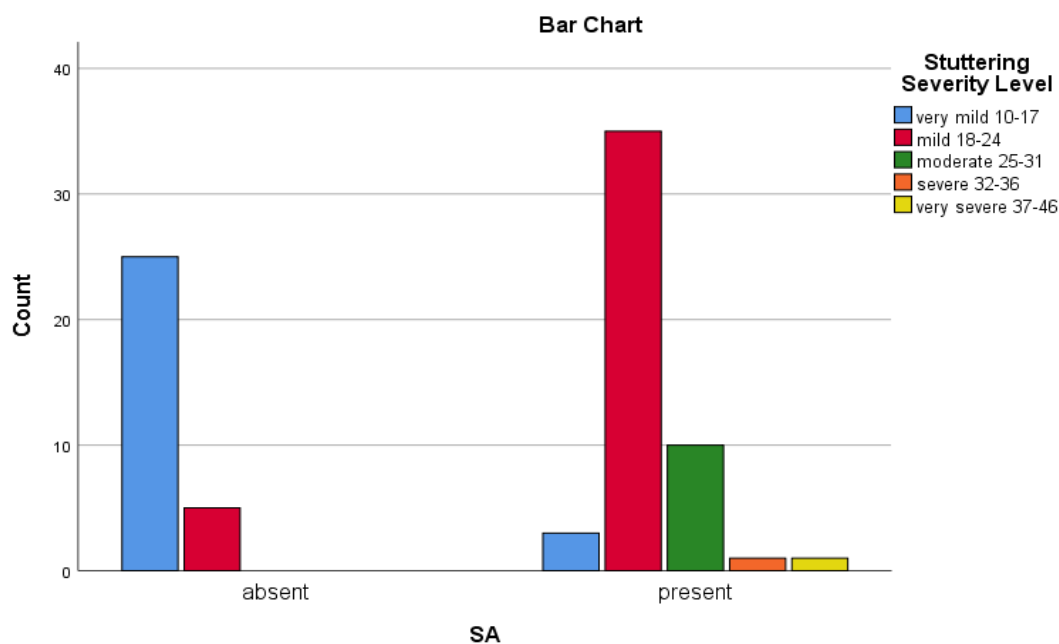

Figure 2 Stuttering Severity Level

Table 1 Prevalence of Stuttering Severity Across Social Situations

Social Anxiety	None	Mild	Moderate	Severe	Total
Using telephone in public					
Present	26	4	0	0	30
Absent	4	31	14	1	50
Total	30	35	14	1	80
Participating in small group activities					
Present	18	12	0	0	30
Absent	5	34	10	1	50
Total	23	46	10	1	80
Eating in public					
Present	17	13	0	0	30
Absent	6	25	19	0	50
Total	23	38	19	0	80
Drinking with others					
Present	22	8	0	0	30
Absent	6	27	17	0	50
Total	28	35	17	0	80
Talking to someone in authority					
Present	21	9	0	0	30
Absent	6	19	22	3	50
Total	27	28	22	3	80
Acting, performing in front of audience					
Present	22	8	0	0	30
Absent	5	17	28	0	50
Total	27	25	28	0	80
Going to party					
Present	23	7	0	0	30
Absent	5	24	19	2	50
Total	28	31	19	2	80
Working while being observed					
Present	16	13	1	0	30
Absent	6	32	12	0	50
Total	22	45	13	0	80
Writing while being observed					
Present	20	10	0	0	30
Absent	5	28	17	0	50
Total	25	38	17	0	80
Meeting strangers					
Present	25	5	0	0	30
Absent	3	30	14	3	50
Total	28	35	14	3	80
Entering a room when others are already seated					
Present	26	4	0	0	30
Absent	2	34	8	6	50
Total	28	38	8	6	80
Speaking up at a meeting					

Using telephone in public					
Present	21	9	0	0	30
Absent	3	33	11	3	50
Total	24	42	11	3	80
Expressing disagreement or disapproval to someone you don't know					
Present	16	14	0	0	30
Absent	2	26	22	0	50
Total	18	40	22	0	80
Giving a prepared oral talk to group					
Present	19	10	1	0	30
Absent	5	31	11	3	50
Total	24	41	12	3	80
Returning goods to a store for a refund					
Present	14	16	0	0	30
Absent	2	31	16	1	50
Total	16	47	16	1	80

In a study with 80 participants, 26 of 30 individuals with social anxiety felt no anxiety using a telephone in public, compared to 31 of 50 without social anxiety who felt mild anxiety. In small group activities, 18 with and 34 without social anxiety experienced no and mild anxiety, respectively. Eating in public, 17 with and 25 without social anxiety felt no and mild anxiety. Drinking with others showed 22 with and 27 without social anxiety having no and mild anxiety. For talking to authority, 21 with social anxiety had no anxiety, while 22 without it experienced moderate anxiety. In acting or performing, 22 with social anxiety had no anxiety, and 5 without had severe anxiety. At parties, 23 with social anxiety felt no anxiety, and 24 without it felt mild anxiety. When working under observation, 16 with and 32 without social anxiety experienced no and mild anxiety. Writing while observed showed 20 with and 28 without social anxiety having no and mild anxiety. Meeting strangers, 25 with social anxiety had no anxiety, and 30 without it had mild anxiety. Entering a room with others seated, 26 with and 34 without social anxiety felt no and mild anxiety. Speaking at meetings, 21 with social anxiety had no anxiety, and 33 without it had mild anxiety. Expressing disagreement, 16 with and 26 without social anxiety had no and mild anxiety. Giving a prepared talk, 19 with and 31 without social anxiety felt no and mild anxiety. Returning goods, 14 with and 31 without social anxiety had no and mild anxiety, respectively. This data highlights varied responses to social situations based on the presence or absence of social anxiety.

DISCUSSION

The current study aimed to explore the interplay between stuttering and social anxiety in adults and assess the compounded impact on their overall functioning. Stuttering and social anxiety, as individual conditions, can significantly hamper quality of life, limiting social engagement, educational achievement, professional advancement, and affecting socioeconomic status. The integration of these conditions may exacerbate the challenges faced by adults who stutter, underlining the necessity for informed clinical management strategies.

Results of the study revealed a pronounced correlation between stuttering severity and the presence of social anxiety, with socially anxious individuals exhibiting higher levels of stuttering compared to their non-anxious counterparts. Socially anxious adults who stuttered were predominantly younger than those without social anxiety. This finding deviates from typical patterns observed in non-stuttering populations, where social anxiety disorder is more commonly associated with females and often linked to lower educational levels, higher unemployment rates, and lower socioeconomic standings (3, 8).

The data showed that adults who stuttered and reported higher levels of social anxiety also indicated a greater fear of negative evaluation and more significant challenges in functional communication than those without social anxiety. These adults experienced heightened emotional distress in social situations, which was strongly correlated with measures of social anxiety (13, 15).

It is important to acknowledge the diversity within the stuttering population; not all individuals who stutter exhibit high levels of social anxiety. However, the study found that male participants reported more stuttering in the presence of mild social anxiety compared to females. Moreover, stuttering severity was positively correlated with social anxiety across a range of social scenarios, including group activities, community engagement, public performances, and workplace interactions (14).

The clinical implications of these findings are substantial. Adults who stutter and display avoidance behaviors, particularly in speaking situations, perceive the effects of their stuttering more negatively and report a higher incidence of emotional, social, and behavioral difficulties, along with negative cognitions associated with their condition (25). This suggests that those seeking treatment for stuttering and who also cope with social anxiety may benefit from additional psychological support to enhance their overall functioning.

CONCLUSION

The study substantiated that social anxiety significantly influences the life experiences of adults who stutter, necessitating a comprehensive approach to treatment that addresses both speech and psychological well-being. Increased awareness and targeted interventions could potentially improve not only the speech capabilities of socially anxious adults who stutter but also their overall quality of life, regardless of the stuttering severity. This holistic perspective is crucial for the development of more effective treatment protocols that cater to the complex needs of this population.

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