

SOCIAL ANXIETY AND SAFETY BEHAVIOURS IN INDIAN FEMALES WHO STUTTER

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ABSTRACT

Background: People who stutter often face both speech difficulties and social challenges. In stressful social situations, they resort to safety behaviours to cope with anxiety. However, these behaviours can worsen anxiety over time and lead to less effective treatment outcomes. Research on females is limited due to higher childhood recovery rates, leading to a male-to-female ratio of 4:1 among adults. Negligible information is available on Indian females with persistent stuttering. **Aim:** This study explores the relationship between social anxiety and the frequency of safety behaviours among Indian females who stutter. **Methods:** Ten females who visited King George's Medical University, Lucknow, for stuttering treatment participated in the study. The Liebowitz Social Anxiety Scale assessed their social anxiety, and the Safety Behaviour Checklist 2023 assessed the usage frequency of specific safety behaviours during social encounters. Correlations were established between the frequency of safety behaviour and the pretreatment score of social anxiety. **Results:** The results showed that all ten participants experienced high levels of social anxiety and frequently used safety behaviours. Most safety behaviours were found to be positively correlated with social anxiety, except a few. **Conclusion:** This suggests a strong connection between social anxiety and the use of safety behaviours in females who stutter. However, a few exceptions indicate that some safety behaviours may have different underlying factors.

KEYWORD:- Females who stutter, social anxiety, safety behaviours, India, gender-sensitive interventions.

INTRODUCTION

Stuttering is a complex communication disorder that extends far beyond disruptions in speech, affecting individuals socially, emotionally, and psychologically. With research showing that genetic factors account for over 20% of stuttering cases (Drayna & Kang, 2011; Yairi & Ambrose, 2013), its hereditary nature adds another layer of complexity to this communication challenge. Research also shows that people who stutter (PWS) have higher social anxiety compared to those who do not stutter (Blood & Blood., 2016; Iverach et al., 2018). Case studies on social anxiety among adults who stutter are widely documented, with prevalence rates reported at 34% (Iverach et al., 2009), 40% (Blumgart, Tran, & Craig, 2010), 44% (Stein, Baird, & Walker, 1996), and 60% (Menzies et al., 2008). The presence of such psychological disorders leads to low treatment efficacy and failure to maintain their speech treatment benefits at 6 months post-treatment (Iverach, Jones et al., 2009).

Social anxiety is a strong and ongoing fear of social situations or activities, like meeting new people, speaking in groups, or giving a speech, where a person

worries about being judged or criticised (American Psychiatric Association, 2013). These situations can be even harder for people who stutter because they fear how others will react to their stuttering. This worry about being judged causes lot of emotional stress and makes them more vulnerable psychologically (Craig & Tran, 2014). Their fear is mainly about stuttering and how others perceive and react to their speech. This heightened sensitivity to negative evaluation can lead to significant emotional distress and psychological vulnerabilities (Craig & Tran, 2014). Social penalties such as mockery and exclusion compound the challenge of everyday communication as not all situations can be avoided. Interestingly, even though people with social anxiety don't always experience the negative outcomes they fear, their anxiety often persists, making it harder for them to overcome their challenges.

Modern cognitive theorists believe that safety behaviours play a key role in maintaining social anxiety. Safety behaviours are actions people with social anxiety use to avoid negative social outcomes and manage their fears. These behaviours include avoiding eye contact, speaking less, mentally rehearsing words, or steering

conversations away from difficult topics (Clark, 1999; Salkovskis, 1991). While these strategies may provide temporary relief, research shows they often have an adverse effect. Instead of helping, they encourage avoidance, reduce participation in social situations, and block the growth of communication skills and confidence.

Connery et al. (2020) found that people who stutter often use safety behaviours to hide their stuttering. While these strategies may seem simple, they have a heavy emotional burden. Many stuttering individuals worry about how others perceive them if they are heard stuttering. These behaviours work as a strategy to prevent stigma and discrimination associated with being a Person Who Stutters (PWS) (Cream et al., 2003; Menzies et al., 2008; St Clare et al., 2009).

Ironically, safety behaviours can cause the problems they are meant to prevent. For example, avoiding eye contact might help someone escape uncomfortable conversations, but it can also make them seem uninterested or unfriendly, leading to negative judgments (Clark & Wells, 1995). By avoiding social interactions, people miss the chance to face their fears, which keeps their anxiety alive (Salkovskis, 1991; Wells & Clark, 1997). Over time, relying on these behaviours can trap individuals in a cycle where fear and avoidance grow, making it even harder to engage with others. Six studies show that when safety behaviours are removed, people experience less anxiety and feel more confident in social situations (Kim, 2005; McManus et al., 2009; McManus, Sacadura, & Clark, 2008; Morgan & Raffle, 1999; Taylor & Alden, 2010; Wells et al., 1995). However, the role of safety behaviour is yet to be established in the case of stuttering.

Stuttering can be particularly difficult for women compared to men, but research on females who stutter is limited. This is partly because fewer females stutter due to higher natural recovery rates during childhood. In the 1970s and 1980s, some studies began examining the unique experiences of women who stutter and comparing the impact of the same on women and men (e.g., Feldman, 1977; Sheehan, 1979; Silverman, 1980, 1986; Silverman & Zimmer, 1979, 1982). More recently, a study by Briley et al., (2021) found that depressive symptoms in women who stutter tend to worsen with

age, while they remain stable in men. Additionally, Byrd et al., (2017) highlighted that listeners react differently to stuttering based on the speaker's gender. Society often places higher expectations on women to be flawless, making any imperfection, including stuttering, subject to harsh judgment. This can pressure women who stutter to avoid speaking situations, leading to social isolation and increased anxiety.

Indian society greatly emphasises fluent and clear speech, particularly in social and professional environments. This societal expectation can be particularly challenging for individuals who stutter especially for females. Research has shown that safety behaviours, often used by those with social anxiety, tend to keep anxiety levels high rather than reduce them. Given these insights, it is crucial to investigate how safety behaviours might affect people who stutter, especially when societal pressure to speak fluently is so prevalent. This study, therefore, seeks to explore the relationship between social anxiety and the use of safety behaviours in Indian women who stutter, aiming to shed light on an important, yet underexplored, aspect of their experiences.

METHOD

Ethical considerations

The Ethical Committee of Era University approved the study, following established ethical guidelines for research involving human participants. All participants provided informed consent, and their confidentiality was maintained throughout the study.

Participants and Procedure

The study included ten female participants who visited the Neurology Department at King George's Medical University (KGMU), Lucknow, for the first time to get treatment for stuttering. All the participants were identified as persons who stutter (PWS) and, every participant met the diagnostic criteria for childhood-onset fluency disorder. Speech-language pathologist, the third author of this study, confirmed their stuttering. Background information collected from each participant included their age, when their stuttering started, history of any psychiatric illness, any previous speech therapy they had received, and whether anyone in their family also stuttered.

Table 1: Participant details.

Participant	Age	Age of Onset	Prior Speech Therapy (Age)	History of any Psychiatric Illness	Family History of Stuttering
1	21	6	No	No	Brother
2	20	4	No	No	Father, Cousins
3	26	6	23	No	Grandfather
4	31	7	16	No	Maternal grandmother
5	23	4-5	18	No	Other relatives
6	23	3	6	No	Father, Grandfather
7	24	6	No	No	None
8	24	5	No	No	Maternal uncle

9	22	5	No	No	Maternal uncle
10	18	5	8	No	None

After the assessment, participants were asked to complete two standardised questionnaires under the supervision of the first author, a clinical psychologist. The Liebowitz Social Anxiety Scale (LSAS) was used to measure their level of social anxiety. The Safety Behaviour Checklist 2023 was administered to assess the use of safety behaviours. The questionnaires were completed in a supportive environment, ensuring participants felt comfortable and understood the questions. The time required to complete the questionnaires was approximately 20-25 minutes.

MATERIALS

Assessment of social anxiety

The Liebowitz Social Anxiety Scale (LSAS) is a widely used tool to measure the level of social anxiety by Mental health professionals, it provides insights into how much anxiety affects a person's daily life. It was developed by Dr. Michael Liebowitz in 1987 to assess both fear and avoidance in social situations. The scale consists of 24 items, divided into two sections: 13 items focus on performance situations (like public speaking), and 11 items relate to social interactions (like meeting new people). Each item is rated on two scales: one for fear and another for avoidance, using a 4-point scale (from "none" to "severe" for fear, and from "never" to "usually" for avoidance). LSAS-SR is a reliable measure of social phobia with high internal consistency (Cronbach's $\alpha = .95$) and high discriminant and convergent validity (Heimberg et al., 1999).

Assessment of safety behaviour

The Safety Behaviour Checklist (2023), developed by the Australian Stuttering Research Centre, is a comprehensive self-report tool that identifies the use of safety behaviours among individuals, particularly those who stutter. It assesses how often individuals engage in behaviours to reduce anxiety or avoid uncomfortable speech situations.

Data analysis

A Spearman correlation analysis was conducted to examine the relationship between the pretreatment score of social anxiety and the frequency of each safety behaviour used.

RESULTS

Questionnaire results

The participants had a mean social anxiety score of 78.1 (SD = 20.76) and a mean safety behaviour score of 109.3 (SD = 15.49). All participants were clinically classified as socially anxious, with 5 exhibiting severe anxiety, 3 marked anxiety, and 2 moderate anxieties. Participants reported frequent use of safety behaviours in response to feelings of anxiety. Table 2 provides a list of 34 safety behaviours along with the number of participants who were engaged in the study. The most commonly

employed safety behaviours included "Avoiding difficult words when feeling anxious," "Avoiding difficult syllables," "Avoiding anxiety-inducing topics," "Mentally rehearsing sentences before speaking," and "Allowing others to order on their behalf." The least frequently used safety behaviour was "Informing others about their stuttering before speaking."

Correlations

The Spearman correlation analysis revealed the association between the frequency of safety behaviours and social anxiety scores. Out of the 34 safety behaviours analyzed, many showed a positive correlation with social anxiety, but only 12 were statistically significant. Conversely, some behaviours were negatively correlated, with 4 reaching statistical significance. Notably, the behaviour "If you feel like you are having a bad day, skip unnecessary talking" showed no correlation with social anxiety. These findings, (Figure 1) suggest that not all safety behaviours exacerbate social anxiety some may provide support.

DISCUSSION

This study explored how often Indian females who stutter use safety behaviours and how these behaviours relate to their social anxiety. It also examined how these individuals use safety behaviours to cope with social situations. The findings align with previous studies, which show that a large number of adults who stutter experience significant social anxiety (Menziez et al., 2008). In this study, all the Indian females who stutter reported high levels of social anxiety, highlighting the strong impact of stuttering and the stigma it creates, particularly for women. An additional significant finding is that 8 out of the 10 participants reported having a family history of stuttering. This high prevalence supports the well-documented hereditary nature of stuttering (Drayna & Kang, 2011; Yairi & Ambrose, 2013). It suggests that genetic factors might contribute to both the occurrence of stuttering and the social and emotional challenges associated with it.

Many participants shared that their families were more concerned about the potential impact of stuttering on marriage prospects than the condition itself. Families often turned to alternative treatments like ayurvedic and homoeopathic remedies but lacked awareness about proper medical support. This reflects a significant gap in both understanding and access to effective treatments, making life even more challenging for Indian females who stutter.

The study also revealed a lack of awareness about mental health. Despite experiencing high levels of anxiety, none of the participants had been diagnosed with any psychiatric condition before starting speech therapy. This underscores the need to better recognise and address

mental health issues within this population. The study found a positive correlation between safety behaviours and social anxiety, with all participants using safety behaviours although the frequency varies. This supports

the idea that individuals with social anxiety often rely on safety behaviours in social situations (Clark & Wells, 1995; Rapee & Heimberg, 1997).

Table 2: Number of females using different safety behaviours.

No.	Safety Behaviour	n
1	Try not to draw attention to yourself	09
2	Say 'relax, relax' to yourself when you feel anxious	10
3	If you feel like you are having a bad day, skip unnecessary talking	09
4	Try to speak slowly when you get anxious	09
5	Rehearse sentences mentally before saying them	08
6	If you are feeling anxious, try to avoid difficult words	10
7	If you are feeling anxious, try to avoid difficult syllables	10
8	Keep your answers short	10
9	Point to avoid having to say things out loud	09
10	Allow others to order for you	10
11	Encourage listeners to speak more, e.g., by asking lots of questions	10
12	Get something else to avoid having to say it	09
13	Avoid topics that make you anxious	10
14	Try to control yourself beforehand	10
15	Try to take deep breaths	09
16	Just say little	10
17	Rehearse answers in your head	09
18	Try to avoid eye contact	10
19	Let your partner do the talking	10
20	Pretend to be interested in something	07
21	Rehearse answering the phone out loud	09
22	Rehearse answering the phone in your head before picking up	07
23	Rehearse opening line of telephone call before making call	08
24	Practice your speech technique at the beginning of each day	07
25	Practice speech technique immediately before an important speaking situation	10
26	Practice speech technique with unknowing listeners	10
27	Reduce your speech rate or speech naturalness when you begin to stutter	10
28	Choose safe or easy people to talk to during the day for practice	10
29	Choose safe or easy people to talk to immediately before an important speaking situation	09
30	Choose safe or easy people to talk to in socially threatening situations	08
31	Over-practice difficult words	10
32	Evaluate your stuttering severity in specific situations across the day	10
33	Use regrouping technique when you lose control of technique and start to stutter	05
34	Tell people that you stutter before you start to talk	02



Cognitive theorists suggest that safety behaviours hinder anxiety reduction, keeping the fear alive (Clark & Wells, 1995; Rapee & Heimberg, 1997; Salkovskis, 1991). Based on this, some theorists argue that safety behaviours should be eliminated for better treatment outcomes. It may be noted that each person who is stuttering has his / her perception about himself/herself and society. Similarly, circumstances and social settings also vary and therefore no two scenarios or persons are alike. Thus, even if a Person Who Stutters tries not to use safety behaviour, s/he still cannot avoid it. As the situation stands now, it would be possible to minimize the safety behaviour strategy through continued counselling and medical intervention.

However, this study presents an alternative perspective, suggesting that not all safety behaviours contribute to maintaining social anxiety. While some can maintain anxiety others can provide support for females who stutter. Similarly, some behaviours are often used to avoid or minimize negative social consequences, which may contribute to the persistence of anxiety. For example, "Rehearse sentences mentally before saying them" might seem like a helpful strategy to prevent stuttering, but it can paradoxically increase cognitive load and reduce spontaneous interaction, leading to heightened self-monitoring and reinforcing anxiety in social settings.

Some behaviours might seem like they maintain anxiety, but they can be really helpful in tough situations and reduce anxiety in the long term. For example, in this study of one the behaviours which is negatively correlated with anxiety is "Use regrouping technique when you lose control of technique and start to stutter". This means they take a moment to pause, calm down, and then try their speech strategy again. At first, it might feel awkward or make them more aware of their stuttering, but this technique helps them stay in control. Instead of getting frustrated or giving up, they can keep going and finish what they want to say. This approach not only helps in the moment but also builds their confidence over time. It shows them that they can handle difficult situations, making them less afraid of stuttering in the future. So, while it might look like it adds stress, it's a way to stay calm and manage the challenge.

The goal of Cognitive Behavior Therapy (CBT) is to reduce anxiety and improve people's quality of life (Menzies et al., 2008). However, removing all safety behaviours in people who stutter could increase their anxiety, making the situation worse. While safety behaviours are often seen as a way to avoid realizing that fears may not come true, in the case of stuttering, the threat is real. People who stutter (PWS) face genuine challenges in communication, and it can be difficult for them to explain their situation to others. Therefore, safety behaviours in stuttering serve a different purpose than in other anxiety disorders, as they help individuals cope with a tangible issue rather than an imagined fear.

For example, actions like speaking slowly when feeling anxious can help people communicate better without avoiding the situation. Instead of removing all safety behaviours, therapy should focus on keeping the helpful ones and addressing the ones that cause anxiety. Allowing the use of safety behaviours carefully in CBT can meet the specific needs of people who stutter, helping them manage anxiety while improving their communication and overall quality of life.

CONCLUSIONS

The use of safety behaviours in people who stutter is a complex issue that needs further study. To fully understand whether these behaviours help or harm, more focused research with a larger group of participants is needed. A key area for future research will be to examine if removing behaviours correlated with social anxiety leads to lower anxiety scores.

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