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LOCUS OF CONTROL, COMMUNICATION APPREHENSION AND SOCIAL AVOIDANCE IN ADULTS WITH STUTTERING DISORDER

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Abstract
The study aimed to explore the relationship between locus of control, communication apprehension and social avoidance. Using correlational design ad purposive sampling adults with stuttering disorder aged ranged 18-25 (M = 21.1; SD = 2.1) were approached from speech therapeutic centres in Lahore. The modified stuttering scale (Andrews and Cutler, 1974), Locus of control scale (Rotter, 1966), Communication Apprehension questionnaire (McCroskey, 1984) and Social Avoidance and Distress scale (Watson & Friend, 1969) were used to assess the relationship among variables. Results indicated a significant mediating role of communication apprehension between locus of control and social avoidance. The findings revealed that locus of control was significantly positively correlated with social avoidance, and significantly negatively correlated with communication apprehension, whereas the relationship between communication apprehension and social avoidance was also negatively significant. From the clinical point of view, the research emphasizes the importance of overcoming not just speech fluency but also internal psychological factors in therapeutic intervention among adults who stutter. Beyond individual-level interventions, the findings have broader social and policy implications. Public education campaigns and learning programs can help minimize stigma and encourage the acceptance of stuttering in schools, workplace, and community environments.
Keywords: *locus of control, communication apprehension, social avoidance, stuttering disorder.*

Introduction

Stuttering is a multidimensional disorder which includes psychological as well as physiological factors. The research study focused on the investigation of the psychological variables focusing locus of control and communication apprehension in the predication of behavioural dimension of stuttering which is social avoidance. Stuttering which is also known as stammering disorder defined in DSM-5 as a difficulty in the normal fluency of speech and the time pattern of speech that is inappropriate according to the individuals age and continues or persists over time. Stuttering disorder disrupts the normal flow of speech, considered externally by involuntary repetitions of words and prolongations of sound, syllables, phrases also as unintentional silent pauses or blocks in which an individual is unable to produce sounds or words properly. Their sound production is poor also the fluency of speech is worse (DSM, 5TR).

Stuttering happens when an individual's try to speak but their muscles start twitching or movement of muscles becomes uncontrollable, this condition disturb the flow of words of an individual speech. Stuttering can be developmental stuttering, persistent stuttering, or acquired stuttering (Ropper, 2019). Stuttering is clearly involving the problem in speech motor planning and also the breakdowns in speech motor processing which results major disfluencies in various duration and form. The motor muscles play an important role in fluency and dysfluency of speech the command to the muscles disrupt or normal the patterns of sounds (Smith, 1989). In addition to motor muscle's role, researchers have suggested that stuttering occurs due to other factors including genetical factors, language delay, neurodevelopmental, psychological and

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some environmental factors that affect the speech fluency of an individual's and cause stuttering disorder (Smith & Weber, 2017).

Locus of control is defined as the degree or stage to which people believe that they, as opposed or contrast to the external forces beyond their influence, and have control over the outcomes of an event in people lives (Rotter, 1966). According to the researches adults who stutter often show a more external locus of control, they assume that speech difficulties are uncontrollable or mainly influenced or inclined by an external factor, this belief leads to the feeling of helplessness and reduced motivation to take part in communicative situations, or social interactions (Craig, 2008). People with strong internal locus of control have believes that event happening in their life is the result of their own action, they blame themselves for any outcome or their bad luck, while individual who are with external locus of control have a belief that event is happening in his life due to external forces or external factors (Carlson, 2007). And, communication apprehension is the term that denotes to the individual's fear or anxiety with real or estimated or anticipated communication with another individual, Individual who's facing communication apprehension having a fear of judgement or anxiety when he's in social interactions, communication apprehension is a psychological response to assessment or evaluation (McCroskey, 1977). Communication apprehension is basically the psychological response to an evaluation, the response which quickly becomes physical just like our body respond to the threats which our mind perceives (Sapolsky, 2004).

While, social avoidance is a behavioural response considered by the deliberate evasion of social situations because of the fear of negative judgement, evaluation, anxiety or discomfort (Lowe et al., 2012). Adults who are suffering with stuttering disorder can have the characteristic of social avoidance as they perceive people will negatively evaluate them especially in public speaking, interviews or group discussions. Their negative past experiences for example bulling, stigmatizing about stuttering can leads to the avoidance behaviour in social situation (Boyle, 2018).

The relationship among locus of control, communication apprehension and social avoidance in adults with a stuttering disorder is multifaceted and intertwined. All of these factors influence how an individual with stuttering disorder perceives his communication abilities and interact socially. Individual with stuttering disorder will have either internal or external locus of control, and communication apprehension that eventually leads to social avoidance. Researches have shown that communication apprehension often play the role of mediating factor between locus of control and social avoidance. People who stutter tend to have a more external locus of control, i.e., they have the assumption that external forces (e.g., others, luck, or uncontrollable situations) control their speech and the events in their life (Craig & Tran, 2014). Individuals have belief that they are in control of stuttering attacks which can reinforce or enhance perceptions of helplessness, lower desire to seek treatment, and enhance avoidance responses (e.g., avoiding speaking situations) (Boyle, 2015). According to the past research studies, it was suggested that locus of control would like to predict higher stuttering behaviour, either its internal or external locus of control it makes an individual's stuttering more prominent or worse, so locus of control also has a relationship with stuttering disorder (Craig et al., 1984).

People with stuttering disorder avoid speaking in difficult situations and they try to avoid using certain words or phrases that give them trouble (Langevin, 2000). Even some individual tends to avoid coming to their institutes on the days when they are required to perform or talk in class in front of everyone, like avoiding oral presentations (Lew, 2000). Stuttering disorder not only affects speech fluency but also has significant psychological consequences. Exploring the variable locus of control (in which individuals believe they have higher control on their actions) helps identify whether people with stuttering attribute their communication difficulties to internal or external factors. Those adults who are suffering with stuttering disorder often

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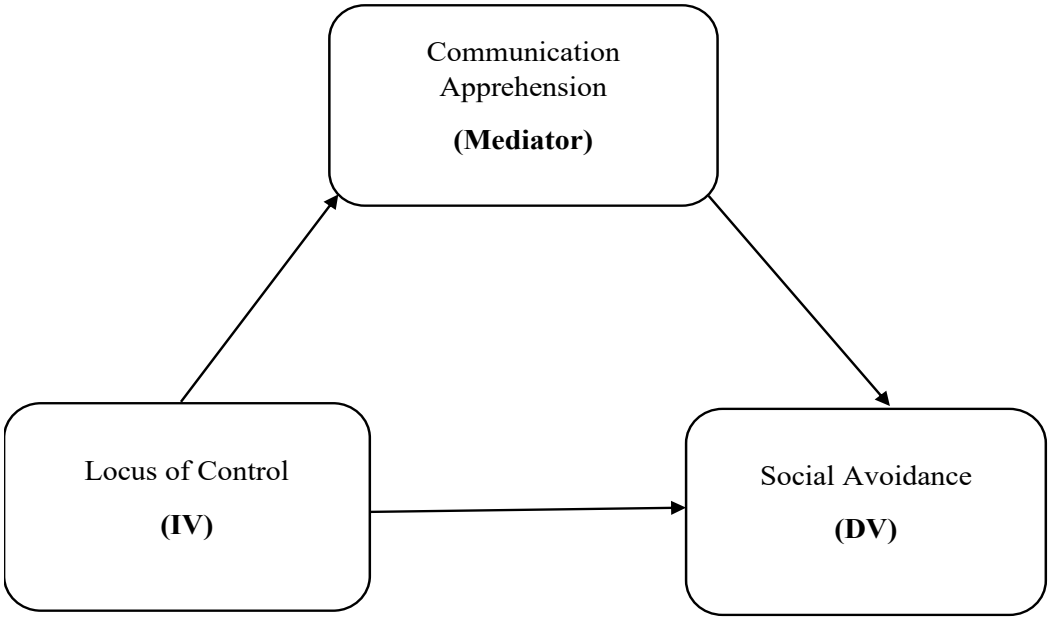
experience communication apprehension, fear or anxiety in public speaking and these concerns leads to social avoidance. By understanding this apprehension, it provides insight to the emotional barriers they are facing and the ways that specifies fear impacts their role in daily participation in communication.

In the current study, the interrelation between locus of control (perceived control over life events), communication apprehension (apprehension or fear regarding communication), and social avoidance is investigated in stuttering disorder patients. Clinicians and the researchers can well understand the psychological aspects at play and the primary emotional and cognitive difficulties experienced by people who stutter. By understanding the phenomenon that how communication apprehension acts as a mediator in the relationship between locus of control and social avoidance, the research could inform or notify the progress of targeted therapeutic or counselling interventions aimed at reducing anxiety and enhancing social functioning in people with stuttering disorder. The result findings can be applied by speech therapists, psychologists, and educators dealing with young adults with stuttering disorder, letting them to take into account not only speech mechanics but also the emotional and social characteristics in treatment procedures.

Objectives

- To find out correlation among locus of control, communication apprehension, and social avoidance in adults with stuttering disorder.
- To determine the mediating role of communication apprehension in relationship between locus of control and social avoidance in adults with stuttering disorder.

Hypothetical Model of the Research



(Figure 1)

Method

Research Design, Sample & Sampling Strategy

Correlational research design was used in current study, as this study intended to identify the relationship among locus of control, communication apprehension, and social avoidance. The

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sample of this research study were (N=100) males and females. Purposive sampling strategy has implemented. As this study aimed to assess variables of interest as participants with stuttering disorder so purposive sampling is serve most suitable technique to collect data from sample as it allows researcher to select sample according to the purpose of the study.

Measures

Informed consent was taken in which objectives and purpose of the research study was mentioned. The demographic information sheet was used to evaluate or assess certain domains of the participant's life. Which included participant's age, gender, family structure, socio-economic status, educational background information, occupational history and health related information. The modified stuttering scale was adapted by Andrews and Cutler (1974) assess the communication attitude, speech confidence, and social emotional reactions of individuals who stutter. It helps clinicians to identify the extent to which stuttering affects a person daily communication and self-perception. The questionnaire was used to assess the locus of control developed by Rotter (1966). This scale has 29-items that measured an individual's internal or external level of locus of control. Respondents chosen between statements reflecting internal or external control beliefs and responses on scale measured higher and lower level of locus of control of an individual. The scale was used to assess the communication apprehension developed by James McCroskey (1984). This scale has 24-items which concerning an individual's feelings about communication with other people. The scale was used to assess the social avoidance developed by Watson and Friend (1969). This scale has 28-items with true and false format responses. Participant has to choose either the items was related to his feelings or not.

Procedure & Ethical considerations

The research proposal was submitted to ethical committee for an approval. When the sampling technique was finalized then sample was derived. Researcher contacted the participants. Consent form was signed from the participants to make sure their inclination to take part in the research. Participants were briefly explained regarding the study and purpose of data collection. Researcher made sure about confidentiality of participant and they were enlightened about their right to withdraw from the research whenever they want. Three scales were administered along with a demographic form. The completion of questionnaire has taken 20-25 minutes. Researcher thanked the participants for participation after data collection. After completion of data collection results were analysed by using SPSS version 27. Initial screening has done for outliers and missing data. Descriptive analysis has done for demographic variables. Reliability analysis of scales has done to find out the reliability of scales. Pearson Product Moment Correlation Analysis has run to identify the relationship among variables. Mediation analysis has run to identify the mediating role of communication apprehension between locus of control and social avoidance in adults with stuttering disorder. While, Independent T-Test has run to identify the difference in family structure between joint and nuclear in locus of control, communication apprehension and social avoidance in adults with stuttering disorder. To conduct this research, following ethical considerations were keeping in mind. Participant's informed consent was taken. Researcher did not force any participant to fill the questionnaire. Participants of the study were given right to withdraw at any point of time in the research. Care was taken to respect the dignity and comfort of participants. Researcher kept the participants identity and confidentiality private. Researcher accurately reported the data outcomes.

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Table 1

Characteristics of study participants (N=100).

Characteristics	**F**	**%**
Gender		
Male	73	73.0
Female	27	27.0
Family Structure		
Joint	44	44.0
Nuclear	56	56.0
Employment Status		
Employed	44	44.0
Un-Employed	56	56.0
Stuttering Severity		
Moderate	22	22.0
Severe	73	73.0
Extreme	05	5.0
	M	SD
Age	21.1	2.1

Note. 1 for male ; 2 for female

Results

The results of the current research presented locus of control, communication apprehension and social avoidance in adults with stuttering disorder. The data was analysed in Five key steps. In the first step, reliability analysis was conducted for each scale and Cronbach's alpha for the scales were reported. Descriptive statistics were reported for demographic variables, locus of control, communication apprehension and social avoidance. In the second step, Pearson Product Moment Correlation was employed to assess the relationship among the study variables. In the fourth step, mediation analysis was done through regression by Baron and Kenny's method. In the fifth step, independent sample T test was run to identify the gender differences among the study variables.

Reliability Analysis

Table 1

Descriptive properties and Reliability coefficients of the scales used in the present study (N=100).

Variables	M	SD	k	α	Range
Locus of Control	55.92	4.81	29	0.80	0.25
Communication Apprehension	39.23	6.87	24	0.94	1.15
Social Avoidance	53.89	4.73	28	0.85	0.8

Note. k = No. of items, α = Cronbach's alpha

These variables appear to represent measures related to different constructs. The locus of control scale assesses the level of locus of control either its internal or external, the communication apprehension scale measure the communication apprehension, fear and anxiety of an individual, and the social avoidance and distress scale perceived the avoidance.

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Cronbach's alpha is a measure of internal consistency reliability, indicating how closely related the items within each scale are. Higher values of Cronbach's alpha (closer to 1) generally suggest better internal consistency.

Correlational Analysis

It was hypothesized that the locus of control and communication apprehension are likely to correlate and predict social avoidance. Communication apprehension was likely to mediate the relationship between locus of control and social avoidance. To assess these relationships among study variables locus of control, communication apprehension and social avoidance, Pearson Product Moment correlation was applied as shown in Table 2.

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Table 2

Correlational analysis of demographic variables and study variables (N = 100).

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Gender	-	-.119	-.176	-.051	.124	.067	.085	-.111	.081	-.152	.088
2. Age		-	.033	.212*	.015	-.038	.224*	.288**	.116	-.035	-.080
3. Family Structure			-	.382**	-.025	.216*	.096	.430**	-.218*	-.034	-.085
4. No. of Siblings				-	.012	.105	.068	.268**	-.226*	.183	-.327**
5. Marital Status					-	.198*	.114	-.071	.145	-.186	-.058
6. Employment Status						-	.185	.243*	-.148	.075	-.160
7. Family Income							-	.436**	.163	-.183	-.041
8. Severity								-	-.510**	.340**	-.220*
9. Locus of Control									-	-.720**	.237*
10. Communication Apprehension										-	-.235*
11. Social Avoidance											-

Note. *p < 0.05; **p < 0.01; ***p < 0.001

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Mediation Analysis

Table 3

Multiple Regression Analyses Following Baron and Kenny's Guidelines to Show Mediation Effect.

	Predictor	Criterion	β	R2	SE	t	df	p
1st Step	Locus of control	Social Avoidance	.22	.05	5.60	2.41	98	<.001***
2nd Step	Locus of control	C Apprehension	-.67	.51	3.99	-10.26	98	<.001***
3rd Step	C Apprehension	Social Avoidance	-.23	.05	5.61	-2.39	98	<.001***
4rth Step	Locus of control C Apprehension	Social Avoidance	.13	.06	5.61	1.0	97	<.001***
	Without Mediation	Total Effect = .22						
	With Mediation	Total Effect = Direct Effect (.13) + Indirect Effect (-.67)(.23) Total Effect = .13 + 0.15 = 0.28						

Note. ***p < .001.

Independent Sample T Test

Table 4

Difference between joint and nuclear family structure in adults with stuttering disorder on three psychological tests.

	Nuclear		Joint					
	M	SD	M	SD	t	df	p	Cohen's d
Locus of control	55.03	5.96	52.34	6.14	2.21	98	0.1	6.04
C Apprehension	36.71	6.44	36.32	4.75	0.34	98	0.4	5.76
Social avoidance	52.57	5.39	51.59	6.17	0.84	98	0.3	5.75

Note. M indicates mean, SD indicates standard deviation.

Summary of the findings

Locus of control was significantly correlated and associated with communication apprehension, social avoidance and stuttering severity, that highlighting its central role in the psychosocial experiences of adults with stuttering disorder. Locus of control was a significant predictor of both social avoidance and communication apprehension. Communication apprehension partially mediated the relationship between locus of control and social avoidance, indicating both direct and indirect effects as shown by significant regression paths following Baron and Kenny's mediation steps. There was no significant difference in locus of control between nuclear and joint families. However, significant differences were found in communication apprehension and social avoidance.

Discussion

The main purpose of this research study was to explore the association and relationship among locus of control, communication apprehension and social avoidance in adults with stuttering disorder. It was assumed that locus of control and communication apprehension were likely to predict social avoidance. Locus of control, communication apprehension and social avoidance were likely to correlate with each other. Communication apprehension was likely to mediate the relationship among locus of control and social avoidance. A significant positive relationship

between locus of control and social avoidance was found. Communication apprehension was likely to mediate the relationship between locus of control and social avoidance.

The current study aimed to explore or examine that how locus of control, communication apprehension, and social avoidance are associated in adults dealing with stuttering disorder. The results findings offer valuable insights into the psychological experiences of those who stutter, highlighting the way cognitive perceptions and emotional reactions interact with their social behaviours. It was hypothesized that locus of control and communication apprehension was likely to predict social avoidance. It was hypothesized that communication apprehension was likely to mediate the relationship between locus of control and communication apprehension. Furthermore, current research also identified a strong negative correlation between locus of control and communication apprehension implying that individuals with a more internalized locus of control (i.e., individuals who experience that outcome are dependent on their own actions) will have lower levels of anxiety in communicative contexts. This result resonates with the larger psychological works suggesting that an internal locus of control encourages self-agency, resilience, and proactive coping all of which incline to lessen anxiety across life domains (Cheng et al., 2013; Rotter, 1966).

The current study also indicated that no significant family structure difference in locus of control between nuclear and joint families. However, significant differences were found in communication apprehension and social avoidance, which indicates that participants from nuclear families showed higher levels of communication apprehension and social avoidance compared to those from joint families. The current results present findings that support communication apprehension as a partial mediator of the relationship between locus of control and social avoidance among adults who stutter. More precisely, adults with a higher degree of externality for locus of control were more likely to exhibit greater social avoidance, and this relationship was partially accounted for by their higher levels of communication apprehension. This would imply that those who perceive outcomes in life as beyond their control may be more anxious regarding communication and thus tend to avoid social contact.

Conclusion

In summary, this study adds to an increasingly clear understanding that stuttering is not just a matter of disfluency but of the complex interplay between speech, cognition, and social experience. Shining light on the contributions of locus of control, communication apprehension, and social avoidance, the research builds understanding of the psychosocial difficulties of adults who stutter. Most importantly, it underscores the demand for integrative, multidisciplinary methods in research and treatment designed to enhance not only speech fluency but also confidence, perseverance, and more inclusive engagement in social and communicative life.

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