

Shyness among Children with and Without Stuttering: A Comparative Study

Harish. M¹, Mridula Singh^{2*}

ABSTRACT

Stuttering can be found in all parts of the world in all cultures and races. It affects people of all ages regardless of intelligence or socioeconomic status. The present study aims to compare the extent of shyness among stuttering and non-stuttering children. A total of 160 subjects (80 stuttering and 80 non-stuttering) children were randomly selected from few schools and institutes of Karnataka state. Shyness of the subjects was assessed through Shyness questionnaire developed by Crozier (1995). Shyness of students was measured in 3 domains-cognitive, social and physical, including total shyness scores. Two-way ANOVA was employed to find out the difference between stuttering and non-stuttering children in their shyness scores, along with gender effects. Results revealed that in all the domains and total shyness scores stutterers were shyer than non-stutterers. Female respondents were shyer than male respondents in physical domain of shyness. There was no significant interaction effect between groups and gender for individual domains and total shyness scores.

Keywords: Stutterers, Non-Stutterers, Shyness

Stuttering is a speech disorder that results in the disruption of speech with pauses, repetitions, and other speech hesitations. The onset of stuttering is often during the development of a child's communication skills. Approximately 1% of American adults are reported to stutter. The incidence of stuttering is around three to four times greater in males than females (Bloodstein, 1995). Stuttering can be found in all parts of the world in all cultures and races. It affects people of all ages regardless of intelligence or socioeconomic status. Incidences of stuttering date back to biblical times; it has been suggested that there are indications of stuttering behavior in reports about Moses (Garfinkel, 1995). There are several signs which show that stuttering may have a genetic component. However, genetic links cannot account for all of the incidences of stuttering. In addition, environmental factors include parents' reactions to their child's normal dysfluencies, demands for more complex utterances during speech development, and low socioeconomic status (Guitar, 2006).

Shyness has negative effect on child's personal and emotional life, it is very much true in disabled individuals. The early life experience will always impact on individual's later life. If

¹ Research Scholar, P.G. Dept of studies in psychology, Manasagangotri, Mysuru, India

² Associate Professor of Psychology, Maharaja's College, University of Mysore, Mysore, India

*Responding Author

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a person had more negative, bitter early life experience it will affect person's mental health throughout the life. If this is true, preventive step falls at early stage among people/ individuals who are at risk. The review of literature showed most of earlier studies on children used professional, parents and teachers rating scales to address child issues. There are several explanations to presume that stuttering may be linked with social anxiety disorder. As stuttering is associated by multiple negative consequences across the lifespan it increases the vulnerability to social and psychological difficulties (Schneier, Wexler, & Liebowitz, 1997). These negative repercussions can begin early with children who are bullied, teased, excluded and negative reactions from peers; especially the ones who stutter (Langevin et al., 2004). Such consequences are further amplified when the child is more actively involved in social settings and speaking in front of people. Due to which the children and adolescents very often experience victimization by peers, isolation and rejection in social settings; also they would be lesser popular than the children or adolescents who do not stutter.(Blood et al., 2011, Davis et al., 2002, Hearne et al., 2008).Such instances lead to negative consequences such as shame, embarrassment, lower self-esteem, withdrawal from various settings and eventually low performance in school.(Langevin & Prasad, 2012). Similar suchreasons have been linked with social anxiety (Hudson & Rapee, 2009).

Due to the multiple negative consequences associated with stuttering the individual is more susceptible in development of anxiety (Blood & Blood, 2007, Ollendick & Hirshfeld-Becker, 2002). The findings during the 1990's regards that the relationship between stuttering and anxiety were inconsistent, ambiguous, and difficult to interpret (Ingham, 1984, Menzies et al., 1999). And this was because of the nature of these findings was linked to a number of methodological mistakes, including sample sizes being small, insufficient power to detect differences between groups, recruitment of adults seeking treatment for stuttering rather than adults who stutter from the general community, and application of physiological and one-dimensional measures of anxiety rather than measures designed to specifically evaluate social anxiety (Ingham, 1984, Menzies et al., 1999). In spite of such hurdles, the research in the last couple decades has given sufficient and much more convincing evidence on the relationship between the stuttering and anxiety. Specifically, a huge organization on research has confirmed the existence of increased anxiety on individuals who stutter, with increased evidence that the anxiety has been most probably restricted to social or performance-based situations (Menzies et al., 1999). Such studies have been propelled by bigger research focus on the social anxiety, fear of negative prejudice and expecting social threat.(Craig & Tran, 2006, Iverach et al., 2011, Menzies et al., 1999).

In the present study, an attempt is made to compare the shyness experienced by children with and without stuttering. Stuttering during childhood causes many psychological problems. Measuring impact of disability on psychological issues is challenging phenomena for professionals. If so, what extent it is true in the case of shyness. Keeping this in mind, current research attempts to know the extent of shyness among child stammerers and non-stammerers.A through survey revealed minimum information in this regard. It is hypothesized that children with stuttering do have more shyness than children whout stuttering.

METHOD

Sample:

A total of 160 samples were selected for the study. Equal number of participants was in stuttering and non-stuttering groups. Children with stuttering were selected from various institutes in Karnataka and children without non-stuttering were randomly selected from normal schools. Among stammerers there were 43 males and 33 female children constituted the

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sample, however, in normal group there were 37 male and 43 females constituted the sample. Their age varied from 9 to 16 years.

Tools employed

- a. **Socio-demographic data sheet:** A semi structured socio-demographic data was prepared by the first author to collect information on name, age, gender, stuttering status, and other related information regarding the sample.
- b. **Shyness questionnaire:** Crozier (1995) of University college of Cardiff developed this questionnaire to measure shyness of an individual. It consists of 26 items and requires the subject to indicate his/her response by ticking 'yes', 'no' or 'don't know'. The items in the questionnaire are based on situations or interactions, like performing in front of the class, being made fun of, being told off, having one's photograph taken, novel situations involving teachers, school-friends interactions, going to party etc., of the 26 items shyness is indicated by a 'yes' response for 21 items and 'no' response for 5 items. Item analysis of the scale using SPSS programme resulted in Cronbach's alpha coefficient of 0.817. In the present study along with total shyness scores, 26 questions which were in the questionnaire were sub classified into three domains- cognitive, social, physical domains to get finer aspects of shyness in those various domains.

Procedure:

The first author personally visited few schools and institutes in Karnataka to collect the data. After taking the permission from the respective authorities, shyness questionnaire was administered along with socio-demographic data sheet to children with and without stuttering. Before administrating the questionnaire, they were assured of confidentiality. They were asked to answer all the questions. In case of difficulty in understanding the item/s, in order to get good response they were made clear in their local language. Once the data were collected, they were scored and fed to the computer.

The data were analysed using two-way ANOVA. While performing two-way ANOVA, groups (CWS and CWTS) and gender were considered as independent variables, shyness scores as dependent variables. Table 1 provides mean shyness scores of male and female students pursuing professional and non-professional courses and results of 2-way ANOVA

RESULTS

Table 1: Mean shyness scores of male and female students pursuing professional and non-professional courses and results of 2-way ANOVA

Group	Gender	Domains of shyness			
		Cognitive		Physical	
		Mean	S.D	Mean	S.D
Stutterers	Male	5.38	1.80	2.40	1.15
	Female	4.64	1.78	2.94	1.12
	Total	5.08	1.82	2.63	1.16
Non-stutterers	Male	3.73	1.82	1.46	1.22
	Female	3.95	2.40	2.14	1.41
	Total	3.85	2.14	1.83	1.36
Total	Male	4.65	1.98	1.99	1.27
	Female	4.25	2.17	2.49	1.34
	Total	4.46	2.07	2.23	1.32

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Group	Gender	Domains of shyness			
		Cognitive		Physical	
		Mean	S.D	Mean	S.D
F (Course) _{1, 156}		F= 13.66 ; p=.001		F= 19.62 ; p=.001	
F (Gender) _{1, 156}		F=0.68 ; p=.409		F=9.52 ; p=.002	
F (Interaction) _{1, 156}		F=2.357 ; p=.127		F= 2.797 ; p=.095	
Group	Gender	Domains of shyness			
		Social		Total shyness	
		Mean	S.D	Mean	S.D
Stutterers	Male	21.06	4.92	28.85	5.96
	Female	20.45	5.32	28.03	5.94
	Total	20.81	5.06	28.51	5.93
Non-stutterers	Male	13.19	4.96	18.38	5.65
	Female	12.53	5.43	18.63	7.24
	Total	12.84	5.19	18.51	6.51
Total	Male	17.60	6.29	24.24	7.80
	Female	15.97	6.65	22.71	8.15
	Total	16.83	6.49	23.51	7.98
F (Course) _{1, 156}		F= 92.25 ; p=.001		F= 98.99 ; p=.001	
F (Gender) _{1, 156}		F=0.59 ; p=.443		F=0.82 ; p=.775	
F (Interaction) _{1, 156}		F= .001 ; p=.978		F=0.287 ; p=.593	

Groups, gender and cognitive domain: Children with and without stuttering differed significantly in their mean shyness scores in cognitive domain ($F=13.66$; $p=.001$). The mean values clearly indicated that stutterers were shyer than non-stutterers (mean values 5.08 and 3.85 respectively). Gender-wise comparison revealed a non-significant difference between male and female subjects, as the observed F value of 0.68 failed to reach the significance level criteria of .05 level. Lastly, the interaction between groups and gender was found to be non-significant revealing a similarity in the pattern of shyness of male and female respondents in two groups.

Groups, gender and physical domain: One-way ANOVA revealed a significant between stutterers and non-stutterers in their mean shyness scores on physical domain ($F=19.62$; $p=.001$). Stutterers (mean 2.63) were shyer than non-stutterers (mean 1.83). Further, female subjects were found to be shyer than male subjects (mean shyness scores 1.34 and 1.27 respectively. However, the interaction between groups and gender was found to be non-significant, indicating that the pattern of shyness was same for male and female subjects irrespective of the group they belong to.

Groups, gender and social domain: Stutterers and non-stutterers differed significantly in their mean shyness scores ($F=92.25$; $p=.001$). The mean values clearly indicated that stutterers were shyer than non-stutterers (mean values 20.81 and 12.84 respectively). Gender-wise comparison revealed a non-significant difference between male and female subjects as the observed F value of 0.59 failed to reach the significance level criteria of .05 level. Lastly, the interaction between groups and gender was found to be non-significant revealing a similarity in the pattern of shyness of male and female respondents in two groups.

Groups, gender and total shyness scores: One-way ANOVA revealed a significant between stammerers and non-stammerers in their mean total shyness scores ($F=19.62$; $p=.001$). Stammerers (mean 28.51) were shyer than non-stammerers (mean 18.51). Male and female respondents did not differ significantly in their mean shyness scores ($F=.82$; $p=.775$). The interaction between groups and gender was found to be non-significant, indicating that the pattern of shyness was same for male and female subjects irrespective of the group they belong to.

DISCUSSION

Major findings of the study

- In all the domains and total shyness scores stammerers were shyer than non-stammerers.
- Female respondents were shyer than male respondents in physical domain of shyness
- There was no significant interaction effect between groups and gender for individual domains and total shyness scores.

Present investigation has clearly brought out the fact that in all the domains of shyness and in total scores, children with stuttering had significantly high scores on shyness than children without stuttering. A study by Koutsodimitropoulos, Buultjens, St Louis and Monfries (2016) revealed that people who stutter may have acquired traits such as shyness as a response to their personal situation and environment, rather than those traits being endemic to them. Maintenance of social anxiety in stuttering may be influenced by a host of interrelated factors, including fear of negative evaluation, negative social-evaluative cognitions, attention biases, self-focused attention, safety behaviors, and anticipatory and post-event processing (Iverach, Rapee, Wong & Lowe, 2017).

There are few contradictions to the findings of the present study. A research from Uppsala University (2014) commented that "It was consistently found that preschool children who stutter (as a group) do not show any tendencies toward elevated temperamental traits of shyness or social anxiety compared with children who do not stutter" (Mental Health Weekly Digest, 2014). According to Strekas (2015) stuttering doesn't cause shyness. And shyness doesn't cause stuttering. However, sometimes children present with both, and the two traits interact with one another. Review by Alm (2014) provides strong evidence that persons who stutter are not characterized by constitutional traits of anxiety or similar constructs.

Although stuttering may not be what typically comes to mind when one thinks of a disability, it provokes a speech limitation. The World Health Organization classifies a disability as anything that impairs an individual's ability to reach his or her goals and expectations in life (WHO, 2004). Stuttering may impact an individual's employment opportunities, perception by others, self-image, relationships with peers, and intimate relationships (Linn, 1998). Research shows that individuals who stutter are viewed as less desirable romantic partners and friends (Dickson, 1994). These aspects may increase shyness and social anxiety among children or adolescents with stuttering.

The most revealing distance in the literature in the present is the shortage in the research associated with social anxiety disorder with children and adolescents who suffer from stuttering. Moreover adolescents and children who stutter have reportedly experienced higher anxiety significantly more than adolescents and children who do not stutter. When using the self-reporting questionnaires (Blood and Blood, 2007, Blood et al., 2011, Mulcahy et al., 2008), no research has probed the presence of social anxiety disorder in children and adolescents who experience stuttering by using a comprehensive diagnostic interview.

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Subsequently, there is a demanding issue on the assessment of social anxiety among children and adolescents who stutter as these factors are of substantial magnitude and consequence (Ollendick & Hirshfeld-Becker, 2002). Specifically the children and adolescents who experience social anxiety usually exhibit difficulty in their academic work, premature withdrawal symptoms from school settings and lesser interest in peer or social settings which would have further consequences in their social and occupational settings later in life (Van Ameringen, Mancini, & Farvolden, 2003). And it is not uncommon if children who stutter report on events of bullying more than their peers as they are at a higher risk (Blood and Blood, 2007, Davis et al., 2002). Moreover, children and adolescents who stutter are much easier targets of being bullied not due to the reason of their stuttering but also due to their display of anxiety and nervousness (Blood & Blood, 2007).

Similarly adults who stutter have reported that they have had many unwanted effects on their school life and future effects on their social and emotional setting due to stuttering (Hayhow et al., 2002, Hugh-Jones and Smith, 1999). Adults suffering from stuttering are also linked with opposing listener reactions, negative stereotypes, and significant disadvantage in occupational and educational settings (Blumgart et al., 2010, Klein & Hood, 2004). The disorder can also affect the quality of life as adversely as life threatening situations such as neurotrauma and coronary heart disease (Craig, Blumgart, & Tran, 2009), and suicidal thoughts and suicides have been documented with adult stuttering patients (Corcoran & Stewart, 1998).

Determining the prevalence of shyness among children and adolescents who stutter is a critical line of future research. Further studies are also required to confirm the efficacy of Cognitive Behaviour Therapy in treating shyness in stuttering.

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Conflict of Interest

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