

Social Anxiety and Quality of Life: Mediating Role of Stigma Perception in Individuals Who Stutter

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Abstract

Children, adolescents, and adults who stutter widely experience anxiety and avoid social situations; hence stuttering negatively affects their quality of life (Yaruss & Quesal, 2004). The study aims to investigate the relation between social anxiety, stigma perception, and quality of life among individuals who stutter and to examine if stigma perception mediates between social anxiety and quality of life. Participants of aged 11- 25 years ($M_{age} = 18.83$, $SD = 4.74$, $N = 117$) were recruited using purposive and snowball sampling technique. Participants were screened based on dysfluency using DSM-5 (2013) stuttering criteria. Results revealed significant association between social anxiety, stigma perception, and quality of life. Mediation analysis also showed that stigma perception partially mediated the relation between social anxiety and quality of life in individuals who stutter. Furthermore, significant age differences were found in social anxiety and quality of life in individuals who stutter. The study concluded that stigma perception partially mediates the relationship between social anxiety and quality of life; therefore, social anxiety and perceived stigma need to be reduced to enhance stuttering individuals' quality of life. Results highlight the importance of multidisciplinary approach in the management of stuttering.

Keywords: Social Anxiety, Stigma Perception, Quality of Life, Individuals who Stutter, Stuttering.

1. INTRODUCTION

Researchers around the globe have attempted to identify early causal factors and treatment of stuttering (Buchel and Sommer, 2004; Menzies *et al.*, 2008). Even though speech delays are likely to resolve before the onset of adulthood, it may lead to extreme anxiety in patients who continue to have a stuttering disorder in their adolescence or adulthood (Menzies *et al.*, 2008).

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Stuttering is a multidimensional disorder that involves cognitive (beliefs), linguistic (speech behaviours) and affective (feelings) as well as social factors that contribute towards its development and maintenance. For example, societal pressure, stigmatization, and stereotyping may worsen this problem (Bloodstein and Bernstein-Ratner, 2008).

In Diagnostic Statistical Manual of Mental Disorders (DSM-5, 2013), Stuttering or Fluency Disorder is termed as Childhood-Onset Fluency Disorder. It is noted as Developmental Stuttering if onset occurs in childhood between two to seven years. On the other hand, the onset of speech dysfluencies in adulthood is linked with neurological factors, medical conditions, and mental disorders, and is not a DSM-5 diagnosis (American Psychiatric Association [APA], 2013).

Literature has indicated that stuttering prevalence in ages 3–10 is 1.99% and for ages 11–17 years it is 1.15%, with overall stuttering prevalence being 1.60%. It also indicates that the prevalence of stuttering is lower at puberty while in adults stuttering is less than 1 percent of the population. According to the parents' report, the incidence is above 15 percent for children who stutter only for a brief period and the incidence for those who stutter longer than six months is about 5 percent (Bloodstein and Bernstein-Ratner, 2008; Boyle, 2013).

In the development and the onset of stuttering, emotions play a significant role. Stuttering gives rise to several negative emotions in an individual such as frustration, fear, and anger. Stuttering involves a vicious cycle: it causes emotional arousal which in turn causes stuttering (Guitar, 2014). Stuttering has been linked to social anxiety in which an individual experience distress while meeting or interacting with another person either of the opposite gender, a stranger, friends or even their boss. His/her central focus include fear of misarticulating words, seeming awkward or bored, not understanding what to say, being less able to interact properly and/or being neglected (Mattick and Clarke, 1998). The DSM-5 details how fearful anticipation can develop, and stutterers may alter the rate of speech and/or the individual may start to omit certain words or sounds and/or avoid situations entirely where use of speech might be involved. Such type of stress and anxiety often exacerbates the condition (APA, 2013).

Researchers have identified negative emotional arousal accompanying stuttering and termed it as anxiety. Essentially, anxiety is a state of alertness and concern about future (Bogels *et al.*, 2010; Guitar, 2014; Rapee & Spence, 2004). Autonomic arousal generates a high level of alertness in individuals who stutter that makes them more prone towards dysfluencies in speech (Caruso *et al.*, 1998; Eysenck *et al.*, 2007; Lowe *et al.*, 2012). Anxiety has been assigned

various roles in stuttering, i.e., anxiety is often considered a major factor that leads to stuttering; as a triggering, maintaining, or perpetuating (increasing) factor; consequences of stuttering, and as overall stress attributed to state of anxiety related to speaking (Davis *et al.*, 2007). Previous literature indicates that individuals who stutter are more vulnerable to experience mental health issues, including social anxiety or elevated level of anxiety (Blumgart *et al.*, 2010; Craig *et al.*, 2009).

Self/perceived stigma is understood as internalization of the society's negative attitude (Boyle, 2013). Self-stigma is defined as the acceptance of negative evaluations by the society that a person endorses because of a sense of social inferiority already present within him (Corrigan *et al.*, 2011). People are stigmatized when they are considered different from the societal norms in terms of religion, personality attributes, intelligence, social circumstances, and social class, among other factors (Towler & Schneider, 2005). Research studies have shown that individuals who stutter are taken more negatively as compared to non-stuttering individuals (Blood and Blood, 2004; Doody *et al.*, 1993; Dietrich *et al.*, 2001).

A person who stutters (PWS) may find it difficult to establish a positive identity due to their perceived failure in social interactions (Daniels and Gabel, 2004). Available literature suggests that adverse effects of stuttering go beyond the adolescence and well into adulthood, where it becomes chronic, adversely affecting the overall quality of life including their employment life, personal life, and communication attitude; and limiting their life opportunities (Blumgart *et al.*, 2010; McAllister, Collier, & Shepstone, 2013). For instance, adolescents who stutter (12-17 years) perceive themselves different from their counter group in terms of their communication competence and communication apprehension (Erickson and Block, 2013).

World Health Organization's International Classification of Functioning, Disability and Health refers to the quality of life in PWS by mentioning not only the symptoms of stuttering but also focusing on the impact of those symptoms on their ability to indulge in routine activities and participation in daily activities (Yaruss, 2010). Due to the stuttering problem and lack of self-confidence, most of the stutterers are employed at a lower level than their intellectual and educational capacity (Craig and Calver, 1991). In a study, approximately 56% of adults who stutter mentioned that due to stuttering their school life was affected; 46% reported that it affected their occupation choices and leisure activities, while 44% experienced friendship and other relationship problems due to stuttering (Hayhow *et al.*, 2002). Yaruss and Quessel's (2004) theoretical framework of stuttering emphasis five components i.e., emotional, behavioural, cognitive reactions, environmental (communicat-

ion difficulty in social situations) and general influence. All these components reflect quality of life of individuals who stutter. The framework shows the solid relationship between the environment and a stuttering individual's capacity to perform adequately. It states that the support groups and connections that PWS have enormously influenced their capacity to work in a society.

To date, to the best of the researchers' knowledge, little research has been carried out on the mediating role of stigma perception between social anxiety and quality of life. In Pakistan, the incidence rate of stuttering is increasing. This is the first study that addresses social anxiety, stigma perception, and their effects on the quality of life (QOL) of individuals who stutter (IWS) in Pakistan. In spite of many advancements in Pakistani society, lack of phenomenological understanding still exists about stuttering. The majority believe stuttering is a developmental language problem that does not have a cure, hence giving rise to different types of misconceptions and stigmas associated with the condition. Therefore, the current study aimed to create awareness in the society about the various psychological factors associated with stuttering, that need to be addressed during treatment.

The present study has the following objectives:

- To investigate the relation between social anxiety, stigma perception, and QOL in IWS.
- To investigate the mediating role of stigma perception between social anxiety and QOL in IWS.
- To investigate age difference between social anxiety, stigma perception, QOL in IWS.

The present study has the following hypotheses:

- A positive relationship is probable between social anxiety, stigma perception, and quality of life in individuals who stutter.
- Stigma perception is likely to mediate between the relationship of social anxiety and quality of life in individuals who stutter.
- Young adolescents, late adolescents, and young adults who stutter are likely to differ in terms of social anxiety, stigma perception, and quality of life.

2. METHOD AND MATERIAL

2.1. Study Participants

In the current study, the total sample comprised 117 individuals (99 men and 18 women) within the age range of 11- 25 years ($M = 18.83$; $SD =$

4.74). Purposive and snowball sampling techniques were used for recruitment. Participants were selected from educational institutions, hospitals, speech clinics, and from the general community.

The following exclusion criteria were applied: (1) Individual with any kind of acquired stuttering; (2) individual with hearing impairment and other speech and language disorders.

2.2. Assessment Measures

The researcher devised a demographic information sheet based on the existing literature to gather data about age, gender, education, birth order, family system, occupation, and stuttering related information.

Assessment measures used in the study included:

- Social Interaction Anxiety Scale (Mattick and Clarke, 1998) consisting of 20 items that measures prevalence, severity, and treatment outcome of social phobia and social anxiety disorders.
- Self-Stigma of Stuttering Scale (Boyle, 2013) comprising of 33 items measuring multiple components of self-stigma such as awareness, agreement, and application of stigma on self.
- Overall Assessment of the Speaker's Experience of Stuttering (Yaruss and Quesal, 2006) comprising 60 items in children version, 80 items in the adolescent version, and 100 items in the adult version. All three versions were used in the current study. It measures general information, reactions to stuttering, communication in day-to-day situations, and quality of life of an individual who stutters.
- Stuttering Severity Instrument (SSI-4; Riley, 2009) measuring stuttering severity by assessing speech behaviours in terms of frequency, duration, physical concomitants, and naturalness of speech.

In the present study sample, all measures had high internal consistency (α) i.e., .93, .82, .86, and .72 respectively.

2.3. Procedure

Participants selected from educational institutions, hospitals, speech clinics, and from community were initially screened on the basis of dysfluency using DSM-5 stuttering criteria and their stuttering severity was assessed through SSI-4.

To assess the conceptual clarity of the items of the tool, their comprehension and response time taken to complete, a pilot study was carried out on 10 participants. During piloting, no major amendments were deemed necessary. After piloting, the data for main study was collected. The entire set of questionnaires were administered on each participant in one seating with an approximate duration of 1.5 hours. Data was collected in 2017-2019.

2.4. Ethical Considerations

First, formal approval was sought from Departmental Doctoral Program Committee (DDPC) of Centre for Clinical Psychology and University Advanced Studies Review Board (ASRB) of University of the Punjab, Lahore-Pakistan. Following which, formal permissions were taken from authors for using and translating assessment measures. Official permissions were sought to recruit participants in the research from public and private sector schools, colleges, universities, hospitals, and speech clinics. Informed consent was taken from all the research participants.

3. RESULTS

3.1. Descriptive Statistics and Correlations

The sample was divided into three age bands based on collected data i.e., young adolescents (11-16 years; $n = 45$), late adolescents (17-19 years; $n = 11$), and young adults (21-25 years; $n = 61$).

Pearson product moment correlation results showed that social anxiety had a significant positive relation with perceived stigma ($r = .734, p = .000$) and quality of life ($r = .639, p = .000$) signifying that high level of social anxiety increases the likelihood of perceiving more stigma and poor quality of life. There was also a significant positive relation between stigma perception and quality of life ($r = .581, p = .000$) indicating that more stigma perception increases the chance of poor quality of life in individuals who stutter.

3.2. Mediation Analysis

Mediation analysis was conducted by following Baron and Kenny (1986) proposed four step approach. For the mediation analysis (see Table 1, Figure 1 Emerged Model), social anxiety was taken as a predictor and quality of life as an outcome in step 1. The analysis revealed that social anxiety strongly predicted quality of life, $b = .026, t(1,115) = 8.910, p < .001$. In step 2 social anxiety was taken as a predictor and stigma perception (mediator) was taken as

an outcome. The analysis showed that social anxiety significantly predicted stigma perception in individuals who stutter, $b = .694$, $t(1,115) = 11.600$, $p < .001$. In step 3, stigma perception (mediator) was taken as a predictor and quality of life as an outcome. The analysis showed that stigma perception was a significant predictor of quality of life in individuals who stutter, $b = .025$, $t(1,115) = 7.659$, $p < .001$.

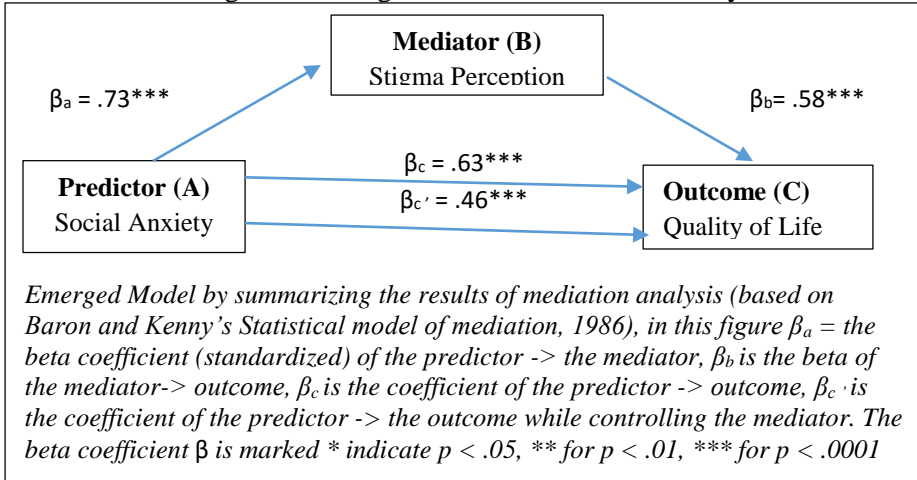
To assess the mediating role of stigma perception between social anxiety and quality of life, a hierarchical regression analysis was performed in step 4 by controlling mediator (stigma perception). The analysis showed that stigma perception partially mediated the relationship between social anxiety and quality of life as the effect of social anxiety on quality of life was reduced in step 4 but remained significant, $b = .019$, $t(2,114) = 4.445$, $p < .001$. Sobel test was further conducted and found partial mediation in the model ($z = 6.79$, $p = .000$).

Table 1. Series of Regression Analyses showing Stigma Perception as a Mediator between Social Anxiety (Predictor) and Quality of Life (Outcome) in Individuals Who Stutter ($N=117$)

Predictors	ΔR^2	β
Step 1 - Quality of Life as an Outcome (Path A-C)		
Social Anxiety	.40	.63***
Total R^2	.40	
Step 2 - Stigma Perception as an Outcome (Path A-B)		
Social Anxiety	.53	.73***
Total R^2	.53	
Step 3 - Quality of Life as an Outcome (Path B-C)		
Stigma Perception	.33	.58***
Total R^2	.33	
Step 4 – Stigma Perception Mediating between Social Anxiety and Quality of Life		
Model 1		
Stigma Perception	.33	.58***
Total R^2	.33	
Model 2		
Stigma Perception	.33	.24*
Social Anxiety	.42	.46***
Total R^2	.43	

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. High score of Quality of Life means poorer quality of life.

Figure 1. Emerged Model of Mediation Analysis



3.3. Assessing Age Differences

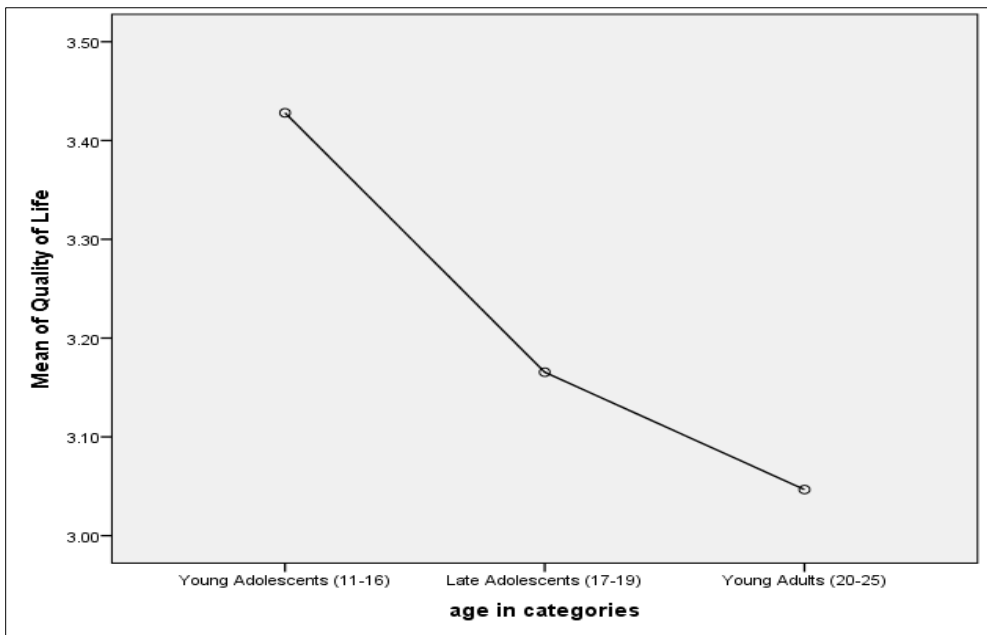
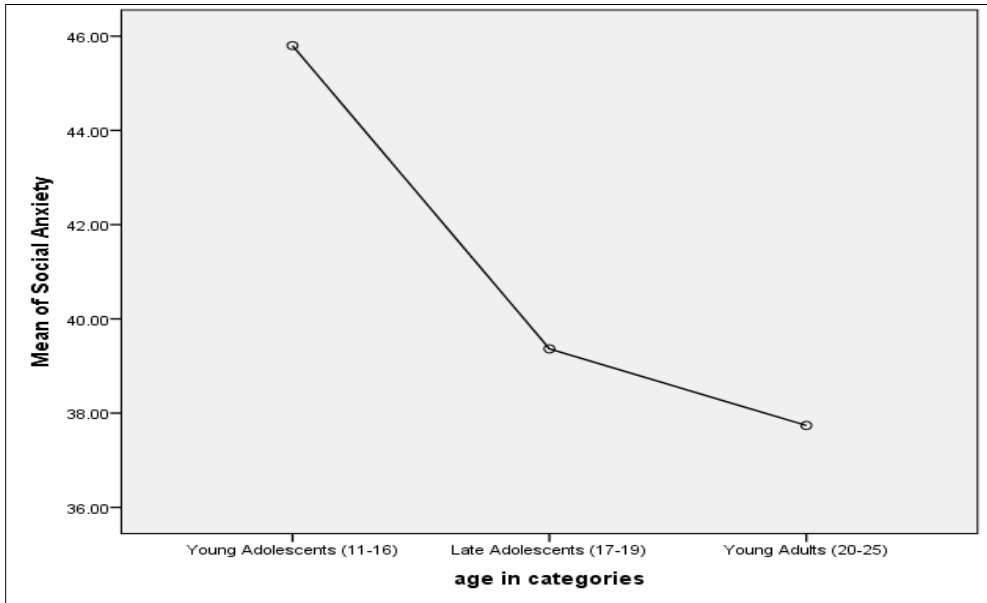
One-way ANOVA results (see Table 2) revealed significant age differences in social anxiety. Post hoc comparisons using the Games-Howell test indicated that the mean score for young adolescents' condition ($M = 45.80$, $SD = 11.72$) was significantly different from young adults ($M = 37.73$, $SD = 15.44$). Furthermore, a significant effect of age groups was observed on quality of life. It was also evident from Post hoc (Games-Howell) analysis that the mean score for young adolescents' condition ($M = 3.42$, $SD = .48$) was significantly different from young adults ($M = 3.04$, $SD = 0.61$; see Figure 2).

Table 2. Showing Differences among Age Groups ($N=117$)

Variables	Age Group	M	SD	F
Social Anxiety	Young Adolescents	45.80	11.72	4.25*
	Late Adolescents	39.36	16.16	
	Adults	37.73	15.44	
Stigma Perception	Young Adolescents	105.84	12.92	1.58
	Late Adolescents	102.27	10.84	
	Adults	101.08	14.65	
Quality of Life	Young Adolescents	3.42	.48	5.86**
	Late Adolescents	3.16	.60	
	Adults	3.04	.61	

Note. * $p < .05$, ** $p < .01$. High score of Quality of Life means poorer quality of life.

Figure 2. Graphical Representation of Age Group Difference



4. DISCUSSION AND CONCLUSION

The current study compared different age groups with a stuttering issue and the results are in line with previous research studies (McAllistera *et al.*, 2015; Merikangas, *et al.*, 2010). Current findings showed higher social anxiety and lower quality of life in young adolescents, when compared with late adolescents and young adults. This highlights that young adolescents with a stuttering problem are more vulnerable towards social anxiety. They are at the stage of learning where they are exposed to newer social experiences. This is also the stage of identity formation. Previous research has also documented that anxiety disorders are more prevalent in children who experience language impairments in their early years (Beitchman *et al.*, 2001). Similarly, in another study, where the researchers again set out to examine the fear of social communication and social anxiety it was found that symptoms of social phobia, that manifested in late adolescence, were preceded by early childhood language impairment (Blumgart *et al.*, 2010).

The current study yielded results in line with the previous research (Byrd *et al.*, 2016; Ezrati-Vinacour and Levin, 2004) by showing a positive relationship between social anxiety, stigma perception, and poor quality of life. The reason behind the positive relation could be that individuals with stuttering (IWS) experience social anxiety while interacting with others. They perceive their stuttering negatively with respect to their speaking competence that ultimately adversely affects their quality of life. Previous studies have shown that stuttering adults were significantly more anxious than non-stutters across anxiety measures. Stuttering is also associated with abnormally elevated social anxiety, 40-60 % of the time (Daniels and Gabel, 2004; Davis *et al.*, 2007; Iverach *et al.*, 2009). It was also noted that due to the negative view of society, people who stutter experience feelings of stigmatization that cause guilt, shame, frustration, self-consciousness, and attempts to hide stuttering (Voci *et al.*, 2006). A study conducted on people of 18 -70 years who stutter, with the majority grappling with holding a negative view of stuttering, found hurdles in getting hired and promoted (Klein and Hood, 2004).

Literature also indicates that adverse effects of stuttering extend beyond childhood and adolescence and go well into adulthood. This chronicity of stuttering negatively influences the overall quality of life including employment, personal life, family, and friends. Communication problem further limits their life opportunities (Craig *et al.*, 2009).

The result of the present study is in line with the literature where stigma perception is found to partially mediate the relationship between social anxiety and QOL in individuals who stutter. In Pakistan, stigma is attached with the

individuals who stutter, as they are deemed less competent. In order to avoid social anxiety and stigma, these individuals may become less interactive, isolate themselves from social gatherings resulting in lower QoL. Young adults who experienced severe anxiety symptoms (Parcesepe and Cabassa, 2012) also reported Lower QoL. A study found that youth with higher levels of social anxiety reported lower QoL (Hoff *et al.*, 2017; Holly *et al.*, 2015). QoL has been found to be related with other social/psychological processes, one of which is self-stigma (Vrbova *et al.*, 2017).

Individuals with self-stigma about any inferiority are likely to feel weak-willed, incompetent, inferior, unable to manage their lives, and being a burden on their significant others due to the existing stereotypes and social prejudices (Craig *et al.*, 2009). The negative stereotypes also affect psychological well-being of people who stutter (Boyle, 2013).

There are very few studies published about anxiety and stuttering in adolescents especially in Pakistan. Therefore, the results of this study are specifically useful for speech and language pathologists and clinical psychologist working with IWS and generally for the stuttering population, their parents, and other significant people in their environment (including their caregivers, teachers, and employers). The findings of this study are helpful in reducing potential stigma and negative stereotypes attached to stuttering by highlighting the cause of the problem and potential solutions. By considering its psychological aspects during treatment, successful recovery results can be taken into account. The study elucidates a need for transdisciplinary and interdisciplinary work in conjunction to bring lasting positive change in the lives of IWS.

In Pakistan, psychological issues are not addressed by people openly and mental health treatment is also not sought due to existing stigmas in the society. Mental health professionals are working to reduce this stigma and encourage psychological management of stuttering. In the light of current study results, integrated therapy by employing speech fluency techniques and psychotherapies can be devised for better management of stuttering and its psychosocial implications.

One of the limitations was lack of awareness among general population about stuttering and its psychological link due to which data collection became challenging. In addition, due to lack of multidisciplinary approach, limited data were collected from speech clinics as people neither consider nor accept that stuttering has a psychological component. In Pakistan, psychological issues are not much addressed by individuals openly and mental health treatment is also not considered important due to existing stigmas in the society. Currently, efforts are being made by the researchers and mental health professionals to

reduce stigma related to psychological interventions and highlighting its importance for the betterment of society. It is recommended that multidisciplinary approaches among professionals must be encouraged in the management of stuttering.

It can be concluded that the group of young adolescents exhibit higher social anxiety and poorer quality of life as compared to late adolescents and young adults, thus they are the most at-risk population and future interventions should consider it as a target group. Stigma reduction must also be targeted if quality of life has to be improved in individuals who stutter due to social anxiety.

Acknowledgements

Respective authors of all assessment tools who gave permission to use their tools in the current study and the institutions who allowed data collection are duly acknowledged.

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