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# A PRELIMINARY STUDY ON THE UNHELPFUL THOUGHTS AND BELIEFS ABOUT STUTTERING (UTBAS) QUESTIONNAIRE IN CROATIA

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**Abstract:** *Along with disrupted speech fluency, people who stutter often develop a fear of speaking or fear of social situations that may lead to the emergence of social anxiety disorder. This has been the subject of numerous studies during recent decades, and specific questionnaires have been developed to assess relationships between stuttering and anxiety. The Unhelpful Thoughts and Beliefs About Stuttering (UTBAS) Questionnaire (St Clare et al. 2009) was developed recently and has been applied to evaluate the frequency and belief in thoughts about stuttering and the degree of anxiety induced by such thoughts.*

*The aim of our preliminary study was to test the Croatian translation of the UTBAS (UTBAS-C) on people who stutter and those who do not stutter and to determine whether there is a statistically significant difference between these two groups, i.e. whether people who stutter are more socially anxious than people who do not stutter. Participants were 16 adults who stutter and 16 controls with normal fluency, aged 18-40 years. Because the results were not distributed normally, all data were analyzed with a non-parametric statistical method. The results showed a statistically significant difference between adults who stutter and those who do not. People who stutter had higher total scores on the Questionnaire, i.e. they are more socially anxious or have more negative thoughts and beliefs regarding speech-related situations than fluent adults.*

*The results of our preliminary study are not unexpected and are consistent with most previous studies on the relationship between stuttering and anxiety. However, as there is a lack of specific instruments in the Croatian language that can be used in diagnosing adults who stutter; especially their attitudes and emotions, our translation of and further research on the UTBAS should help to fill that absence. This study should also alert clinicians working with adults who stutter of the importance and influence of attitudes and beliefs on therapy outcome.*

**Keywords:** *stuttering, social anxiety, adults who stutter, attitudes, beliefs, Croatian language*

## INTRODUCTION

Speech is a fundamental mechanism underlying everyday interaction with others, and social relationships are grounded, developed and maintained through it. Stuttering can often be associated with a lower quality of life, which can be seen in various domains of life, such as social life and emotional functioning (Craig et al, 2009; Blumgart et al., 2014). In some who stutter, social harm connected to their stutter can interfere with social activities, which can be followed by a sense of shame and humiliation and as a result lead to reduced moti-

vation to get involved in social situations and avoiding speaking (Craig & Tran, 2014). In such circumstances, social anxiety can appear (Poulton & Andrews, 1994; Messenger et al., 2004). Social anxiety is one of the most commonly observed psychological phenomena in people who stutter (Ingham, 1984; Iverach et al., 2011), and the reason for this is the importance of speech for daily activities (Messenger et al., 2004). It can prevent normal social development and because of it, individuals usually avoid social, educational and professional situations as they perceive them to be a threat (Cuthbert, 2002; Iverach & Rapee, 2014). Avoiding

situations that a person fears can have a negative impact on daily activities, routine, business, academic performance, social life and relationships. Such difficulties may appear during preschool (Ezrati-Vinacour et al., 2001; Langevin et al., 2009; Iverach et al., 2011) and continue throughout life.

Although studies have shown different results, there are some indications that negative attitudes and speech-related anxiety can occur at a very early age, even from the age of 3 years. In a study by Vanryckeghem et al. (2005) where preschool children were examined using a measure of attitude toward communication called KiddyCat, the results showed that preschoolers who stutter had more negative attitudes towards communication than control preschool children. Van der Merwe et al. (2011) examined whether preschool children who stutter are more socially anxious than their peers who do not stutter, especially in social situations. No significant differences were found in state or trait anxiety between the two groups of children, and no relationship was evident on measures of stuttering behavior and anxiety (van der Merwe et al., 2011). More studies show evidence that anxiety-related issues affect school-age children and adolescents who stutter. A study by Gunn and associates (2013) in which they investigated anxiety in 37 adolescents who stutter (12–17 years) using a battery of assessments have shown that adolescents who stutter received at least one diagnosis of a mental disorder, with the majority of these diagnoses involving anxiety (Gunn et al., 2013).

A large number of studies have shown that adults who stutter have high levels of social anxiety (Stein, 1996; Kraaimaat et al., 2002; Messenger et al., 2004). One study that examined social anxiety in people who stutter was carried out by Kraaimaat et al. (2002). A group of people who stutter had higher results on a social anxiety test than those who do not stutter. Fifty percent of people who stutter scored as high as socially anxious psychiatric patients. The study also showed that people who stutter were less likely to engage in social interactions than people who do not stutter. A study conducted by Messenger et al. (2004) estimated the difference in expectation of negative social appraisal by comparing the group of people who stutter and the group of those who do not stutter. Those

who stutter scored much higher, i.e. were more anxious than those who do not stutter. Blumgart et al. (2010) compared a group of 200 people who stutter with a group of 200 who do not. People who stutter proved to be more anxious than those who do not.

Diagnostic assessment of anxiety is necessary to evaluate the presence and frequency of stutterers' social anxiety. However, diagnosing social anxiety among people who stutter was previously limited by the exclusion criteria specified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; 4th edition, revised text; American Psychiatric Association, 2000). More specifically, according to DSM-IV, social anxiety disorder could not be diagnosed in cases where social anxiety and avoidance occurred due to another disorder, such as stuttering. Changes in diagnostic criteria have been introduced in the DSM-V and they were a response to many pieces of evidence suggesting that stuttering may be associated with excessive social anxiety (DSM-5; American Psychiatric Association, 2013) This change represents a major breakthrough in improving the possibilities for treatment and quality of life for people who stutter and have social anxiety disorder (Iverach & Rapee, 2014).

There are a lot of ways to examine the relationship between stuttering and social anxiety. One is by paper-and-pencil self-report, such as the Unhelpful Thoughts and Beliefs about Stuttering (UTBAS) Questionnaire. The UTBAS Questionnaire was developed by psychologists and speech therapists who put together a list of 66 thoughts and attitudes expressed by people who stutter (St Clare et al., 2009; Iverach et al., 2011; Onslow, 2017) and who have undergone cognitive-behavioral therapy for social anxiety (St Clare et al., 2009). The first version, which contained only one scale, was conducted at the University of Sydney by St Clare and associates in 2009. Later, Iverach et al. (2009) further developed and validated the original UTBAS-I scale as a measure of unhelpful thoughts and beliefs about stuttering among a large sample of adults seeking speech treatment for stuttering. Their aim was to extend the original UTBAS-I scale to include assessment of the frequency of negative thoughts and beliefs (UTBAS-I); belief

in these thoughts (UTBAS-II); anxiety associated with these thoughts (UTBAS-III); and the total frequency, belief and anxiety associated with these thoughts (UTBAS Total). The UTBAS scales provide a comprehensive measure of unhelpful cognition associated with social anxiety in stuttering. Of the 66 items included in the full UTBAS, 27 make a specific reference to stuttering (e.g., “People who stutter are boring”), and 39 make no reference to stuttering (e.g., “People will laugh at me”). Although the UTBAS Questionnaire can be used easily by speech therapists to fully assess social anxiety for adults seeking treatment for stuttering and is useful for a full assessment of unhelpful cognition associated with anxiety, completing the 198 items in the full version can be time-consuming. Therefore Iverach and et al. (2016) created a brief version of the UTBAS Questionnaire (UTBAS-6) to be used as a screening instrument. The UTBAS-6 can assess negative thoughts associated with stuttering, including fear of negative evaluation (“*People will think I’m strange,*” “*People will think I’m incompetent because I stutter*”), avoidance (“*I don’t want to go—people won’t like me*”), self-doubt and lack of confidence (“*I’ll never finish explaining my point—they’ll misunderstand me*”), and hopelessness (“*What’s the point of even trying to speak—it never comes out right,*” “*I’ll never be successful because of my stutter*”) (Iverach et al., 2016). For one of the recent studies, done by Chu et al. (2017), the UTBAS Questionnaire was translated into Japanese (UTBAS-J) and the authors concluded that UTBAS is a reliable instrument for evaluating the negative thoughts and beliefs associated with stuttering among Japanese adults who stutter.

Studies show that after speech restructuring therapy aimed at reducing or eliminating stuttering, only one-third of clients are able to sustain their treatment benefits, i.e. the relapse rate after speech treatment is around two-thirds (Onslow, 2017). The reason why so many people go back to their old way of speaking after speech therapy was not known until studies linked this relapse with anxiety (Craig & Hancock, 1995; Onslow, 2017). Craig & Hancock (1995) found that one-third of the clients confirmed they did not sustain their new way of speaking and they had higher scores on

a test that examined anxiety (Craig & Hancock, 1995; Onslow, 2017). These results were confirmed by research conducted by Iverach and associates in 2009.

Although many studies have been conducted around the world on various stuttering treatments and their outcomes, we have no data about therapies in Croatia. There is very little information about approaches applied in stuttering treatments for adults in Croatia, so we do not know how much they include speech-related anxiety. With the lack of treatment data there is also a lack of assessment tools and studies of the relationship between stuttering and social anxiety. Therefore, translation of the UTBAS scale into Croatian (UTBAS-C) and its standardization would be of great importance for both speech language therapists and people who stutter.

## AIM

As mentioned above, a client’s social anxiety can interfere with treatment outcome, and the UTBAS Questionnaire can help speech language therapists learn a lot about the client’s beliefs, thoughts, emotions and speech. In order to improve therapy outcomes, the aim of this preliminary study was to use the UTBAS-C to examine and compare negative attitudes and beliefs of people who stutter and those who do not stutter in Croatia.

## HYPOTHESIS

Based on the results of previous studies, the assumption was that there would be a statistically significant difference in total scores on the UTBAS Questionnaire between people who stutter and those who do not.

## METHOD

### Participants

A total of 32 participants were included in the study. The subjects were recruited through the Croatian stuttering association “Hinko Freund” and social networks. They were divided into two groups: 16 people who stutter and 16 people who do not. In each group there were 8 men and 8 women. The age range in the group of people

who stutter ranged from 18 to 40 years ( $M=23.69$ ,  $SD=4.97$ ) while in the second group it ranged from 19 to 31 years ( $M=25.31$ ,  $S=3.19$ ).

Participants from the first group started to stutter at an early age and all had been diagnosed with stuttering. None of the subjects who stuttered was taking part in stuttering therapy at the time of this study.

### Measurement tools and variables

Participants were tested with the UTBAS-C. With the permission of the original UTBAS Questionnaire authors, the questionnaire was translated into Croatian by a native Croatian speaker who was also a speech-language therapist fluent in English. The translated version was then verified by a native Croatian speaker with a master's degree in English language and literature. The Croatian version of the Questionnaire was then back-translated into English by a speech therapist fluent in English who was a native Croatian speaker and who had a doctoral degree in the field of speech and language sciences from the University of Cambridge.

The Questionnaire is a self-report instrument that contains 66 items that assess the frequency of unhelpful thoughts and beliefs and can assess social anxiety in people who stutter (St Clare et al., 2009). There are 39 items on the Questionnaire that are general, not connected to stuttering (items 8, 9, 13, 16-18, 20-24, 27-29, 31, 33, 35-37, 41-44, 46-60, and 63) and 27 stuttering-specific items (see Appendix).

For each of these thoughts, a person has to give scores on three scales. The UTBAS-I scale evaluates the frequency of negative thoughts and beliefs about stuttering ('how frequently I have these thoughts'); the UTBAS-II scale evaluates how realistic, accurate, or correct respondents believe these negative thoughts are ('how much I believe these thoughts'), and the UTBAS-III scale appraises how worried, concerned, or anxious respondents are when they have these thoughts ('how anxious these thoughts make me feel').

A 5-point rating scale is used to indicate a response for each item (1 = never or not at all, 2 = rarely or a little, 3 = sometimes or somewhat, 4 = often or a lot, 5 = always or totally).

Item responses for the three UTBAS scales are summed to produce a score ranging from 66 to 330 for each scale. Item responses for all three scales can be summed to yield an UTBAS total score ranging from 198 to 990. A higher UTBAS total score indicates a higher frequency of unhelpful thoughts and beliefs about stuttering and greater anxiety associated with these thoughts (Lowe, 2017).

### Procedure

The Questionnaire was sent by e-mail to participants. People who stutter responded to all 66 items in the Questionnaire that are both general (questioning social anxiety) and assess speech-related anxiety and stuttering. People who do not stutter gave scores on 39 general items. Participants were instructed to provide scores from 1 to 5 on all three scales, according to their attitudes and beliefs. Although there are 66 items in this Questionnaire, the results of people who stutter and those who do not stutter were compared on 39 items.

### Data Analysis

Collected data were statistically analyzed using SPSS Statistics 24 (IBM). Various statistical analyses were carried out, including descriptive statistics for which basic statistical parameters were calculated.

Normality of distribution was tested using the Shapiro-Wilk test, which indicated that the results on all three scales (total score) were not distributed normally. For this reason, the nonparametric Mann-Whitney U-test for two independent samples was used. The Questionnaire examined whether there were any statistically significant differences between participants who stutter and participants who do not. Statistical significance was questioned for each item on all three UTBAS scale scores and UTBAS Total score.

### RESULTS

Items that are not related to stuttering but are general are shown in this study. There are 39 items on the Questionnaire. Table 1 shows differences between two groups, i.e.  $p$  values on the items, on all three scales (UTBAS-C I, II, III). On most of

**Table 1.** A comparison between groups on 39 items of the UTBAS-C Questionnaire based on the Mann-Whitney U test

ITEM	UTBAS-C I				UTBAS-C II				UTBAS-C III				
	GROUP**/ 32	Mean rank	Sum of ranks	Mann - Whitney Test		Mean rank	Sum of ranks	Mann - Whitney Test		Mean rank	Sum of ranks	Mann - Whitney Test	
				U	P			U	P			U	P
8. People focus on every word I say.	PWS (16)	19.56	313.00	79.000	0.047*	19.75	316.00	76.000	0.032*	21.50	344.00	48.000	0.001*
	PWNS (16)	13.44	215.00			13.25	212.00			11.50	184.00		
9. I am incompetent.	PWS (16)	19.16	306.50	85.500	0.105	17.81	285.00	107.000	0.405	17.84	285.50	106.500	0.378
	PWNS (16)	13.84	221.50			15.19	243.00			15.16	242.50		
13. I'm stupid.	PWS (16)	17.41	278.50	113.500	0.551	17.13	274.00	118.000	0.673	18.13	290.00	102.000	0.285
	PWNS (16)	15.59	249.50			15.88	254.00			14.88	238.00		
16. I won't be able to answer their questions.	PWS (16)	20.41	326.50	65.500	0.014*	20.03	320.50	71.500	0.027*	20.53	328.50	63.500	0.012*
	PWNS (16)	12.59	201.50			12.97	207.50			12.47	199.50		
17. I'm hopeless.	PWS (16)	19.91	318.50	73.500	0.031*	19.41	310.50	81.500	0.054	20.47	327.50	64.500	0.010*
	PWNS (16)	13.09	209.50			13.59	217.50			12.53	200.50		
18. I'm of no use in the workplace.	PWS (16)	19.59	313.50	78.500	0.042*	19.78	316.50	75.500	0.033*	19.88	318.00	74.000	0.031*
	PWNS (16)	13.41	214.50			13.22	211.50			13.13	210.00		
20. I'll block completely and won't be able to talk.	PWS (16)	21.09	337.50	54.500	0.004*	20.53	328.50	63.500	0.012*	22.84	365.50	26.500	0.000*
	PWNS (16)	11.91	190.50			12.47	199.50			10.16	162.50		
21. Everyone will think I'm an idiot.	PWS (16)	19.59	313.50	78.500	0.045*	20.31	325.00	67.000	0.014*	21.56	345.00	47.000	0.001*
	PWNS (16)	13.41	214.50			12.69	203.00			11.44	183.00		
22. I can't speak to people in positions of authority.	PWS (16)	21.06	337.00	55.000	0.004*	19.78	316.50	75.500	0.035*	21.72	347.50	44.500	0.001*
	PWNS (16)	11.94	191.00			13.22	211.50			11.28	180.50		
23. People will think I'm strange.	PWS (16)	19.28	308.50	83.500	0.081	19.75	316.00	76.000	0.036*	22.66	362.50	29.500	0.000*
	PWNS (16)	13.72	219.50			13.25	212.00			10.34	165.50		
24. People will think I can't speak Croatian.	PWS (16)	21.66	346.50	45.500	0.001*	20.69	331.00	61.000	0.003*	19.50	312.00	80.000	0.032*
	PWNS (16)	11.34	181.50			12.31	197.00			13.50	216.00		
27. I can't speak to aggressive people.	PWS (16)	19.94	319.00	73.000	0.026*	19.69	315.00	77.000	0.047*	19.75	316.00	76.000	0.046*
	PWNS (16)	13.06	209.00			13.31	213.00			13.25	212.00		
28. People will think that I have no opinions.	PWS (16)	19.44	311.00	81.000	0.061	22.16	354.50	37.500	0.000*	19.66	314.50	77.500	0.024*
	PWNS (16)	13.56	217.00			10.84	173.50			13.34	213.50		
29. People will think I'm boring because I have nothing to say.	PWS (16)	21.44	343.00	49.000	0.002*	19.75	316.00	76.000	0.039*	19.94	319.00	73.000	0.033*
	PWNS (16)	11.56	185.00			13.25	212.00			13.06	209.00		
31. I can't face these people.	PWS (16)	18.94	303.00	89.000	0.106	20.94	335.00	57.000	0.004*	19.47	311.50	80.500	0.038*
	PWNS (16)	14.06	225.00			12.06	193.00			13.53	216.50		
33. What will people think of me if they disagree with what I say?	PWS (16)	18.34	293.50	98.500	0.241	18.00	288.00	104.000	0.353	19.41	310.50	81.500	0.067
	PWNS (16)	14.66	234.50			15.00	240.00			13.59	217.50		
35. I don't want to go—people won't like me.	PWS (16)	20.34	325.50	66.500	0.016*	19.97	319.50	72.500	0.017*	21.22	339.50	52.500	0.002*
	PWNS (16)	12.66	202.50			13.03	208.50			11.78	188.50		
36. My pauses are too long—people will think I'm weird.	PWS (16)	21.31	341.00	51.000	0.003*	22.19	355.00	37.000	0.000*	21.88	350.00	42.000	0.000*
	PWNS (16)	11.69	187.00			10.81	173.00			11.13	178.00		
37. People won't like me because I won't be able to talk.	PWS (16)	19.19	307.00	85.000	0.088	21.16	338.50	53.500	0.003*	19.66	314.50	77.500	0.044*
	PWNS (16)	13.81	221.00			11.84	189.50			13.34	213.50		
41. I'll make a fool of myself.	PWS (16)	22.25	356.00	36.000	0.000*	19.56	313.00	79.000	0.039*	21.22	339.50	52.500	0.001*
	PWNS (16)	10.75	172.00			13.44	215.00			11.78	188.50		
42. People get tired of waiting for me to get my words out.	PWS (16)	22.59	361.50	30.500	0.000*	22.13	354.00	38.000	0.000*	23.68	374.00	18.000	0.000*
	PWNS (16)	10.41	166.50			10.88	174.00			9.63	154.00		
43. People shouldn't have to wait so long for me to speak.	PWS (16)	24.28	388.50	3.500	0.000*	22.38	358.00	34.000	0.000*	21.56	345.00	47.000	0.000*
	PWNS (16)	8.72	139.50			10.63	170.00			11.44	183.00		
44. I always embarrass the people I'm speaking to.	PWS (16)	20.94	335.00	57.000	0.003*	18.44	295.00	97.000	0.185	19.88	318.00	74.000	0.027*
	PWNS (16)	12.06	193.00			14.56	233.00			13.13	210.00		
46. People will think that I'm worthless.	PWS (16)	17.63	282.00	110.000	0.471	16.91	270.50	121.500	0.794	19.47	311.50	80.500	0.059
	PWNS (16)	15.38	246.00			16.09	257.50			13.53	216.50		
47. I'll embarrass myself.	PWS (16)	20.84	333.50	58.500	0.007*	20.22	323.50	68.500	0.019*	20.84	333.50	58.500	0.006*
	PWNS (16)	12.16	194.50			12.78	204.50			12.16	194.50		
48. I can't speak to people I find sexually attractive.	PWS (16)	20.50	328.00	64.000	0.011*	20.38	326.00	66.000	0.011*	19.94	319.00	73.000	0.025*
	PWNS (16)	12.50	200.00			12.63	202.00			13.06	209.00		

ITEM	UTBAS-C I					UTBAS-C II				UTBAS-C III			
	GROUP**/ 32	Mean rank	Sum of ranks	Mann - Whitney Test		Mean rank	Sum of ranks	Mann - Whitney Test		Mean rank	Sum of ranks	Mann - Whitney Test	
				U	P			U	P			U	P
49. No one will understand what I'm trying to say.	PWS (16)	19.53	312.50	79.500	0.053	20.31	325.00	67.000	0.017*	20.34	325.50	66.500	0.011*
	PWNS (16)	13.47	215.50			12.69	203.00			12.66	202.50		
50. What's the point of even trying to speak—it never comes out right.	PWS (16)	22.00	352.00	40.000	0.000*	22.72	363.50	28.500	0.000*	23.56	377.00	15.000	0.000*
	PWNS (16)	11.00	176.00			10.28	164.50			9.44	151.00		
51. I won't be able to say exactly what I want to say.	PWS (16)	18.31	293.00	99.000	0.252	18.94	303.00	89.000	0.114	18.63	298.00	94.000	0.176
	PWNS (16)	14.69	235.00			14.06	225.00			14.38	230.00		
52. Everyone will think I'm simple or dumb because I avoid using difficult words.	PWS (16)	21.56	345.00	47.000	0.001*	22.91	366.50	25.500	0.000*	21.16	338.50	53.500	0.003*
	PWNS (16)	11.44	183.00			10.09	161.50			11.84	189.50		
53. I slow up everyone's conversation.	PWS (16)	19.28	308.50	83.500	0.057	21.47	343.50	48.500	0.001*	22.81	365.00	27.000	0.000*
	PWNS (16)	13.72	219.50			11.53	184.50			10.19	163.00		
54. Everyone hates it when I start to speak.	PWS (16)	22.19	355.00	37.000	0.000*	21.63	346.00	46.000	0.001*	20.41	326.50	65.500	0.006*
	PWNS (16)	10.81	173.00			11.38	182.00			12.59	201.50		
55. I can never speak on the phone.	PWS (16)	19.81	317.00	75.000	0.035*	20.91	334.50	57.500	0.004*	19.66	314.50	77.500	0.037*
	PWNS (16)	13.19	211.00			12.09	193.50			13.34	213.50		
56. I won't be able to ask for what I want.	PWS (16)	20.63	330.00	62.000	0.009*	21.88	350.00	42.000	0.001*	21.91	350.00	41.500	0.001*
	PWNS (16)	12.38	198.00			11.13	178.00			11.09	177.50		
57. The person on the other end of the phone will hang up on me.	PWS (16)	23.56	377.00	15.000	0.000*	23.91	382.50	9.500	0.000*	22.75	364.00	28.000	0.000*
	PWNS (16)	9.44	151.00			9.09	145.50			10.25	164.00		
58. People will laugh at me.	PWS (16)	20.66	330.50	61.500	0.006*	21.50	344.00	48.000	0.001*	21.44	343.00	49.000	0.001*
	PWNS (16)	12.34	197.50			11.50	184.00			11.56	185.00		
59. People will think I'm mute.	PWS (16)	23.69	379.00	13.000	0.000*	23.13	370.00	22.000	0.000*	23.28	372.50	19.500	0.000*
	PWNS (16)	9.31	149.00			9.88	158.00			9.72	155.50		
60. I'll never finish explaining my point—they'll misunderstand me.	PWS (16)	19.28	308.50	83.500	0.071	21.13	338.00	54.000	0.002*	20.03	320.50	71.500	0.020*
	PWNS (16)	13.72	219.50			11.88	190.00			12.97	207.50		
63. I won't be able to say 'hello' when I pick up the phone.	PWS (16)	23.25	372.00	20.000	0.000*	23.63	378.00	14.000	0.000*	23.00	368.00	24.000	0.000*
	PWNS (16)	9.75	156.00			9.38	150.00			10.00	160.00		

\*statistically significant at  $p < 0.05$

\*\*PWS- participants who stutter; PWNS- participants who do not stutter

these items, people who stutter (PWS) gave higher scores than people who do not stutter (PWNS). On five items, no statistically significant difference was found on any of the three scales.

Table 2 shows statistical difference between two groups of participants (PWS and PWNS), on each scale of the UTBAS-C Questionnaire. There was a statistically significant difference between the two groups on all three scales (UTBAS-C I,  $p = 0.001$ ; UTBAS-C II,  $p = 0.000$ ; UTBAS-C III,  $p = 0.000$ ).

Table 3 shows that there was a significant difference between the groups on UTBAS-C Questionnaire Total score ( $p = 0.000$ ).

## DISCUSSION

This study is a preliminary one on the UTBAS Questionnaire in Croatia and it suggests that the Questionnaire translated into Croatian is a good

assessment tool for evaluating social anxiety in people who stutter. The results of this study confirmed that, as a group, people who stutter are more anxious than people who do not. Statistically significant differences were found between adults who stutter and fluent adults on all three UTBAS scale scores as well as on UTBAS Total scores. A comparison between these two groups was done on all 39 items examined. There was a statistically significant difference on 34 items and no statistically significant difference on only five items.

Stuttering is a complex disorder. It can be associated with fear of negative evaluation, attentional biases, negative cognitions and the use of safety behaviors (to reduce anxiety). All of these are also experienced by nonstuttering individuals with social anxiety disorder; they are implicated in the etiology of social anxiety disorder and involved in the maintenance of social anxiety among adults

**Table 2.** A comparison between groups across UTBAS-C I, II, III scales based on the Mann-Whitney U test

GROUP**/ 32	UTBAS-C I				UTBAS-C II				UTBAS-C III			
	Mean rank	Sum of ranks	Mann-Whitney Test		Mean rank	Sum of ranks	Mann-Whitney Test		Mean rank	Sum of ranks	Mann-Whitney Test	
			U	P			U	P			U	P
PWS (16)	22.25	356.00	36.000	0.001*	22.41	358.50	33.500	0.000*	23.25	372.00	20.000	0.000*
PWNS (16)	10.75	172.00			10.59	169.50			9.75	156.00		

\*statistically significant at  $p < 0.05$ 

\*\*PWS- participants who stutter; PWNS- participants who do not stutter

**Table 3.** Comparison between groups on UTBAS-C Total score based on the Mann-Whitney U test

GROUP**/ 32	UTBAS-C			Mann - Whitney Test	
	Mean rank	Sum of ranks		U	P
PWS (16)	22.50	360.00		32.000	0.000*
PWNS (16)	10.50	168.00			

\*statistically significant at  $p < 0.05$ 

\*\*PWS- participants who stutter; PWNS- participants who do not stutter

who stutter (Iverach & Rapee, 2014; Iverach et al., 2017). Most influential models of maintenance of social anxiety are by Clark and Wells (1995) and Rapee and Heimberg (1997). These two models propose that self-focused attention in social situations is fundamental to generating and maintaining anxiety and impairing social performance, and that socially anxious individuals tend to assume that other people will negatively evaluate them. Iverach et al. (2017) identified five key assumptions from both of these models that may be implicated in the maintenance of social anxiety in stuttering. Some of these assumptions can help us to better understand these results.

Some socially anxious individuals assume that they will be negatively evaluated by others and overestimate the consequences of negative evaluation. This is because from early childhood, they are continuously exposed to negative social reactions, which can cause a person who stutters to form a belief that negative evaluation will occur in all social and speaking situations. Fluent adults tend to avert their gaze (Zhang & Kalinowski, 2012) and demonstrate physiological and negative emotional reactions to stuttered speech (Guntupalli et al., 2007). For that reason, people who stutter can dread or avoid social and speaking situations because of the constant fear of a negative evaluation (Iverach et al., 2017). Items such as 21 (*'Everyone will*

*think I'm an idiot'*), 23 (*'People will think I'm strange'*), 28 (*'People will think that I have no opinions'*), 37 (*'People won't like me because I won't be able to talk'*) or 52 (*'Everyone will think I'm simple or dumb because I avoid using difficult words'*) are a good example of what is the state of mind of a person who stutters in feared situations.

When socially anxious people who stutter find themselves in a social situation, they tend to form a negative mental representations of themselves and their performance (speech) as seen by the audience, i.e. how they appear to others. Since their main concern is speech, they underestimate their speech and overestimate the severity of their stuttering (Iverach et al., 2017). This kind of situation occurs in some of the items where a statistically significant difference was found: 17 (*'I'm hopeless'*), 18 (*'I'm of no use in the workplace'*), 44 (*'I always embarrass the people I'm speaking to'*), 48 (*'I can't speak to people I find sexually attractive'*) and 54 (*'Everyone hates it when I start to speak'*). Socially anxious individuals who stutter engage in anticipatory and post-event processing that involve recurrent and intrusive thoughts about what might happen in social-evaluative situations and can include the recollection of past social failures (Clark & Wells, 1995; Rapee & Heimberg, 1997; Iverach et al., 2017). Most likely their thoughts will be about stuttering or about negative reactions of



the listener to their stuttering. Adults who stutter have been found to endorse negative anticipatory thoughts such as in item 16 (*‘I won’t be able to answer their questions’*), item 21 (*‘Everyone will think I’m an idiot’*), item 24 (*‘People will think I can’t speak Croatian’*), item 29 (*‘People will think I’m boring because I have nothing to say’*), item 35 (*‘I don’t want to go—people won’t like me’*), item 36 (*‘My pauses are too long—people will think I’m weird’*), item 41 (*‘I’ll make a fool of myself’*), item 47 (*‘I’ll embarrass myself’*) and item 49 (*‘No one will understand what I’m trying to say’*).

There was a statistically significant difference on item 20 (*‘I’ll block completely and won’t be able to talk’*). The reason for this may be the fact that people who stutter can easily identify with this belief, as blockage is a common stuttering behavior (Yairi & Seery, 2015), although this item falls among 39 general items that are not related to stuttering. Item 55 (*‘I can never speak on the phone’*), item 56 (*‘I won’t be able to ask for what I want’*), item 57 (*‘The person on the other end of the phone will hang up on me’*), item 58 (*‘People will laugh at me’*), item 59 (*‘People will think I’m mute’*), item 60 (*‘I’ll never finish explaining my point – they’ll misunderstand me’*) and item 63 (*‘I won’t be able to say ‘hello’ when I pick up the phone’*) are statements to which a person who stutters can relate more easily than a person who does not stutter, because answering or talking on the phone is one of the most frequently mentioned feared situations among people who stutter (James et al., 1999; Onslow, 2017).

However, there are exceptions on the individual level: not all participants who stutter had higher scores on every item of the Questionnaire in comparison with those who do not stutter. As noted before there are five items (out of 39) where there was no statistically significant difference found on any of the three scales: item 9 (*‘I am incompetent’*), item 13 (*‘I’m stupid’*), item 33 (*‘What will people think of me if they disagree with what I say?’*), item 46 (*‘People will think that I’m worthless’*), and item 51 (*‘I won’t be able to say exactly what I want to say’*). It is hard to explain what these items have in common and why scores on these items were not statistically different. Three of

the items are more general and not speech-related, while the other two are speech-related, especially the last one, which can be connected to the way of speaking and stuttering. Although there was no statistical difference on these items, people who stutter did give slightly higher scores than people who do not stutter. Just like those who stutter, sometimes young adults who do not stutter have negative thoughts and beliefs about themselves. Most of the participants in this study were young adults, students or newly employed, in the age range of 19 to 31 years ( $M = 25.31$ ,  $SD = 3, 19$ ). Vanryckeghem et al. (2017) evaluated the usefulness of the Speech Situation Checklist for adults who stutter. The Checklist has 2 sections: emotional reactions and speech disruption. They compared people who stutter and those who do not stutter on self-reports of anxiety and speech disruption in communicative settings. They found that these self-report tests differentiated people who stutter from those who do not. One of their variables was age. They compared young and older adults within the groups. They found that, in both groups, young adults scored higher on the Checklist, and age varied inversely with score (Vanryckeghem et al., 2017); older participants were less anxious. In addition, for young adults who stutter, the score on the Checklist for speech disruption was higher, although not significantly so, than the score for older participants. One longitudinal study done by Orth, Trzesniewski, & Robins (2010), where they studied development of self-esteem during 16 years from young adulthood to old age (age range 25-104,  $M = 54.0$ ,  $SD = 17.6$ ), found that self-esteem increased during young and middle adulthood, reached a peak at about age 60 years, and declined in old age (Orth et al., 2010). We can conclude that people who stutter do have more negative thoughts and beliefs about themselves, their performance in social situations, and their speech, but that there are some individual differences and people who do not stutter, especially young adults, can sometimes also have negative thoughts and concerns about themselves.

Although these results are preliminary they are consistent with most studies previously done on the relationship between stuttering and anxiety, including those done using UTBAS. They confirm

that UTBAS-C is able to discriminate participants who stutter and participants who do not stutter on items that contain no reference to stuttering, as in St Clare et al. (2009). Those authors, in their study to develop the UTBAS Questionnaire, compared a group of people who stutter before cognitive-behavioral therapy and a group of people who do not stutter. There was a statistically significant difference between the two groups: those who stutter achieved significantly higher results. This confirms that the UTBAS Questionnaire is a good assessment tool for evaluating speech-related anxiety in people who stutter. It can also discriminate between stuttering and control participants' unhelpful cognition related to social anxiety, with large effect sizes (known-group validity). People who stutter gave higher scores on almost all items such as "I can't speak to aggressive people" or "People will think that I have no opinions". As in the present study, the original study describing UTBAS reported that individuals who stutter, despite being in therapy, "sometimes" or "rarely" have these thoughts (St Clare et al., 2009).

In a large number of studies about the connection between stuttering and social anxiety, statistically significant differences were found between people who stutter and those who do not. One of these studies was conducted by Mahr and Torosian in 1999. They compared people who stutter, people who do not stutter and a group of people with diagnosed social anxiety. Their research showed that people who stutter are more anxious than those who do not, and similarly anxious as those diagnosed with social anxiety. These results suggest that although people who stutter and people with social anxiety may have a similar level of anxiety, those who stutter are less disturbed in everyday social situations than those with social anxiety (Mahr and Torosian, 1999).

Ezrati-Vinacour and Levin (2004) examined the relationship between social anxiety and stuttering using two questionnaires among 94 participants who stutter and do not stutter. Their results revealed that trait anxiety was higher among people who stutter compared to fluent speakers, thus indicating that anxiety is a personality trait of people who stutter (Ezrati-Vinacour & Levin, 2004).

Iverach and associates (2009) have done a study where they compared the rate of anxiety disorders between adults who stutter and seek speech therapy and fluent controls, using a number of assessment tools for anxiety disorders, social phobia, generalized anxiety disorder and panic disorder. Their results showed significantly higher scores for adults who stutter, i.e. the group who stutters had increased odds of satisfying the diagnostic criteria of any DSM-IV or ICD-10 anxiety disorder and social phobia, DSM-IV generalized anxiety disorder and ICD-10 panic disorder (Iverach et al., 2009).

A study by Iverach and associates (2009) examined whether there is a relationship between pre-treatment stuttering severity and psychological variables, and whether psychological variables impair the maintenance of treatment gains, i.e. does the presence of mental health disorders contribute to failure to maintain fluency after treatment. Their study included 64 adults who stutter. Stuttering frequency, self-rated stuttering severity and self-reported avoidance were measured before treatment, immediately after treatment and 6 months after treatment (speech restructuring program). The results showed the impact of mental health disorders on the treatment outcome domains of stuttering frequency and situation avoidance. Medium-term outcomes were worse in the presence of mental health disorders. One-third of the patients that maintained the benefits of the treatment for 6 months were without a mental health disorder. These results suggest that prognosis for the ability to maintain fluency after speech restructuring should be guarded for clients with mental health disorders. Further research is needed to determine the benefits of treating such disorders prior to, or in combination with, speech restructuring (Iverach et al., 2009).

## CONCLUSION

According to the data presented, we can conclude that people who stutter are more anxious than people who do not stutter, and the fact is that it can cause discomfort, feelings of helplessness, shame, frustration, anxiety, sadness and nervousness in people who stutter. According to many diagnostic evaluations, various features of social anxiety are present in stutterers, such as, for example, fear of

negative evaluation and fear of speech situations, which can maintain social anxiety and make stuttering worse (Iverach & Rapee, 2014).

An important fact is that most studies examining anxiety in people who stutter include only individuals who have undergone stuttering therapy. This indicates that one of the reasons why people who stutter start speech therapy is probably the negative feelings related to speech situations or the presence of anxiety. For this reason, one of the essential elements in therapy, assessment or diagnosis should be to examine the level of social anxiety in people who stutter. Speech therapists should always be aware that there is a high possibility that a person who stutters has an increased level of anxiety (Craig & Tran, 2005, ), and the person who stutters should be aware that stuttering can lead to social anxiety, which consequently has a negative impact on various aspects of life, i.e. reduces quality of life.

There is a lack of instruments for stuttering, for adults who stutter and for assessing social anxiety in people who stutter in Croatia. This study was the first step towards making an effective instrument that could help people who stutter and clinicians. As many studies today point out, it is most important to assess social anxiety in those who stutter

because not only does it have a negative impact on the quality of life and mental health of a person who stutters, but it can also have a negative impact on speech therapy outcomes.

We used the UTBAS Questionnaire because it is the first measure of speech-related anxiety developed specifically for use with adults who stutter and these results can provide a preliminary support for the use of UTBAS. It is useful because it can assess social anxiety but can be used by speech language therapists. Although there is a 6-item version of UTBAS that can be used as a screening tool, this 66-item UTBAS is more detailed and can be used to provide information about situations in which people who stutter may experience negative thoughts and beliefs. This information can be used as guidelines in stuttering treatment.

What we can safely conclude is that social anxiety certainly makes life difficult and affects the mental health of people who stutter. Therefore, further research and development of the UTBAS-C Questionnaire is needed because it can help to evaluate the effectiveness of treatments for stuttering in Croatia. The questionnaire can be useful to every speech language therapist who works with adults who stutter, and most importantly it can be useful to those who stutter.

## APPENDIX

Below is a list of 66 items that assess the frequency of unhelpful thoughts and beliefs and can assess social anxiety in people who stutter (St Clare et al., 2009). The UTBAS Questionnaire has three scales: how frequently you have these thoughts (UTBAS-I), how much do you believe these thoughts (UTBAS-II) and how anxious these thoughts make you feel (UTBAS-III). An individual who stutters gives a score (from 1-5) for each of these items, on all three scales.

1. Never have the thought
  2. Rarely have the thought
  3. Sometimes have the thought
  4. Often have the thought
  5. Always have the thought
- 
1. People will doubt my ability because I stutter.
  2. It's impossible to be really successful in life if you stutter.
  3. I won't be able to keep a job if I stutter.
  4. It's all my fault — I should be able to control my stutter.
  5. I'm a weak person because I stutter.
  6. No one will like me if I stutter.
  7. I might stutter.
  8. People focus on every word I say.
  9. I am incompetent.
  10. No one could love a stutterer.
  11. I will stutter.
  12. Everyone in the room will hear me stutter.
  13. I'm stupid.
  14. Other people will think I'm stupid if I stutter.
  15. I'll never be successful because of my stutter.
  16. I won't be able to answer their questions.
  17. I'm hopeless.
  18. I'm of no use in the workplace.
  19. People will think I'm incompetent because I stutter.
  20. I'll block completely and won't be able to talk.
  21. Everyone will think I'm an idiot.
  22. I can't speak to people in positions of authority.
  23. People will think I'm strange.
  24. People will think I can't speak Croatian.
  25. No one would want to have a relationship with a stutterer.
  26. I can't think clearly because I stutter.
  27. I can't speak to aggressive people.
  28. People will think that I have no opinions.
  29. People will think I'm boring because I have nothing to say.
  30. If I block, people will think I'm retarded.
  31. I can't face these people.
  32. People will wonder what's wrong with me if I stutter.
  33. What will people think of me if they disagree with what I say?
  34. Most people view stutterers as less capable.

35. I don't want to go—people won't like me.
36. My pauses are too long—people will think I'm weird.
37. People won't like me because I won't be able to talk.
38. I can't convince people of anything I say because I stutter.
39. People will think I'm retarded if I stutter.
40. I'll block – I know I will.
41. I'll make a fool of myself.
42. People get tired of waiting for me to get my words out.
43. People shouldn't have to wait so long for me to speak.
44. I always embarrass the people I'm speaking to.
45. People think I have something to hide because my stutter sounds suspicious.
46. People will think that I'm worthless.
47. I'll embarrass myself.
48. I can't speak to people I find sexually attractive.
49. No one will understand what I'm trying to say.
50. What's the point of even trying to speak—it never comes out right.
51. I won't be able to say exactly what I want to say.
52. Everyone will think I'm simple or dumb because I avoid using difficult words.
53. I slow up everyone's conversation.
54. Everyone hates it when I start to speak.
55. I can never speak on the phone.
56. I won't be able to ask for what I want.
57. The person on the other end of the phone will hang up on me.
58. People will laugh at me.
59. People will think I'm mute.
60. I'll never finish explaining my point – they'll misunderstand me.
61. The answering machine will turn off if I block – I won't be able to leave any message.
62. They'll think I'm a prank caller if I block.
63. I won't be able to say 'hello' when I pick up the phone.
64. People who stutter are stupid.
65. People who stutter are incompetent.
66. People who stutter are boring.

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## ISPITIVANJE STAVOVA I UVJERENJA O MUCANJU: PILOT PRIMJENA UTBAS UPITNIKA U HRVATSKOJ

**Sažetak:** Kod osoba koje mucaju, uz netečan govor, često se može razviti strah od govornih i socijalnih situacija što može dovesti do poremećaja socijalne anksioznosti. Tijekom zadnjih desetljeća veza između mucanja i anksioznosti bila je predmet brojnih istraživanja, te je razvijen specifičan upitnik kojim se to ispituje. Upitnik Negativni stavovi i uvjerenja o mucanju (*Unhelpful Thoughts and Beliefs About Stuttering Questionnaire - UTBAS-C*) razvijen je i primijenjen kako bi se ispitala učestalost razmišljanja i vjerovanja o mucanju te stupanj anksioznosti kojeg izazivaju takva razmišljanja (*UTBAS, St Clare et al. 2009*).

Cilj je ovog pilot istraživanja bio ispitati hrvatsku inačicu *UTBAS-C* upitnika uključujući osobe koje mucaju i osobe koje ne mucaju, te utvrditi postoji li statistički značajna razlika između te dvije skupine, odnosno utvrditi jesu li osobe koje mucaju anksioznije od osoba koje ne mucaju. Uzorak je činilo 16 odraslih osoba koje mucaju i 16 tečnih govornika, u dobi od 18 do 40 godina. Budući da se rezultati nisu normalno distribuirali, svi podaci su analizirani neparametrijskim statističkim metodama. Rezultati su pokazali da postoji statistički značajna razlika između osoba koje mucaju i osoba koje ne mucaju. Osobe koje mucaju imale su više rezultate na cijelom upitniku, odnosno pokazale su se više anksioznima te je kod njih utvrđeno da imaju više negativnih misli i vjerovanja o govornim situacijama od odraslih koji su tečni.

Rezultati ovog pilot istraživanja nisu neočekivani i u skladu su sa većinom do sada provedenih istraživanja o vezi između mucanja i socijalne anksioznosti. S obzirom na to da postoji manjak dijagnostičkih testova za odrasle koji mucaju, osobito o stavovima i emocijama, ovaj prijevod i daljnja primjena *UTBAS-C* upitnika trebalo bi popuniti tu prazninu. Ovo istraživanje bi također trebalo skrenuti pažnju kliničarima koji rade s odraslima koji mucaju na važnost i utjecaj stavova i vjerovanja na ishod terapije.

**Ključne riječi:** mucanje, socijalna anksioznost, odrasli koji mucaju, stavovi, uvjerenja, hrvatski jezik