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STUTTERING : SPEECH AND SPEECH COMMUNICATION SIX MONTHS AFTER THE STUTTERING TREATMENT[1]

Abstract

The purpose of each treatment of stuttering is fluent speech without stopping, fear and anxiety. It is neither simple nor easily realizable to define criteria of the success of "normal speech" in the sense of post-treatment monitoring, measuring and assessing verbal and vocal communication. One of the important criteria of the treatment success is surely the opinion, attitude and assessment of the persons who underwent a certain treatment.

In this research a group of 141 respondents was surveyed six months after their teratment was completed. The condition of speech and oral communication was studied. The results showed that after six months significant changes occurred in the condition of respondents' speech. The number of those, who, after the treatment, said that they did not stutter any more was reduced by half (25,3 % ; 10,5%). After six months the number of respondents with severe stuttering increased in comparison with the number at the end of the therapy (6,02% ; 3,62%). At the same time, the number of respondents with moderate stuttering decreased.

The results were compared with a series of studies worldwide which aimed at monitoring the condition of oral communication after the treatment.

1. INTRODUCTION

The purpose of each stuttering treatment is a fluent speech without delay, fear and anxiety. Definition of the success criteria for "normal" speech in post-treatment follow-up, measurement and assessment of verbal and vocal communication is neither simple, nor easily achievable. Bloodstein (1981, according to Boberg, 1985) analyzed 117 researches (carried out between 1928 - 1979) and has concluded that only 46 of them i.e. 40% of researches report on the results of speech condition follow-up in the post-treatment period. On the other side, Bloodstein confirms that researches reporting on the follow-up of respondents' speech after treatment usually use the kind of terminology (for instance "improvement of the speech condition") which tells little of the real and objective impacts of the therapy in a long period of time. Bloodstein suggests several criteria for researchers to comply with when evaluating success of a rehabilitation of stutterers. He considers that the shortest period which ought to be taken into consideration when determining success of a treatment is 18 months. In order to achieve objectiveness during evaluation, he recommends that speech success should be measured in out-clinic conditions (sessions) and that evaluation should be done by persons who did not carry out the treatment.

There are also other criteria to be taken into account when evaluating success of stuttering therapy and these are percentage borders of stuttering (whether it be syllables or words per minute or presented in percentages), which are considered as satisfying. Several authors point out a number of 3% as a border value (Van Riper, 1971; Zebrowski, 1991; 1994). There are authors who highlight other criteria such as change of attitude toward speech and speech situations, speech and articulation rate, level of laryngal muscles tension and so forth. One of the most important criteria for success is opinion or attitude and/or evaluation of subjects who underwent a particular therapy. Sheehan (1970), Van Riper (1971) and Johnson et al. (1963) consider that subjective evaluations and reactions of

[1] Brestovci,B. *CONDITION OF SPEECH COMMUNICATION SIX MONTHS AFTER THE STUTTERING TREATMENT.* Proceedings : Rehabilitation and Inclusion. Faculty for Special Education and Rehabilitation,University of Zagreb, Croatia, Zagreb, 1998, pp. 81 – 92.

respondents regarding the treatment are a very important component which needs to be assessed in a particular way and ought to be taken into account when evaluating success of a rehabilitation treatment for stuttering persons. Perkins et al. (1974) also stress that evaluation of success of a treatment by
respondents themselves is very important and consider that if respondents themselves are not satisfied with treatment results, then it can hardly be concluded that the therapy is successful, regardless of other indicators.

1.2. Success of stuttering treatment according to some researches carried out throughout the world

Immediate comparison between the therapy results we have obtained and the results of other researches is not possible for several reasons. Firstly, programme of treatment evaluated in our research is different and more complex than programmes of other researches. Secondly, duration of treatment of only two weeks (or more exactly 12 days in a row) is shorter than programmes whose results we will display. And finally, criteria for evaluation of success of a treatment are not the same, although employing the same procedure. Despite this fact, we consider that it is useful to get acquainted with evaluation results of other programmes for treatment in order to get a better insight into evaluation criteria for treatment results and insights into success of stuttering rehabilitation generally.

Howie et al. (1981) and Andrews and Craig (1982) have conducted a research with a view to determine condition of speech and speech communication 12 months after intensive therapies had been finished. Researches were carried out by a survey comprising 5 to 6 questions. Results of their researches are shown in the Table 1. If you compare the results obtained by the second question ("condition at the end of the treatment) and the third one ("condition 12 months later"), a very notable difference can be seen. On the last day of therapy, 94,6%, that is, 96% of respondents were satisfied with their speech. However, 12 months later, this percentage split in half (43,2% and 42%). This can be explained by the fact that there was a considerable deterioration of speech during the year following the treatment in both respondent groups. This also entailed a greater "dissatisfaction" concerning their speech fluency. More than half of respondents in each group (56,7% and 58%) were not satisfied with their speech fluency a year later. Self-confidence was the only characteristic highly evaluated by respondents (86,5% and 95%). The first question "satisfied with the speech before the treatment"), was answered equally by respondents of both groups: 100% of them were not satisfied. When the treatment was finished, 94,6%, that is, 96% of respondents stated they were satisfied with the achieved level of speech expression. A year later, the same respondents declared they had a "good speech fluency" in a much lesser extent (40,5%, that is, 41%).

Table 1 : Survey results of both groups of respondents 12 months after the intensive therapy had finished

Q u e s t i o n s	Howie et al. (1981) (N = 43) in %	Andrews and Craig (1982) (N = 41) in %
1. Satisfaction with speech pretreatment:		
very satisfied/satisfied	0,0	0,0
not satisfied	100,0	100,0
2. Satisfaction with speech on last day of intensive treatment:		
very satisfied/satisfied	94,6	96,0
not satisfied	5,4	4,0
3. Satisfaction with present speech:		
very satisfied/satisfied	43,2	42,0
not satisfied	56,7	58,0
4. Report on present fluency:		
essential or good fluency	40,5	41,0

adequate fluency marginal fluency/disfluent	45,9 13,5	49,0 10,0
5. Reported confidence in speech: increased confidence no increased confidence/unsure	 86,5 13,5	 95,0 5,0
6. Self-assurance after the treatment: increased not increased / unknown	--- ---	 83,0 17,0

Craig and Calver (1991) have surveyed 123 respondents who underwent a particular stuttering treatment programme in average 68 months before (SD = 38) with a view to establish relapse into stuttering (recidivism) and reasons why that happens. The respondent group consists of 38,45 women and 71,5 men at the average age of 39 (SD = 12). It was established that as much as 73,2% of respondents had a relapse into stuttering after the therapy had finished. A high percentage of stuttering relapse after the treatment (three out of four respondents had a relapse), shows the need to further analyse the condition once the treatment is over, and to make more reserved predictions concerning the maintenance of post-treatment condition. When it comes to making prediction about the condition, Guitar (1976) has noted that attitudes represent an important characteristic, although they do not show more important correlations with manifestations of "stuttering speech". The author concludes that when the attitudes on speech situations and stuttering are strongly negative, then it is necessary to apply different rehabilitation procedures (for instance desensitization and so forth) and to plan a longer transfer period for speech behaviour. Guitar states that attitudes before the treatment are independent of the strength of stuttering, but at the same time, they are important predictors for success of rehabilitation. Further on, the author states that stuttering (of adults) is multidimensionally structured and therefore, it is not sufficient to measure manifestations of speech only, as it is usually done in evaluation and reevaluation of success of a treatment.

We will present several researches whose measurements were carried out in order to reevaluate the condition after a longer period after the treatment. Mowre (1975, according to Boberg et al., 1986) had measured 11 respondents five years after the treatment and established that only two respondents still had a fluent speech. Prins and Miller (1973, according to Boberg et al., 1986) followed up a group of 16 respondents after eight-week intensive therapy and have obtained the following results: before the therapy, respondents were stuttering 30% at the average. After the treatment, the stuttering decreased to 9%, whereas ten months later, 21% of the same respondents were stuttering.

2. THE PURPOSE OF THE RESEARCH

It is known from a series of researches (some of which are quoted in the Introduction), and speech pathologists know it from their practice, that after the stuttering treatment, a large number of respondents do not manage to maintain fluent speech for a longer time. Some authors call this deterioration of speech "recidivism", whereas others call it "relapse" or "weakening of control" of the speech process. We were interested in finding out what the respondents themselves think of their speech and speech communication and of the problems occurring during a longer period of time, once the therapy is over. Several authors (Sheehan, 1970; Van Riper, 1971) emphasize that opinion, attitude and/or evaluation of respondents themselves who underwent a particular therapy represent the most important criteria for success of stuttering treatment. Six months after the intensive therapy had finished, respondents were surveyed in order to get insight into their speech, their opinion of the therapy and insight into the possible difficulties occurring after the treatment. All the surveyed respondents were followed up from the beginning until the end of the therapy. Each respondent was measured at the beginning and at the end of the therapy.[2]

[2] For more details on comparison of results see: Novosel et al. (1993); Prizl (1994); Brestovci and Prizl (1995).

3. METHOD

3.1. Subjects

Our research surveyed a group of respondents who stuttered six months after the speech pathology treatment had finished. A group of 141 respondents were surveyed on their condition of speech and speech communication. The survey consisted of several questions for which the respondents had to choose a particular answer. At the same time, respondents were given an opportunity to express their attitudes and opinions of rehabilitation procedures, as well as of the condition and difficulties in maintaining the achieved level of speech fluency during the treatment. 83 or 58,9% out of 141 respondents answered the survey, which is quite a satisfying number for this kind of research. Craig and Calver (1991) report on 41% of answers to a similar survey. The respondents were ranging in age from 12 to 39 years. There were 26 (31,33%) younger respondents up to age of 15 and 57 or 68,67% of older ones. There were 59 (71,1%) male and 24 (28,9%) female respondents. All respondents underwent a speech pathology treatment through an intensive work in duration of 12 days in row (ValMod Programme in Varaždin).

3.2. Sample of variables

Data on the condition of speech and speech communication were gathered from respondents through a structured survey. Answers in the survey referred to self-assessment of stuttering before the therapy, results at the end of the therapy, quality of speech six months after the treatment had finished and intensity and the kind of verbal communication. Each question had three to four offered answers. In addition, respondents were given an opportunity to explain and describe the condition of their speech after the therapy ("your condition, impressions or problems after the therapy in Varaždin, describe"). On the basis of answers obtained by the survey, the following variables have been elaborated: age, gender, self-assessment of stuttering before the therapy, evaluation of success of the therapy when the treatment was over, evaluation of speech six months later and impressions and problems after the speech pathology treatment was carried out.

3.3. Data Analysis

Percentages for each variable have been calculated respectively in order to compare the results of evaluation of speech before the therapy, immediately after the treatment and the condition six months later. By means of X^2 test, differences between the evaluation of speech condition at the end of the treatment and the speech condition six months later were established. Results are arranged in tables and presented graphically for a simpler insight into changes occurring six months later.

4. RESULTS

Tables 2 and 3 show answers to five asked questions. Answers were analysed according to respondents' age and gender. The survey was answered by 26 out of 55 younger respondents and 57 out of 102 older respondents. The ratio of younger and older respondents who answered the survey is similar to the ratio of rehabilitated persons (1 : 3). Likewise, the ratio of respondents according to gender is similar to the total number of respondents who have completed the treatment (28,9% of female and 71,1% male respondents).

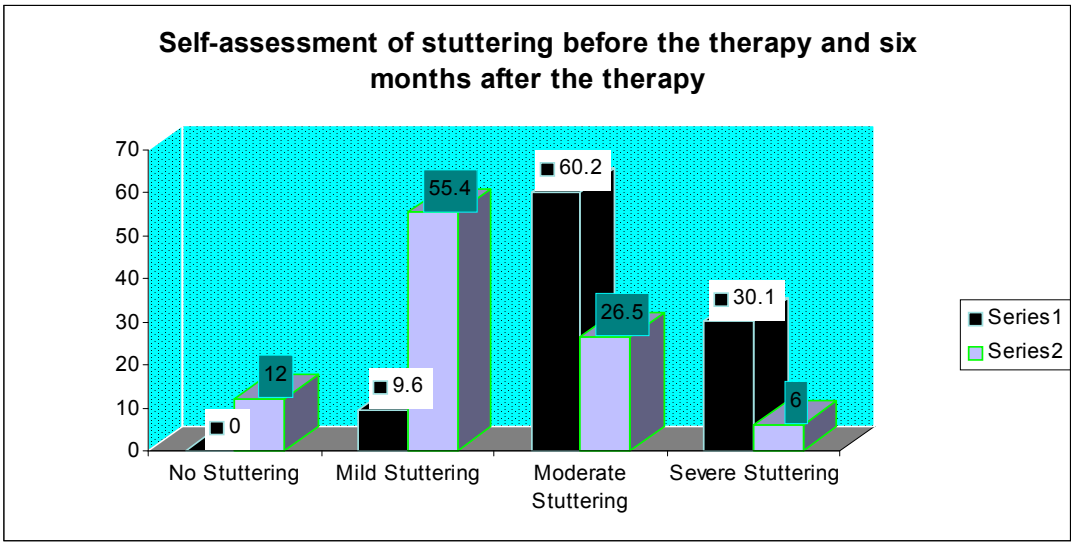
For the need of results comparison, the respondents were asked to evaluate the strength of stuttering on a three-unit scale ("mild", "moderate" and "severe" stuttering).

Table 2: Evaluation of speech before the treatment, immediately after the treatment and six months later

	BEFORE THE THERAPY		AFTER THE THERAPY		6 MONTHS LATER	
N = 83	N	%	N	%	N	%
NO STUTTERING	0	0,0	21	25,3	10	12,1
MILD STUTTERING	8	9,6	42	50,6	46	55,4
MODERATE STUTTERING	50	60,2	17	20,5	22	26,5
SEVERE STUTTERING	25	30,1	3	3,6	5	6,0

The largest number of respondents were those with moderate stuttering (60,2%), and the smallest number were those with mild stuttering (9,6%). One respondent in three stated to have stuttered severely before the therapy. Results of the therapy show that one in every four older respondents (25,3%) and one in every three younger respondents (34,6%) stated they did not stutter any more at the end of the therapy. It is interesting that as little as 3,62% of respondents consider that they stuttered with equal strength at the end of the therapy. One out of two respondents (50,6%) answered that question by saying they stuttered only occasionally, and one out of every five respondents (20,5%) said their stuttering had "a weaker intensity". Six months after the therapy, there were significant changes in the speech condition of respondents. The number of respondents who claimed not to stutter any more at the end of the therapy split in half (only 12% of respondents stutter no more when compared to 25,3% at the end of the therapy).

Six months later, the number of respondents with severe stuttering increased when compared to the number at the and of the therapy (6,02% : 3,62%). Comparison between the results at the end of therapy and the results obtained six months later shows statistically significant differences. Value X^2 test amounts to 36,22 and 9 degrees of freedom, and it is statistically significant at the level (.0000). Condition of speech and speech communication significantly deteriorated six months later. When compared to the condition before the therapy, condition six months later is significantly different in a positive way. Before the therapy, there were only 9,64% of respondents with mild stuttering, whereas six months later, this percentage was six times bigger (55,4%). Percentage of moderate and severe stuttering is considerably



lower when compared to the condition of speech and speech communication before the therapy (see the Graph). There is even five times less respondents with severe stuttering six months after the therapy when compared to the condition before the therapy (6,0% : 30,1; see Table 2) and the percentage of moderate stuttering is split in half (the Graph). Last two questions in the survey referred to the intensity and the kind of communication. Only 21,7% of respondents said that the

intensity of speech communication remained at the same level, whereas 48,2% of respondents stated to have a stronger intensity. As much as 48,2% respondents consider that their communication has been improved in all situations.

Table 3 : Self-assessment of condition of speech six month after the speech therapy

	ACCORDING TO AGE				ACCORDING TO GENDER					
	YOUNGER		OLDER		MALE		FEMALE		TOTAL	
	N	%	N	%	N	%	N	%	N	%
1. Self-assessment of stuttering before the therapy:										
1. mild	5	19,23	3	5,26	6	10,17	2	8,30	8	9,64
2. moderate	14	53,85	36	63,16	35	59,32	15	62,50	50	60,24
3. severe	7	26,92	18	31,58	18	30,51	7	29,20	25	30,12
	26	100,00	57	100,00	59	100,00	24	100,00	83	100,00
2. Self-assessment of success of the therapy:										
1. stutter-free	9	34,62	12	21,05	16	27,11	5	20,80	21	25,30
2. stutter only occasionally	13	50,00	29	50,88	30	50,84	12	50,00	42	50,60
3. stuttering of weaker intensity	3	11,54	14	24,56	10	16,95	7	29,20	17	20,48
4. stuttering with the same intensity	1	3,84	2	3,51	3	5,10	0	0,00	3	3,62
	26	100,00	57	100,00	59	100,00	24	100,00	83	100,00
3. Current evaluation of your speech quality:										
1. stutter-free	6	23,08	4	7,02	6	10,17	4	16,67	10	12,05
2. mild stuttering	11	42,30	35	61,40	36	61,02	10	41,67	46	55,42
3. moderate stuttering	6	23,08	16	28,07	13	22,03	9	37,50	22	26,51
4. severe stuttering	3	11,54	2	3,51	4	6,78	1	4,16	5	6,02
	26	100,00	57	100,00	59	100,00	24	100,00	83	100,00
4. Intensity of communication in respect of the therapy:										
1. the same	6	23,08	12	21,05	17	28,81	1	4,16	18	21,69
2. weaker	8	30,77	17	29,82	14	23,73	11	45,84	25	30,12
3. stronger	12	46,15	28	49,13	28	47,46	12	50,00	40	48,19
	26	100,00	57	100,00	59	100,00	24	100,00	83	100,00
5. Where do you communicate the most:										
1. at home	3	11,54	10	17,54	9	15,25	4	16,67	13	15,67
2. in school	11	42,30	12	21,05	16	27,12	7	29,17	23	27,71
3. at work	0	0,00	5	8,77	4	6,78	1	4,16	5	6,02
4. in all situations	12	46,15	30	52,64	30	50,85	12	50,00	42	50,60
	26	100,00	57	100,00	59	100,00	24	100,00	83	100,00

4.1. How the respondents describe their condition of speech and speech communication and what they think of the speech pathology treatment six months later

In addition to answering the questions, each respondent was given an opportunity to describe his/her condition, impressions and problems after the speech pathology treatment had finished. All respondents described their condition and/or difficulties occurring six months later. They gave a longer or shorter description depending on success of speech pathology therapy, on condition of speech and on individual possibilities and capacities to transfer the experience acquired during the therapy consisting in methods of controlling the speech process to everyday situations and social contacts. There is a very small percentage of respondents stating that there was no changes in their speech expression and communication in general. The largest part of respondents are satisfied with methods and results of the therapy and with their condition of speech six months later. By reading their opinions, attitudes and propositions, we get the impression that respondents deem as the most important self-confidence they acquired, possibilities for relaxation, control of speech process, change in attitudes and perceiving their stuttering and speech in general, and decreased fear and anxiety when speaking and when they find themselves in speech situations.

As it was impossible to present opinions of all respondents, we have made a choice of characteristic phrases of one part of the sample, so as to serve as an illustration for all the group. The cited phrases are original, just as the respondents wrote them, with no interventions whatsoever. Attitudes, opinions and propositions of respondents are quoted in random order. We did not try purposely to group respondents' descriptions and impressions according to age, gender or quality of the answers. We wanted to present to the reader the differences in impressions, just as they happen in reality. The only intervention was done in handwriting transcription, so that the quoted phrases can be read more easily.

"It's been six months since the therapy in Varaždin. In my view, I stutter much less than before the therapy. In fact, when I make efforts, I don't stutter at all." (39 y.)

"At work and generally, I think I communicate quite a lot with customers and clients and sometimes, when I speak and hear myself talk, I think it is great. It is actually quite pleasant to hear myself talking." (37 y.)

"... it has restored my self-confidence which was difficult to have with stuttering, because people think they worth less, if they stutter. Before the therapy, I used to avoid people who would make fun of me, I just couldn't look them in the eyes. Now, I can do it and I can confront them, because I have the strength, unlike before ..." (18 y.)

"After the therapy, my speech condition improved quite a lot. When I talk to other people, I am no longer afraid that I will stutter, because there is no more stuttering." (18 y.)

"I can pick up the phone and I am no longer afraid of stuttering. I stopped grinding my teeth ...! (13 y.)

"... I freed myself from the fear of speaking and I start communicating with other people more easily. Another thing that seems important to me: I kicked the habit to breathe out and hold my breath when I can't pronounce something." (18 y.)

"After the therapy in Varaždin, I felt much more confident. Since then, I am able to control the situation in critical moments." (26 y.)

"I managed to master completely the mode of breathing; blockades have decreased significantly." (20 y.)

"My hands sweat no more. I use the phone more often than before." (17 y.)

"I am very satisfied at work ... the hardest thing is to introduce myself on the phone!?! afterwards, it just GOES ..." (29 y.)

"My condition after the therapy in Varaždin had improved. When I feel a blockade, I use the therapy from Varaždin and then I stutter less." (38 y.)

"After the therapy in Varaždin, my speech condition was very good. It is not bad now either, except when I am shocked by something - by some event or if someone blames me for something - then I get scared, my muscles get tensed and then it's hard to speak." (23 y.)

"After the therapy, my condition was very good, there were practically no speech disorders. However, as the time went by, my speech started to deteriorate at slow pace, at my big disappointment. It must have been affected by the environment and what has been going on." (21 y.)

"My speech improved, but not so much that I would not stutter any more. There are oscillations; when I don't feel the tension in my stomach, I speak very well and I can control my speech." (18 y.)

"After the therapy I was very satisfied and happy. As the time went by, speech difficulties were becoming more frequent, but only in some situations ... particularly at the university, when I have an exam." (20 y.)

"After the therapy in Varaždin, my condition had improved a little bit. I think I should do the therapy again, if possible." (13 y.)

"You asked me to evaluate my speech quality. I wrote that I stutter moderately. In some situations, I stutter moderately and in others, very severely. One day I stutter more, the other day a bit less." (26 y.)

"My problems after Varaždin really decreased, but again, I can feel some kind of fearfulness or excitement rising in me when I talk to people."

"About 15 days after returning from Varaždin, I was speaking very well, that is, I didn't stutter at all. Afterwards, I started paying less attention to the speech technique and I gradually relapsed into the old condition. Now, the intensity of stuttering is almost the same as before the therapy." (25 y.)

"Nothing significant has happened since the therapy in Varaždin. When I am relaxed and self-confident I don't stutter or stutter very little. When I feel insecure or when I have butterflies in my stomach, my stuttering is stronger." (26 y.)

"So far, I have no problems and I hope it will stay that way." (15 y.)

"As to the therapy in Varaždin, I have no complaints, nor will I ever have any." (18 y.)

From the quoted examples, you can see different opinions of respondents who received the therapy and their condition six months later. The majority of respondents are pleased with their speech condition even after six months. Their satisfaction is expressed by their observations ranging from disappearance of stuttering, decreased tensity, blockades, fear or anxiety to a larger circle of people and situations in which they can talk freely. Unfortunately, there are also such respondents who are not satisfied with the results of the therapy, as the normal speech did not stabilize permanently and their fear and insecurity in speech situations did not disappear. According to some authors, the greatest changes after the therapy occur particularly during the first six months (Prins and Miller, 1973; according to Shames and Rubin, 1986). There are other authors who established a considerable number of recidivism after the therapy had finished. Howie et al. (1981) say that stuttering relapse or some other stuttering characteristics are present in 30 - 60% of cases, depending on the applied criteria for evaluation of success of rehabilitation. The latter also confirm that speech fluency does not get automated for a long time after the therapy. Respondents are further requested to reflect and consider the way they are going to express themselves. The best illustration of this assertion is the opinion of a 30-year-old man who wrote: "When I have a blockade, I apply the therapy from Varaždin and then I stutter less".

5. DISCUSSION AND CONCLUSION

Based on analysis of answers given by 83 respondents six months after the stuttering treatment, it can be concluded that there was a certain deterioration in speech and speech communication when compared to the situation immediately after the speech pathology therapy, as it was expected. However, comparison between the obtained results and the situation before the therapy indicates that the largest number of respondents significantly improved their speech. It is useful to continue following up the speech and speech communication of respondents not only by a survey, but also by immediate observation and measurement of speech fluency.

Even after six months, a certain number of respondents permanently felt insecure if they succeeded or failured in realization of speech and speech contacts. This is how a 13-year-old Marina describes her birthday party: "*Recently, I was celebrating my birthday and I was afraid I would not succeed in anything, although I didn't know what that was. It was my best birthday party, because I invited many friends who dispelled my fear by their presence. It was great, a real party. When I remember my previous birthday parties, I would choose friends who knew of my speech disorder, because I knew they would not make fun of me. Now, everything is fine and I hope it will stay that way*". Within time, if not resolved, such insecurity restores the stuttering. There is a question of what causes the stuttering relapse, if we consider that one out of every four respondents stated he/she did not stutter any more. In conformity with the findings and propositions of Guitar (1976), it is possible to assume that stuttering relapse comes primarily because of inadequate evaluation of condition (most frequently, stuttering is measured in percentages and in speech rate) at the end of the therapy, and not for any other reasons. Usually, at the end of therapy, similar results are obtained for measurement of speech fluency and speech rate, regardless of the strength and stuttering characteristics at the beginning of the therapy. Such measurement and evaluation of condition do not imply that stability of inner structure of a stutterer has been evaluated. Respondents with severe stuttering are the first to have a stuttering relapse and they have it more frequently. However, at the end of therapy, their manifest speech status does not differ significantly from the respondents with weakly pronounced stuttering characteristics. In other words, the same treatment will not produce the same final and permanent effects for all stutterers. Probably the process of diagnostics itself has to indicate the need to apply different procedures and measures with different duration even when it concerns the same rehabilitation method. When diagnostics is "superficial", without analysis of disorder structure, the application of standard methods of rehabilitation does not necessarily ensure the permanent success for all respondents. What can be objectively measured and evaluated at the beginning, can only accidentally be changed during the treatment, and that is usually insufficient. Researches carried out by Howie et al. (1981) and Andrews and Craig (1982) have shown that 12 months after the treatment, more than 50% (more exactly 56,7% and 58%) of respondents expressed their dissatisfaction with their speech. In our research, only 48% of respondents stated, after six months, that they communicated "more" when compared to the situation before the therapy. Perkins et al. (1974) did not establish any differences at the end of therapy between the respondents with high intensity of stuttering and those with moderate stuttering. However, after six months, a subgruop of respondents with severe stuttering stuttered considerably more than the subgroup of respondents with moderate stuttering. The authors conclude that the treatment produces similar changes in speech of respondents, regardless of how they stuttered before. However, after the treatment, the respondents with severe stuttering do not manage to maintain the achieved speech fluency. We would like to add that this concerns not only "the maintenance of the achieved speech fluency", but also the fact that "stabilization of speech fluency is not completed", which is usually evaluated as completed and stable. In our research, the biggest progress has been done with severe stuttering or with no stuttering. At the end of therapy, one out of four respondents evaluated his/her speech as stuttering-free, and six months later that figure was as twice as less. There was only 3,6% of respondents with severe stuttering at the end of the therapy, but after six months, this percentage was as twice as double (6,0%).

Based on a series of researches and analysis of long-term speech pathology practice of working with stutterers, the following conclusion imposes itself: it is necessary to make more detailed diagnostics

of the condition before the therapy, but especially after the therapy had finished, and to make careful predictions, including follow-up and further professional support for respondents. The best example for this is the fact that, after six months, a certain number of respondents state they have problems to use the phone, to regulate muscle tension or to control the way they speak in school, at work, in company of other people and so forth. Professional support which is necessary even after the "prescribed" therapy in order to automate and stabilize the speech, should be provided for primarily by the speech pathologist who carried out the therapy. The method, frequency and the form of "support" is to be adjusted to each particular respondent.

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