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**PERFORMANCE ANXIETY IN INSTRUMENTAL
PERFORMERS**

SUMMARY OF THE DOCTORAL THESIS

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Key words: performance anxiety, music performance, study of a musical instrument, learning styles, cognitive anxiety, somatic anxiety, self-confidence, self-efficacy, anxiety management, mental study, relaxation, modelling, exposure.

INTRODUCTION

The problem addressed by this research is commonly encountered but also commonly neglected in the education of young performers. My interest in this subject derives from nearly 10 year-experience as a violin teacher and another 25 years of violin study. In my classroom work I have often experienced the negative effects of performance anxiety on the quality of my students' performance. Furthermore, I have noticed that their and also their parents' reluctance or even refusal to seek psychological help for personal optimisation. Next, a substantial motivational boost in my professional training was the decision to attend a MA program in counselling and psychotherapy. The resulting dissertation, "*Performance anxiety and coping strategies of adolescent violinists*" (Mătieș, 2005), was a first step towards an in-depth study of this phenomenon.

Also known as stage fright, performance anxiety is a distress response to musical interpretation in the presence of an audience. Most studies confirm the fact that performance anxiety can be debilitating for musical interpretation. Performance anxiety affects not only pupils or students but also professionals - experienced interpreters, whose instrumental techniques and training can not be disputed. However, performers having the qualities and skills necessary for successful interpretation can doubt their ability to do this on stage. There are known cases of famous artists such as Arthur Rubinstein, Luciano Pavarotti and Pablo Casals, who confessed to have experienced psychological distress and extreme tension on stage (Salmon, 1990). We also believe that as teachers we have all had the opportunity to see how well prepared students experienced failure on stage, whether it was a recital, an exam or a competition concert (Blaga, 2010). I have also met students giving better performances on stage than in class or organised auditions. We think it is enough to not feel comfortable on stage, to lose the joy of performing, without interpretation being clearly affected, to consider this an issue of performance anxiety.

This experience can be different with each performer but also in the case of the same individual (depending on the occasion and the repertoire), which explains the lack of consensus found in the literature: some researchers emphasise the negative effects of performance anxiety, and others its positive effects.

Although the training of future musicians starts early, most studies conducted so far have aimed at university students and/or professional musicians. In the literature there are few studies addressing musical performance anxiety in children

and adolescents, and these include especially pianists in American music education system. Social context and cultural influences should also be taken into account because today's musicians live in a world where psychological, social and economic stressors increase the complexity of anxiety performance (Nagel, 1993).

In recent years, foreign researchers and educators have acknowledged performance anxiety as a natural phenomenon, which should be addressed in the preparation stage of performance. Protection of physical and mental health of young musicians should be an objective of specialist education. Numerous research studies have clearly demonstrated that health-related information on preventing injuries should be included in the education of future performers. Also, young musicians need the tools / techniques to help them cope with performance anxiety and other risk factors that may jeopardize their development (Berenson, 2005).

The ability to handle the performance pressure and anxiety is crucial to the success of an interpreter. To effectively address this phenomenon, it is necessary that performers (pupil and student players) and specialty teachers should understand the difference between normal and debilitating forms of anxiety (Petrovich, 2003). Research shows that people with performance anxiety are more reluctant to seeking treatment/therapy than those with generalised social phobia (Magee, Eaton, Wittchen, Mc-Gonagle & Kessler, 1996, Wittchen, Stein & Kessler, 1999 in Powell, 2004). These findings are valid even in the U.S. and Germany, countries where mental health services are free. It may be that some personality characteristics of musicians affected by performance anxiety (introversion and lack of social skills) interfere with the attempts of seeking appropriate treatment (Taborsky, 2007). A study investigating stress and adjustment styles of the musicians showed that when they have problems and difficulties related to musical performance, students seek support first from friends, secondly, from teachers and thirdly, from the family. Professional help (e.g. psychologists, social workers, psychiatrists) was the most rarely sought (Curie, 2001).

Yet, even when musicians do seek psychological help, they have already tried many behavioural techniques, self-help techniques, taken drugs and, in some cases, experienced alcohol abuse. Medication and alcohol are attractive options for musicians, since in many cases they want a rapid treatment for this complex and supra-determined problem (Nagel, 1993). The interpretation is still affected and self-esteem is low because they do not obtain the desired outcomes (Nagel, 1993). Given the massive number of musicians who use beta-blockers and the inconclusive data on

their short or long term effects (Lehrer, 1987), it is more than evident that musicians should be equipped with safer alternatives to cope with anxiety performance. Rapid remedies such as beta-blockers are only temporary solutions.

1. INSTRUMENTAL PERFORMANCE

The first chapter of this thesis describes and analyses some aspects of instrumental performance and of the study of a musical instrument. Physical and mental strain that musicians experience during performance and individual study, during competitions and continuous assessment, the expectations and pressures from teachers and family, render them vulnerable to performance anxiety. Teachers must adapt their teaching techniques to students' development peculiarities and learning style but their role is not limited to technical and musical training. They must also provide mental preparation and, when needed, support following the performance, and know the techniques of performance anxiety prevention and management.

2. MUSICAL PERFORMANCE ANXIETY

The second chapter is a survey of the literature devoted to musical performance anxiety. The examination of studies investigating the relationship between performance anxiety and musical interpretation has been limited due to differences in methodological approaches and operationalizations of the concept of performance anxiety.

The research presents the study evaluating the performance anxiety of performers, and the implementation of the cognitive-behavioural intervention programme aimed at reducing anxiety and the related case studies. The results were analyzed in terms of the theories of performance anxiety and of other studies in the specialist literature.

3. RESEARCH OBJECTIVES

Our thesis has the following general objectives:

I. Identifying psychological components that explain individual differences in experiencing performance anxiety in adolescent musicians.

II. Implementing a cognitive - behavioural management of performance anxiety with violinists and confirming its effectiveness.

I. The following specific objectives derive from the first general objective:

1. Assessing musical performance anxiety.
2. Identifying the relationship between cognitive anxiety, somatic anxiety and self-confidence.
3. Identifying the relationship between the profile of emotional distress, namely dysfunctional negative emotions, and musical performance anxiety.
4. Identifying the relationship between self-esteem and musical performance anxiety.
5. Identifying the relationship between self-efficacy and musical performance anxiety.
6. Identifying the existing relationship between self acceptance and musical performance anxiety.
7. Identifying the relationship between irrationality and musical performance anxiety.
8. Identifying the relationship between experience (age and year of study) and musical performance anxiety.
9. Identifying the relationship between gender and musical performance anxiety.

Hypotheses:

1. Subjects included in the study have high levels of musical performance anxiety.
2. Subjects with high cognitive or somatic anxiety have low self-confidence.
3. Subjects with a high level of performance anxiety have a high level of distress and of dysfunctional negative emotions.
4. Subjects with low self-efficacy have a higher level of musical performance anxiety.
5. Subjects with low self-esteem have a higher level of musical performance anxiety.
6. Subjects with low self acceptance have a higher level of musical performance anxiety.
7. Subjects with higher levels of irrationality have a higher level of musical performance anxiety.

8. Subjects with greater experience (age, year of study) have a lower level of musical performance anxiety.
9. Girls have a higher level of musical performance anxiety.

4. RESEARCH METHOD (I)

4. 1. SUBJECTS

The sample comprised 53 subjects, including 29 girls (54.72%) and 24 boys (45.28%), aged between 14 and 17 ($M = 16.04$, $SI = 1.06$), students from "Sigismund Toduță" upper secondary school of music, Cluj-Napoca, grades 9-11. Twelfth grade students were not included because, in their case, there is no final specialty exam.

In Romanian vocational schools, violin study starts in the first grade, at about 6-8. In the first two years, every student receives two 45-minute individual sessions each week; later, during grades 3 to 12; three hours of study are allocated to the primary musical instrument, in our case, the violin. In recent years, due to a diminished interest in the musical career, even "Sigismund Toduță" upper secondary school aims to provide education through music rather than for music. There are of course students who want a musical career and are willing to invest the required effort in collaboration with teachers and parents; however, it is often the case when performance is only the desideratum of the teachers, who either have their own standards and ideals or are constrained by the assessments to which they are subject in their turn.

The great amount of knowledge assumed to be covered in class and learned at a level which would allow performance in front of an audience is part of a busy timetable that, in addition to classes of primary instrument (violin), comprises between 5-7 hours of general education daily. Basically, 5th -8th grade pupils have general education classes from 7:30 a.m. to 12:30/13:30 p.m. followed by primary and secondary instruments, choir or orchestra rehearsals. Obviously, they need time to prepare assignments for all these subjects. Similarly, 9th to 12th grade pupils have general education classes between 12:30/13:30 and 18:30/19:30, with specialist music classes scheduled in the morning. Starting with fifth grade, students attend weekly one piano class.

During the school year, there are two main evaluation periods for the primary instrument: an assessment at the end of the first semester and an exam at the end of the second semester. The assessment score is equivalent to a normal grade, but the exam result accounts for 50% of the annual average. Therefore, for the majority of students, it is the most important grade and also the most significant performance before an audience / jury. Competition is tough: students' performances are compared both with their own previous interpretations and with those of peers. Each exam is an opportunity to modify the hierarchy. Thus, every decimal can be of consequence. The hierarchy is maintained until the next exam. These are the reasons why we chose to evaluate anxiety performance on the occasion of the final specialty exam. Due to the competitive atmosphere, we opted for conceptualizing music performance anxiety as a multidimensional concept and chose CSAI - 2 as assessment tool.

4. 2. METHODS

To study the relationship between size/components of performance anxiety in musicians and emotional distress, self-efficacy, self esteem, unconditional self acceptance and irrationality, we used the following scales and questionnaires: Competitive State Anxiety Inventory (CSAI-2, Martens, Burton & Vealey, 1990), the Profile of Emotional Distress (PDA, Opris & Macavei, 2005), Self-Efficacy Scale (SES, Schwarzer & Jerusalem, 2007), Self-Esteem Scale (SS, Rosenberg 2007), the Unconditional Self Acceptance Questionnaire (USAQ Chamberlain & Haaga, 2007), Attitudes and Beliefs Scale Short Version (ABSs, David, 2007).

Students were also requested to indicate the musical instrument studied, the year of study and whether they and their teachers were satisfied with the performance at the specialty exam. To this end, they had to answer the following open questions: "Were you happy with the way you played? "How about your teacher?" To investigate the students' and teachers' level of satisfaction, we made use of content analysis. Students were asked for information on individual study, the number of auditions attended in view of the examination, preparation assessments, the grades received, their career intentions, but these were not analysed in this thesis.

1. CSAI-2 (Competition State Anxiety Inventory – 2, Martens, Burton & Vealey, 1990)

CSAI-2 was designed to assess states of cognitive and somatic anxiety and self-confidence under competitive circumstances. We chose this tool because performance anxiety is conceptualized as a state and not as trait and anxiety state is a better performance predictor. Another argument in favour of the CSAI-2 is that it allows detection of cognitive and somatic anxiety, and an effective intervention for reducing anxiety performance and increase the quality of interpretation must refer to the type of anxiety experienced (Martens et al. 1990). Also, the CSAI-2 assesses the self-confidence of the performer, which is essential for a successful musical performance.

CSAI - 2 was adjusted and calibrated to the Romanian population by Ormenișan (2007). A revised CSAI-2 was adapted to musical performance anxiety by Yoshie et al. (2009).

The inventory comprises 27 items covering three subscales: cognitive, somatic and self-confidence. The scoring is on a scale of 1-4 where 1 = not at all, 2 = little extent, 3 = some extent, 4 = very large extent.

Because CSAI-2 was originally designed to assess athletes' anxiety some changes were required: the word "competition" was replaced by "examination". Respondents were asked to remember how they felt approximately a week before the specialty examination. To facilitate recall, the items were formulated in the past tense. Other modified items were item 7, item 10, item 15, and item 18.

Initial studies conducted by authors (and Martens et al., 1990) demonstrated good internal consistency of the three CSAI -2 scales: Cronbach alpha coefficient values ranged between .79 and .90. Recent studies have confirmed the internal consistency of the CSAI-2, reporting alpha values between .74 and .91 (Coelho et al., 2007, Iosifidou & Doganis, 2001 Sewll Lane, Terry, Bartram & Nest, 1999, Tsorbatzoudis, Barkouis, Rodafinos & Grouios, 1998, 2002 in Coelho, Vasconcelos-Raposo & Mahle, 2010)

2. The Profile of Emotional Distress

The Profile of Emotional Distress (PDA - Opris & Macavei, 2005) is a tool designed to assess the subjective dimension of functional and dysfunctional negative emotions and of positive emotions. The scale includes 39 items and calculates an overall score of distress, a score of negative emotions, a score of positive emotions, and the scores for (functional) "concern," (dysfunctional) "anxiety" and

(dysfunctional) "depression". In our study, we calculated the distress overall score and the dysfunctional negative emotions score.

3. The Self-Efficacy Scale (SES, Schwarzer & Jerusalem, 2007)

The SES scale was designed to measure self-efficacy, namely "*a person's conviction that their actions may be/are responsible for the success of certain activities*" (2007:4). Since each person can have different beliefs regarding their effectiveness in certain areas, tasks, situations, self-efficacy is conceptualised as being specific. The SES version adapted and calibrated for the Romanian population assesses self-efficacy in professional work, in our case musical performance.

While the original scale contained 20 items, its reduced version includes 10 items describing positive characteristics of personal efficacy. The subject is asked to choose one of the four response options (1 - "completely untrue for me", and 4 - "completely true for me") by way of self-evaluation. The Cronbach alpha coefficient reported by the authors ranges between .75 and .90, values indicating a good internal consistency of the scale.

The self-efficacy score is obtained by summing scores collected from the 10 items. It can range between minimum 10 and maximum 40. Sample items: 'I am confident that I can handle unexpected situations effectively.' "Whatever happens, I am (usually) prepared to face the situation."

4. The Self-Esteem Scale

Self esteem was assessed by the questionnaire developed by Rosenberg (Self Esteem Scale - SS 2007). The scale was designed as a self-esteem one-dimensional and overall assessment tool consisting of 10 items. The items are statements about the perceived value of the self, located on a continuum. Sample items: "I feel that I have little reason to be proud of myself," "I feel I am a person as valuable as the others." Responses are given in Likert format, where 1 is "I totally disagree" and 4 is "I fully agree."

The SS scale has good internal consistency, with Cronbach alpha coefficient being .89, and the test - retest reliability ranging between .85 and .88 (Rosenberg, 1965). Because of these psychometric properties, the scale is widely used in social psychology, health psychology, and clinical psychology.

5. The Unconditional Self Acceptance Questionnaire (USAQ, Chamberlain & Haaga, 2007)

The instrument is based on Albert Ellis's theory on unconditional acceptance. According to this theory, emotional or behavioural problems derive from individuals' difficulty to accept themselves unconditionally and to accept unconditionally the persons around them as well as their living conditions. Ellis's definition of unconditional acceptance shows that individuals "fully and unconditionally accept themselves, whether they behave intelligently, competently or correctly, or whether people approve, respect or love them" (Ellis, 1977, in Chamberlain & Haaga, 2007: 7).

The questionnaire consists of 20 items measuring the unconditional acceptance of one. Nine of the items reflect high levels of unconditional acceptance and 11 items reflect a low acceptance level. There are seven response options ranging from "almost always false" to "almost always true."

The reliability of USAQ was estimated by calculating the internal consistency. The Cronbach Alpha coefficient value was .73.

6. Attitudes and Beliefs Scale Short Version (ABSs, David, 2007)

This instrument measures irrationality with each of the eight items covering a type of irrational or rational belief: absolutist claims, catastrophising, low frustration tolerance, negative overall assessment, preferences, nuanced assessment of the adverse nature of an event, frustration tolerance, unconditional acceptance of oneself and evaluating specific behaviours.

The items can be adapted to various contents, so its use was possible to assess subjects' attitudes towards performance, namely the musical performance during the specialty exam.

The scale comprises eight items: four irrational and four rational statements. Subjects had the following response options: strongly disagree, partially disagree, neutral, partially agree, and strongly agree. The rational items (3, 4, 7, and 8) were scored in reverse.

The reliability of ABSs was estimated by calculating the Cronbach Alpha coefficient, which showed an average internal consistency of .56 - .78.

4. 3. PROCEDURE

The psychological examination was carried out from 9 to 13 June, 2008, in the week following the end-of-year specialty exams. Specialty exams are scheduled over 2-3 weeks, depending on the studied instrument and the year of study. The questionnaires were completed during the general education class, with pupils being notified in advance. Thus, participation was on a voluntary basis. The study was conducted with the approval of the headmaster's office and the testing period was set by the head master. Testing was conducted with the cooperation of a supervisor senior psychologist accredited by the Romanian College of Psychologists for clinical/educational psychology, educational and vocational counselling. The subjects were asked to complete questionnaires anonymously. Also, in order to complete the tests accurately, instructions were given as to desirability. There was no imposed time limit for completion.

5. RESULTS AND DISCUSSIONS

Students enrolled in the study were in grades 8 to 11; however, in terms of year of study of the instrument or vocal study, they had had 1-12 years of study. The average study years was 6.94 (SI = 2.92). As mentioned in the introductory chapter, selected subjects were 29 girls (54.72%) and 24 boys (45.28%).

The composition of the sample according to the musical instrument studied can be found in the following table:

Table 6. Composition of the sample according to the instrument studied

Instrument	Girls	Boys	Total
Strings	10	5	15 (28%)
Brass/ Wood Wind	5	15	20 (37%)
Percussion	1	1	2 (3%)
Piano	6	2	8 (15%)
Canto	7	1	8 (15%)

Regarding their performance at the specialty exam, 47% of students said they

were satisfied with their interpretation, while 26.4% of them were dissatisfied. According to students' impressions, 56.6% of teachers were satisfied with their stage performance, while only 17% of them were dissatisfied. It seems that some students had not talked to their teachers about their exam performance, so they simply made assumptions or did not know or seek the teacher's opinion.

The number of measurements for girls and boys were under 30; therefore, to be able to compare the averages of this sample with the reference population, we applied the *t test* and calculated the size of the effect (Cohen's *d* coefficient):

$$t = \frac{M - \mu}{EE_M}$$

$$d = \frac{M - \mu}{\sigma}$$

Where *M* is the sample population mean, μ is the average of the population of which the sample is part; *EE M* is the standard error of the sample mean and σ is the standard deviation of the interest variable in the population.

To study the relationships between CSAI-2 scales and PDA dysfunctional negative emotions, PDA overall score, SES, SS, USAQ, ABSs IR, age and year of study of a musical instrument, we calculated the Pearson correlation coefficient (one-tailed).

To explain the variance of CSAI-2 scales, we performed multiple linear regressions with these scales as dependent variables and PDAs, SES, SS USAQ, ABSs IR, age and year of study as independent variables. We used PSPP 0.7.2, a free programme for statistical processing (<http://www.gnu.org/software/pspp/>).

Table 9 contains statistical indicators of the variables used in research, and Tables 10 and 11, statistical indicators of the performance of boys, girls that the variables studied.

Table 9. Statistical indicators of the variables used in research

Valid cases=53; missing cases =1;

Variable	N	Mean	Std Dev	Minim	Maxim
Cognitive Scale	53	19,77	4,79	13,00	33,00
Somatic Scale	53	20,74	6,00	11,00	33,00
Self-Confidence Scale	53	19,43	4,98	11,00	29,00
PDA- negative emotions	53	27,17	9,99	13,00	58,00
PDA	53	56,42	17,39	26,00	105,00
SES	53	29,43	4,68	16,00	37,00

SS	53	27,74	4,75	12,00	38,00
USAQ	53	79,94	12,42	54,00	110,00
ABSs IR	52	5,31	3,08	0,00	14,00
Age	53	16,04	1,06	14,00	18,00
Study Year	53	6,94	2,92	1,00	12,00

If we look only average scores achieved by subjects, whereas cognitive and somatic anxiety is around the average values reported by Martens et al. (1990), Self-Confidence Scale, ESS, SS and USAQ reflect low levels of constructs measured. ABSs average scores in this sample, suggests an high level of irrationality.

Table 10. Statistical indicators of the performance of boys that the variables studied

Valid cases=53; missing cases =1;

Variable	N	Mean	Std Dev	Minim	Maxim
Cognitive Scale	24	19,38	4,09	13,00	27,00
Somatic Scale	24	18,67	4,78	11,00	28,00
Self-Confidence Scale	24	19,96	4,54	13,00	28,00
PDA- negative emotions	24	26,63	11,01	13,00	58,00
PDA	24	53,42	19,34	26,00	105,00
SES	24	29,96	3,36	23,00	36,00
SS	24	29,04	3,54	23,00	38,00
USAQ	24	82,79	11,12	58,00	108,00
ABSs IR	24	5,25	2,64	0,00	9,00
Age	24	16,04	1,04	14,00	18,00
Study Year	24	6,54	2,23	3,00	11,00

Table 11. Statistical indicators of the performance of girls that the variables studied

Valid cases=53; missing cases =1;

Variable	N	Mean	Std Dev	Minim	Maxim
Cognitive Scale	29	20,10	5,35	13,00	33,00
Somatic Scale	29	22,45	6,43	14,00	33,00
Self- Confidence Scale	29	19,00	5,36	11,00	29,00
PDA- negative emotions	29	27,62	9,23	15,00	55,00
PDA	29	58,90	15,50	35,00	102,00
SES	29	29,00	5,57	16,00	37,00
SS	29	26,66	5,37	12,00	38,00
USAQ	29	77,59	13,12	54,00	110,00
ABSs IR	28	5,36	3,47	0,00	14,00
Age	29	16,03	1,09	14,00	18,00
Study Year	29	7,28	3,40	1,00	12,00

Mean scores obtained in CSAI-2 by this sample are: Cognitive Scale M = 19.77 (std dev = 4.79), Somatic Somatic Scale M = 20.74 (std dev = 6.00), Self-Confidence Scale M = 19.43

Apparently, the first hypothesis of this study is not confirmed: only in Self-Confidence Scale scores were significantly lower, and this is especially true for boys ($t = -3.25$, $d = .87$). On the other hand, Self-Confidence is the most important predictor of performance (Martens et al., 1990).

Table 27. The percentages of subjects with average scores higher or lower than the sample average (CSAI - 2)

	Cognitive Anxiety		Somatic Anxiety		Self-Confidence	
	scăzută	ridicăată	scăzută	ridicăată	scăzută	ridicăată
Boys	16.67%	20.84%	20.83%	16.67%	20.84%	20.83%
Girls	13.79%	17.25%	31.04%	27.59%	17.25%	17.25%

Mean scores obtained by boys at the CSAI-2 Cognitive Scale is 19.38 (std dev = 4.09). A percentage of 20.84% of the boys have a high level of cognitive anxiety, and 16.67%, a low level of cognitive anxiety. For boys, mean scores of the Somatic Scale of CSAI-2 is 18.67, and standard deviation, 4.78. 16.67% of the boys have a higher somatic anxiety, while 20.83% of them have a lower somatic anxiety.

Mean scores achieved by boys at the Confidence Scale is 19.95 (std dev = 4.54). Frequency distribution shows that 20.84% of the boys have a low self-confidence and 20.83% a high level of self-confidence.

In female subjects, the CSAI-2 Cognitive Scale, the mean was M = 20.10 (std dev = 5.35). Only 17.25% of the girls have a high level of cognitive anxiety, while 13.79% had a low level. At the CSAI-2 Somatic Scale, the mean scores obtained by the girls was M = 22.45 (AS = 6.43). A percentage of 27.59% of the girls has a high level of somatic anxiety, and 31.04% have a low level. At the Self-Confidence Scale, the average scores obtained by the girls was M = 18.72, (std dev = 5.36). Only 17.25% of girls have low self-confidence, while a similar proportion have a high confidence.

PDA total mean scores of this sample is 56.42 (std dev = 17.39) and is at the upper limit of an medium and a high level of distress. For boys, the average scores obtained is 53.42 and SD = 19.34. Average scores obtained by girls is 58.90, std dev =

15.50. În terms dysfunctional negative emotions, the average scores achieved by this sample is 27.17 (std dev= 9.99) and reflects a high level of this construct. On this scale, the average scores obtained by boys is 26.62. (std dev = 11) and that of girls is higher: 27.55 (std dev = 9.18).

Mean scores obtained from the SES is 29.51 (std dev = 4.69) is at the limit between low (26-29) and average (30-33). Media boys is 29.96 (std dev = 3.36) and girls is 29.14 (std dev = 5.59).

At SS the mean in this sample is 27.74 (std dev = 4.75) and reflect a low self-esteem. Mean scores achieved by boys is 19.04, (std dev = 3.54) and în girls, the mean scores is 26.66 (std dev = 5.37). Mean scores obtained from USAQ is 79.94 (std dev = 12.42) and reflects a low level of unconditional acceptance of oneself. For boys, the average is 82.79 (std dev = 11.12) and the mean scores obtained for girls is 77.59 (std dev = 13.12).

At ABSs Irrationality, the mean scores of this sample is 5.29 (std dev = 3.08) and suggests a high irrationality. Mean scores obtained by boys is 5.25 (std dev = 2.64) and girls is 5.29 (std dev= 3.08).

Correlations

Table 21. Correlation of variables studied: boys and girls

Variable		Cognitive Scale	Somatic Scale	Self-Confidence Scale	PDA-Negative Emotions	PDA total	SES	SS	USAQ	ABSs IR	Age	Study Year
Scala cognitivă	Coef. Pearson	1,00	,36	-,39	,35	,45	-,10	-,08	,12	,22	,04	-,02
	Sig.(1-tailed)		,00	,00	,01	,00	,23	,28	,19	,06	,39	,42
	N	53	53	53	53	53	53	53	53	52	53	53
Scala somatică	Coef. Pearson	,36	1,00	-,55	,39	,52	-,11	,01	-,13	-,12	-,24	-,07
	Sig.(1-tailed)	,00		,00	,00	,00	,22	,47	,18	,20	,04	,30
	N	53	53	53	53	53	53	53	53	52	53	53
Self-Confidence	Coef. Pearson	-,39	-,55	1,00	-,37	-,39	,37	,01	,06	,09	,12	-,11
	Sig.(1-tailed)	,00	,00		,00	,00	,00	,48	,34	,26	,20	,21
	N	53	53	53	53	53	53	53	53	52	53	53
PDA-	Coef. Pearson	,35	,39	-,37	1,00	,89	-,19	-,17	-,29	-,06	-,24	-,19
	Sig.(1-tailed)	,01	,00	,00		,00	,10	,11	,02	,34	,04	,09
	N	53	53	53	53	53	53	53	53	52	53	53
PDA total	Coef. Pearson	,45	,52	-,39	,89	1,00	-,15	-,14	-,15	-,06	-,16	-,24
	Sig.(1-tailed)	,00	,00	,00	,00		,14	,16	,14	,34	,13	,04
	N	53	53	53	53	53	53	53	53	52	53	53
SES	Coef. Pearson	-,10	-,11	,37	-,18	-,15	1,00	,27	,17	,03	,16	,10
	Sig.(1-tailed)	,23	,22	,00	,10	,14		,02	,11	,41	,12	,23
	N	53	53	53	53	53	53	53	53	52	53	53
SS	Coef. Pearson	-,08	,01	,01	-,17	-,14	,27	1,00	,17	-,11	,06	-,15
	Sig.(1-tailed)	,28	,47	,48	,11	,16	,02		,11	,22	,34	,14
	N	53	53	53	53	53	53	53	53	52	53	53
USAQ	Coef. Pearson	,12	-,13	,06	-,29	-,15	,17	,17	1,00	,14	,10	,06
	Sig.(1-tailed)	,19	,18	,34	,02	,14	,11	,11		,16	,25	,33
	N	53	53	53	53	53	53	53	53	52	53	53
ABSs IR	Coef. Pearson	,22	-,12	,09	-,06	-,06	,03	-,11	,14	1,00	,11	,06
	Sig.(1-tailed)											
	N											

	Sig.(1-tailed)	,06	,20	,26	,34	,34	,41	,22	,16		,22	,33
	N	52	52	52	52	52	52	52	52	52	52	52
Age	Coef. Pearson	,04	-,24	,12	-,24	-,16	,16	,06	10	,11	1,00	,20
	Sig.(1-tailed)	,39	,04	,20	,04	,13	,12	,34	,25	,22		,08
	N	53	53	53	53	53	53	53	53	52	53	53
Study Year	Coef. Pearson	,02	-,07	-,11	-,19	-,24	,10	-,15	,06	,06	,20	1,00
	Sig.(1-tailed)	,42	,30	,21	,09	,04	,23	,14	,33	,33	,08	
	N	53	53	53	53	53	53	53	53	52	53	53

The analysis of *Table 21* show us that the sample correlations between the three CSAI two scales are highly significant: Scale Cognitive and Somatic Scale $r = .36$ ($p < .001$), Scale and Cognitive Self-Confidence Scale $r = -.39$ ($p < .001$) and Somatic Scale Self-Confidence Scale $r = -.55$ ($p < .001$), also observed by Martens et al. (1990). Thus, confirming the second hypothesis of this study: individuals with cognitive or somatic anxiety have a low level of self-confidence.

The analysis also revealed significant correlations between scores 2 and PDA CSAI total: Cognitive Scale coef Pearson $r = .45$ ($p < 0.001$); Somatic Scale coef Pearson $r = .52$ ($p < 0.001$) and Self-Confidence Scale, $r = -.39$ ($p < 0.001$). PDA correlations between PDA negative dysfunctional emotions and CSAI 2 scales are also significant: the Cognitive Scale $r = .35$ ($p < .01$); with Somatic Scale $r = .39$ ($p < .01$) and with Self-Confidence Scale $r = -.37$ ($p < .001$). These results confirm the third hypothesis of this study: more anxious performers experience a higher level of emotional distress and dysfunctional negative emotions, respectively have a low self – confidence.

Another significant positive correlation is observable between SES scores and Self-Confidence Scale: Pearson $r = .37$ ($p < 0.01$). The correlation between SES and the level of self-esteem and is $r = .27$ ($p < .02$). Therefore, performers with low auto-efficacy have less self-confidence. They also have a low self-esteem.

Between negative emotions and dysfunctional unconditional acceptance of oneself is a negative correlation: coef Pearson $r = -.29$ ($p < .02$). Performers with low unconditional acceptance experience a high level of dysfunctional negative emotions. Dysfunctional negative emotions and negatively correlated with age subjects: $r = -.24$, ($p < .04$). Also, a negative correlation is apparent between the total PDA and year of study being: $r = -.24$. ($P < .04$). With age performers reduce the emotional distress for the musicians included in our study.

The relationship between student age and level of somatic anxiety is negative: coef Pearson $r = -.24$, ($p < .04$). This means that with experience, the musicians

adolescents experience fewer somatic symptoms and / or manage to control them better. Thus, partially confirmed the eighth case.

Regression

To get an accurate picture of the relationship between scales CSAI - 2 and other variables, we performed multiple linear regression analysis. The Scales of CSAI - 2, were dependent variables.

Table 24. The regression results for the CSAI 2 Cognitive Scale dependent variable

<i>R</i>	<i>R square</i>	<i>Adjusted R Square</i>	<i>Std Dev of the Estimate</i>
,61	,38	,24	4,26

ANOVA

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>Significance</i>
Regression	449,07	10	44,91	2,48	,02
Residual	743,60	41	18,14		
Total	1192,67	51			

Coefficients

	<i>B</i>	<i>Std Dev</i>	<i>Beta</i>	<i>t</i>	<i>Significance</i>
(Constant)	4,21	13,24	,00	,32	,80
Somatic Scale	,09	,14	,11	,62	,54
Self-Confidence Scale	-,24	,17	-,25	-1,42	,16
PDA-	-,04	,15	-,09	-,29	,78
PDA total	,12	,09	,42	1,28	,21
SES	,01	,15	,01	,08	,94
SS	-,05	,14	-,05	-,36	,72
USAQ	,06	,05	,16	1,13	,27
ABSs IR	,37	,20	,23	1,84	,07
Age	,47	,62	,10	,76	,45
Study year	-,03	,25	-,02	-,14	,89

In the case of cognitive anxiety, the model chosen (Table 24), explains 61% of the variance ($R = .61$, $p < .02$). Irrationality has been the most important factor, but statistically insignificant ($t = 1.84$, $p = .07$).

Table 25. The regression results for the CSAI 2 Somatic Scale dependent variable

Model Summary

<i>R</i>	<i>R square</i>	<i>Adjusted R Square</i>	<i>Std Dev of the Estimate</i>
,72	,53	,42	4,65

ANOVA

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>Significance</i>
Regression	980,70	10	98,07	4,54	,00
Residual	886,53	41	21,62		
Total	1867,23	51			

Coefficients

	<i>B</i>	<i>Std Dev</i>	<i>Beta</i>	<i>t</i>	<i>Significance</i>
(Constanta)	42,87	12,84	,00	3,34	,19
Cognitive Scale	,10	,17	,08	,62	,54
Self-Confidence Scale	-,54	,17	-,45	-3,14	,00
PDA-	-,35	,16	-,58	-2,26	,03
PDA total	,27	,09	,78	2,97	,00
SES	,16	,16	,13	1,01	,32
SS	,05	,15	,04	,32	,75
USAQ	-,08	,06	-,16	-1,33	,19
ABSs IR	-,07	,23	-,04	-,32	,75
Age	-1,17	,66	-,21	-1,77	,08
Study year	-,04	,27	-,02	-,16	,88

Somatic Anxiety variance is thus explained in the proportion of 72% ($R = .72$, $p < .001$). The most important variables were: self-confidence ($t = -3.14$, $p < .001$), dysfunctional negative emotions ($t = -2.26$, $p < .03$), Emotional Distress profile ($t = 2.97$, $p < .001$).

Table 26. The regression results for the CSAI 2 Self- Confidence Scale dependent variable

Model Summary

<i>R</i>	<i>R square</i>	<i>Adjusted R Square</i>	<i>Std Dev of the Estimate</i>
,73	,54	,44	3,81

ANOVA

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>Significance</i>
Regression	684,90	10	68,49	4,73	,00
Residual	594,10	41	14,49		
Total	1279,00				

Coefficients

	<i>B</i>	<i>Std Dev</i>	<i>Beta</i>	<i>t</i>	<i>Significance</i>
(Constanta)	32,55	10,71	,00	3,04	,20
Cognitive Scale	-,19	,14	-,19	-1,42	,16
Somatic Scale	-,36	,11	-,44	-3,14	,00
PDA-	-,16	,13	-,33	-1,24	,22
PDA total	,05	,08	,16	,56	,58
SES	,35	,12	,33	2,88	,01
SS	-,13	,12	-,12	-1,06	,29
USAQ	-,02	,05	-,06	-,47	,64
ABSs IR	,12	,18	,08	,67	,51
Age	-,13	,56	-,03	-,23	,82
Study year	-,47	,21	-,27	-2,27	,03

The proposed model explained 73% ($R = .73$, $p < .001$) of variance in self-confidence (Table 26). The most important factors are: somatic anxiety ($t = -3.14$, $p < .001$), autoeficacitatea ($t = 2.88$, $p < .01$) and year of study ($t = -2.27$, $p < .03$). This confirms that the experience is a decisive factor in reducing performance anxiety.

6. CONCLUSIONS

The objective of our thesis was to assess performance anxiety and identify psychological components that explain individual differences in experiencing musical performance anxiety in adolescent musical instrument performers.

53 subjects participated in this research, namely 29 girls (54.72%) and 24 boys (45.28%), aged between 14 and 17 years ($M = 16.04$, $SI = 1.06$), students from "Sigismund Toduță" upper secondary school of music Cluj-Napoca, grades 9-11, with 1 to 12 years of study of a musical instruments or canto. About half of the student musicians included in the research (47%), out of which more than half girls, and 56.6% of the teachers were satisfied with the performance in the specialty examination.

Average scores obtained from this sample on Cognitive Anxiety and Somatic Anxiety scales of the CSAI - 2 were similar to those reported by Martens et al. (1990). In contrast, the self-confidence scores were significantly lower, especially among boys. This is relevant due to the fact that out of the CSAI-2 scales this is the most important predictor for performance.

Some of the participants showed high levels of cognitive or somatic anxiety: practically between 17.25% and 27.59% of them were affected by some form of anxiety. The percentages are similar to those in the specialist literature.

Within this sample, girls had a higher percentage of high somatic anxiety, while a higher percentage of boys reported high levels of cognitive anxiety.

Relations between CSAI - 2 scales for this sample are similar to those established by Martens et al., (1990) except for girls, where no significant correlations between cognitive and somatic scales exist.

Average scores on the SES, SS and USAQ reflect low levels of constructs measured by these instruments. The average of the PDA scores situates this sample at a medium level, except for the dysfunctional negative emotions, which are high. The average of the ABSs irrationality scores suggests a high level of irrationality.

Performance anxiety produces distress and dysfunctional negative emotions in subjects involved in research.

Results emphasise the role of self-efficacy in maintaining adolescent instrumental performers' self-confidence.

Self esteem does not seem to influence directly the subjects' performance anxiety, but the results of our research confirm the relationship between musicians' self-esteem and self-efficacy.

For our sample, correlation analysis revealed a low level of unconditional acceptance of oneself only in male subjects with a high somatic anxiety. Therefore, our hypothesis was not confirmed. Unconditional acceptance of oneself influenced the dysfunctional negative emotions experienced by student musicians enrolled in our research.

At the level of the entire sample irrationality affected only the subjects' cognitive anxiety, but the influence was statistically insignificant. However, male subjects with high somatic anxiety and/or low self-esteem showed a high level of irrationality. Relations between irrationality and somatic anxiety, respectively self-confidence were reversed in the case of girls. Basically, it meant that girls with a high level of irrationality have a higher self-confidence and experience lower somatic anxiety.

Our results show that somatic anxiety experienced by adolescent musicians' decreases with age. This is also true for dysfunctional negative emotions.

The importance of the year of study of the musical instrument is evident in relation to respondents' self-confidence, especially in the case of boys.

6. 1. THEORETICAL AND PRACTICAL ISSUES

The assessment of performance anxiety in adolescent instrumental performers is a novel approach in Romanian research. The results of this study show that the percentage of musicians who experience a high level of performance anxiety is similar to those reported in the specialist literature. Therefore, music performance anxiety is an issue that should be addressed in education and training of young performers.

Highlighting the two dimensions of instrumental performance anxiety and self-esteem by using CSAI-2 is necessary in order to achieve effective intervention programmes.

The low levels of self-esteem and dysfunctional negative emotions revealed by our research findings should alert music education and health professionals. These results may suggest the need for reassessment of teaching methods and techniques and the inclusion of strategies and/or intervention techniques designed to increase self-confidence of adolescent performers. In this respect, constructive feedback could be an option.

Relations between somatic anxiety and self-confidence of adolescent performers revealed in this research have practical importance in terms of planning effective interventions in musical performance anxiety. They justify the need to introduce the techniques to reduce its physiological activation (breathing, relaxation exercises). The same is true in terms of the influence of self-efficacy and the year of study on self-esteem. In this case, techniques such as time management and study techniques, modelling, exposure during auditions, can be effective.

The role of irrationality in performance anxiety is not statistically significant. Yet, the study of the relationship between performance anxiety and irrational belief types could provide additional clarification.

Finally, the relationship between performance anxiety and gender should be further researched.

6. 2. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The small number of subjects included in the study is a limiting factor to our ability to generalize results.

Similarly, the fact that questionnaires were applied after specialty examination and not before (for the reasons already mentioned), did not allow accurate capture of the level of anxiety experienced by subjects. Most times, musicians feel relieved after they perform, regardless of the quality of interpretation and of the assessment results.

Responses may also have been biased by the potentially significant influence of emotional states upon completion of the investigation. Thus, an emotional positive /negative state at that time may have induced an error related to the prevalence of pleasant / unpleasant events to which items of the used instruments made reference.

7. RESEARCH OBJECTIVE (II)

This study aims to evaluate the effects of a cognitive-behavioural programme of violinists' performance anxiety management on the quality of their instrumental performance.

Hypothesis:

The implementation of a cognitive – behavioural programme of anxiety performance management can improve the quality of violinists' performance.

8. RESEARCH METHODOLOGY

8. 1. SUBJECTS

Initially, there were six subject violinists, students of “Sigismund Toduță” upper secondary school in Cluj-Napoca. Along the way, two subjects had to be excluded due to personal problems that affected their training programme.

The selection was made according to the following criteria: subjects had to be teenagers affected by musical performance anxiety. We included only male subjects because we did not aim at gender differences. Moreover, my department was composed only of boys (one exception only). All violinists had been informed on the

purpose of the research. In the case of minors, we obtained parental consent for their participation in this study. Confidentiality was ensured for all of them.

8. 2. METHODS

To collect data, we used the interview, the observation, school documents and heteroanamnesis.

Data on medical history, age, years of study, as well as musical performance anxiety, time and context of the appearance of the first anxiety experiences, symptoms experienced and their effects on performance were obtained in interviews. We also used the observations made during instrument study classes, auditions, examinations and competitions involving violinists, and those of the teacher who accompanies them on piano.

Psychological investigation aimed to measure musical performance anxiety, trait anxiety, state anxiety, self-efficacy, self-esteem and irrationality.

The psychological assessment tools used were STAI X1, STAI X2 (Spielberger, 1975), CSAI 2 (Martens, Burton Vealey, 1990), Self-efficacy Scale (SES, Schwarzer and Jerusalem, 2007), Self-Esteem Scale (SS, Rosenberg, 2007), Attitudes and Beliefs Scale Short Version (ABSs, David, 2007). Except for STAI, the other instruments have been presented elsewhere in our thesis.

The State-Trait-Anxiety Inventory (STAI, Spielberger, 1975)

Musical performance anxiety is unique in every individual and is influenced by other characteristics, external stressors and various factors so the auto reported tools can provide essential information. We also chose this STAI because it is the most commonly used in research in this field.

The validity and reliability of this instrument have been thoroughly studied and data obtained indicate satisfactory psychometric properties (Spielberger & Sydeman, 1994). STAI validity is based on the assumption that the subjects understood the instructions for A-state asking them to tell how they felt at that particular moment and those for A-trait asking them to indicate how they feel generally. Instructions for A-trait were always in printed format.

Numerous studies used STAI to assess anxiety in musical performance: Abel & Larkin, 1990; Craske & Graig, 1984, Hamann & Sobaje, 1983, Nagel, Himle &

Papsdorf, 1989, Steptoe & Fidler, 1987. There are other researchers who acknowledge the use of this inventory for musicians (Kemp, 1996: 93). In addition, anxiety inventories are preferable to psychological tests because they are affected to a lesser extent by external factors (Hamann, 1982).

STAI is composed of two self-assessment scales for measuring two distinct concepts of anxiety: state anxiety (A-state) and trait anxiety (A-trait).

A-trait scale consists of 20 statements that assess how respondents feel generally. A-state scale also consists of 20 statements but the instructions require subjects to indicate how they feel at a particular time.

The respondents are asked to choose one of four response options. For the A-state scale are: 1 – not at all, two - somewhat, 3 – moderately so 4 – very much so. The trait scale categories are: 1 - almost never 2 - sometimes 3 - often 4 - almost always.

In both subscales A-state and A-trait, for the X form of STAI, possible scores range between a minimum of 20 points and a maximum of 80. Individuals with high scores on trait anxiety are more typically inclined to self-doubt and are more likely to perceive danger where there is none than people with low scores on this variable. X2 STAI average scores for the Romanian population are 42.11 (SI = 7.04) for female subjects, respectively 40.16 (SI = 8.33) for male subjects. Regarding anxiety state STAI X1, average scores are: for women 41.39 (SD 8.30) and for men 40.78 (SD = 7.21).

As instructions may be modified for the A - state scale to assess the level of anxiety intensity for the situation or time interval of concern to the experimenter or clinician, students were asked to relate how they felt before performing on stage.

In assessing the performance, we sought technical quality (fluency, accuracy of intonation, rhythm) and expressivity (phrasing, dynamics and attitude on stage). To assess the quality of interpretation, we used school records, student evaluations and those of the teacher who accompanies them on piano, and, as importantly, my personal observations.

8. 3. EXPERIMENTAL DESIGN

Each violinist performed their own control. In the pre-test completed in March 2010, subjects were asked to recall in as much detail as possible the last situation (audition,

examination, competition) where their emotions negatively affected their performance. During the post-test (May 2010), the questionnaires were applied approximately one hour before the end-of-year specialty exam, prior to the instrument warm-up while the interview was conducted immediately after the exam. During post - test, only performance anxiety and state anxiety were assessed.

8. 4. PROCEDURE

Given the students' extremely busy schedule, the intervention was conducted over nine weeks (March-May 2010), during specialist classes, on the premises of "S. Toduță" upper secondary school of music. Each student participated in three individual hours per week, according to the schedule. The absentees made up for the missed sessions.

In addition to the intervention, the specialist classes included a part of the students' performance programme, after which we reviewed the interpretation and offered feedback, study methods and suggestions. The feedback was always constructive so as to increase self-confidence.

The questionnaires and tests, the initial assessment interviews along with the observations revealed the image of performers with high anxiety and deficient self-confidence.

The proposed intervention programme included:

- *Instructions on anxiety*
- *Stress inoculation,*
- *Identifying and replacing negative thoughts,*
- *Relaxation (abdominal breathing and Jacobson progressive relaxation)*
- *Time and individual study management*
- *Modelling,*
- *Exposure (during organized auditions)*
- *Constructive feedback.*

In conducting the intervention protocol we took into account existing specialist literature data (Tuncay, 2003): both cognitive-behavioural and behavioural interventions had only moderate effects in diminishing test anxiety. Combining cognitive-behavioural interventions and those aimed at skill improvement may have

significant effects in reducing anxiety and increasing performance quality.

The selected techniques focused on *cognitive anxiety* (education, identifying and replacing negative thoughts, and stress inoculation), *somatic anxiety* (abdominal breathing and Jacobson progressive relaxation) and *self-confidence* (time and individual study management, modelling, constructive feedback).

9. CONCLUSIONS

The objective of this part was the implementation of an intervention programme for performance anxiety in violinists and assessing its effectiveness.

The subjects were four violin students from “S. Toduță” upper secondary school in Cluj. Their selection met the following criteria: they were adolescents affected by musical performance anxiety. An additional argument to include only boys in this study refers to lack of homogeneity of the samples used in most studies assessing the effectiveness of intervention techniques in performance anxiety. Moreover, the results of our study investigating the adolescent musicians’ performance anxiety showed that they had higher anxiety level than their female peers.

The performance anxiety management programme was conducted over nine weeks, being integrated into the specialist classes of violin study. As each student was assigned three weekly individual classes, the total time used was 27 hours.

Musical performance anxiety is a complex phenomenon and has multifaceted causes. Thus, there is a legitimate need for several intervention techniques. The anxiety management programme included: instruction on musical performance anxiety, identifying and replacing negative thoughts, stress inoculation, time and independent study management, relaxation (abdominal breathing and Jacobson progressive relaxation), modelling, gradual exposure during auditions, constructive feedback. The techniques addressed cognitive and somatic anxiety and self-confidence as they are conceptualized in the CSAI - 2 (Martens et al., 1990).

The intervention was efficient as shown by the comparison of z scores of the scores obtained by violinists at STAI X1, and at CSAI – 2 scales before and after the intervention:

- Case 1. STAI X1: $z=-2.32$ vs $z=3.22$; CSAI - 2 - Cognitive Scale: $z=-.27$ vs $z=.66$; Somatic Scale: $z=-.30$ vs $z=.95$, Self-confidence Scale: $z=.41$ vs $z=-1.76$.
- Case 2. STAI X1: $z=-.79$ vs $z=1.7$; CSAI - 2 - Cognitive Scale: $z=-.84$ vs $z=.10$; Somatic Scale: $z=-.85$ vs $z=.20$; Self-confidence Scale: $z=.41$ vs $z=-1.76$.
- Case 3. STAI X1: $z=-.66$ vs $z=1.42$; CSAI-2 - Cognitive Scale: $z=-1.20$ vs $z=1.22$; Somatic Scale: $z=-.66$ vs $z=1.32$; Self-confidence Scale 26: $z=.23$ vs $z=-1.22$.
- Case 4. STAI X1: $z=-.38$ vs $z=1.14$; CSAI-2 - Cognitive Scale: $z=-.46$ vs $z=.09$, Somatic Scale: $z=-1.04$ vs $z=.41$; Self-confidence Scale: $z=.41$ vs $z=-.14$.

All violinists improved their performance quality both in terms of technical execution and expressiveness, as shown by their grades and the accompanying observations. Beyond the development particulars of each musician, their repertoires with various complexity levels require individual approaches and justify the use of case study as research method. Basically, the intervention programme components were adapted to the particularities and needs of each student.

9.1. PRACTICAL ISSUES

Testing the effectiveness of cognitive-behavioural management programme of musical performance anxiety is important from both theoretical and practical points of view. The theoretical importance is obvious in a context where there are only two studies that assess the effectiveness of intervention programmes on young musicians (Kenny et al., 2008, Orman, 2003).

When seeking treatment, performers want not only to reduce anxiety, but also to enjoy their performance and, most of all, to enhance their on-stage presence. Time management and study strategies may be helpful for improving the quality of interpretation for violinists participating in this study.

This intervention programme was meant to become a useful tool for specialist teachers, often discouraged and helpless when facing their students' performance anxiety. In this respect, the tested techniques are available and can be applied during instrument study classes.

9. 2. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Despite encouraging results, the specificity of this study does not allow for generalizations in this regard and further replication is necessary.

Pre-testing was not carried out before an exam/ assessment, but was based on violinists' memories, so that performance anxiety level was only estimated.

The combination of intervention techniques does not allow some to detect their particular role in reducing performance anxiety and increasing the quality of performance. To clarify this issue, further studies are needed.

There is no follow-up, and thus long-term effects of this intervention cannot be examined.

10. FINAL CONSIDERATIONS

As mentioned in the introduction, our thesis reflects our personal interest in the topic and is based on the following prerequisites:

- The need for studies to address musicians' performance anxiety in our country;
- The small number of studies on adolescent performers in the specialist literature;
- The impact of musical performance anxiety on musical interpretation, career/quality of life of those affected;
- The neglect of performance anxiety-related issues in the education of future performers.

The complexity of this phenomenon, the conceptual and methodological issues along with the contradictory or inconclusive results of many studies conducted so far reveal an early stage of research into musical performance anxiety - anxiety over musical interpretation.

Although research in the field of musical performance anxiety has increased in the past 20 years, their influence is barely felt in music education.

The two studies presented in our thesis are only small but necessary steps needed to pave the way for future studies. Thus, whereas the first study shows data on the percentage of instrument performers who experience high levels of anxiety and on

the relationships between performance and certain components that influence it, the second study proposes practical solutions accessible to specialist teachers.

My personal contributions to the studies presented in this study are as follows:

- Adapting CSAI - 2 as a tool for assessing musicians' performance anxiety;
- Designing the performance anxiety management programme based on specialist literature and my professional experience;
- Adapting and changing the study log proposed by Belknap and Culata (2005) by integrating technical aspects and repertoire as well as allocating a flexible time span for completing each task;
- Adapting techniques to requirements of violin playing and to the needs of each student;
- Implementing the intervention program in the specialist classes; this will help increase violinists' compliance.

From the perspective of performance anxiety, the first responsibility of teachers is prevention. This can be achieved by building and maintaining students' self-esteem. Selecting a challenging repertoire that would not exceed the technical abilities of young performers is also one of the teachers' professional duties.

Specialist teachers should also get involved in interventions encouraging the use of learned techniques after their achievement. Integrating intervention techniques within instrument study classes and in students' individual study sessions may be a solution in this regard.

Creating a positive atmosphere during specialty classes, converting negative thoughts into positive thoughts, reinterpreting physiological symptoms, creating realistic expectations towards interpretation, teaching study and memory strategies, constructive feedback, modelling, organising auditions for students to test their training and experience small successes are other techniques available to specialist teachers. Careful preparation of instrument performers for on stage presentation includes mental preparation. All these require a good knowledge of the student.

Developing training programmes for specialty teachers and/or for specialty teacher trainees so that they can be actively involved in the prevention, detection and intervention related to mild forms of performance anxiety could have a major impact on the training of future musicians.

Investigating the role of gender in performance anxiety, of the discrepancies between physical symptoms and perceived anxiety may be subject of future studies.

Similarly, the impact of the studied musical instrument because of specific physical demands and competition, outline another research direction in the study of performance anxiety.

Performance anxiety is a complex phenomenon caused by multiple factors. From this perspective, it might be helpful to consider the influences of perfectionism, learning styles and of adjustment strategies used by musicians.

Another research direction could be related to the role of teachers and parents in musicians' education. Thus, it would be of real interest to study the role of the specialist teacher and of the parental style at the onset and maintenance, and possibly treatment, of performance anxiety.

The complexity of this phenomenon and the early stage of the research in the field offer many opportunities to conduct future studies.

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