

## COPING WITH THE PERFORMANCE ANXIETY AMONG MUSIC EDUCATION STUDENTS: A METHOD TRIAL

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### ABSTRACT

*It has been perceived as a problem by both the students and the teaching staff that in music education, students experience low performance during the performance exam. In this research, it has been aimed to find out whether the performance anxiety that the music education students suffer could be reduced by the techniques such as proper breathing, relaxation etc. or not. Randomly chosen 48 (forty-eight) students having education in the Department of Music Education took part in the first stage of the research. 36 of those 48 students took part in the second stage of the research. Saliva samples of the students which were taken just before, during and at the end of the piano exam which the students performed before a jury at the end of the term in June 2011 in order to determine the cortisol level that increases with excitement were analyzed. Thus, the ideas of the students about how they felt physically and psychologically just before and during the exam were obtained via a questionnaire. After the piano exam that the saliva samples were taken from the students, the students were informed of the methods how to cope with the performance anxiety many times until the piano exam at the end of the term in January 2012. In the piano exam before the jury in January 2012, saliva samples were taken again in the same way and the results were compared with the previous saliva test results using the chi-square test. It has been detected that the cortisol levels decreased in the second measure.*

**Keywords:** Performance anxiety, Music Education, Piano.

### INTRODUCTION

Anxiety or concern is the state of worry, fear, tension and boredom which is experienced by the living-beings. It is a protective reaction by the living-beings while they try to get used to the external world. This reaction may have some physical symptoms such as sweating, shaking and palpitation. It is also accepted as a cognitive but mostly unquestionable and unidentified state of tension in which one may experience pessimistic thoughts and the fear of public humiliation and katagelophobia. A moderate level of anxiety may help one give decisions, desire, generate energy according to these decisions and increase performance by using this energy (Kafadar, 2009). That is why it is important not to get rid of the anxiety completely but to control it.

The anxiety experienced during any performance can be called as 'Performance Anxiety'. The performance anxiety of musicians can also be called as stage anxiety, performance anxiety or music performers' stress syndrome (Fehm et al, 2006). According to Clark (2001) and Miller (2006) anxiety and performance anxiety have physiologic (such as an increase in heartbeats, sweating, shaking etc.), behavioral (such as avoiding performing at stage, incapability to add musical expressions on their comments while trying not to make any

technical mistakes, concentration difficulties, and difficulties in controlling their fingers, etc.) and psychological symptoms (such as one's doubts about himself/herself, the fear of failure) (Yöntem, 2012). Kenny (as extracted by Yöntem in 2012) emphasizes that lack of preparation or perceived competence is a key factor in performance anxiety, whereas Abel and Larkin (as extracted by Yöntem in 2012) state that the anxiety level may change according to the difficulty level of the task.

Researchers have shown that performance and anxiety have a negative correlation. No matter who they are, amateur or professional, child, teenager or adult, soloist or a member of a band, or no matter which instrument they play, musicians can be affected by performance anxiety, and this situation may end up with a bad stage performance (Yağışan, 2009). As extracted by Teztel and Aşkın (2007) 50% of the musicians are influenced by performance anxiety. Even some musicians come up with the decision of leaving their professions as a result of experiencing a high level of performance anxiety (Yağışan, 2009). On the other hand, Fehm and Schmith (2009) state that the musicians' ratio of being affected by performance anxiety can be higher or lower than expected due to not only the lack of data collecting tools but also the shortage of the samples in the researchers conducted.

Both theoretical and applied courses are included in the syllabus at the Department of Music Education at Uludag University. Some courses, such as instrument training (violin, cello, flute etc.), orchestra, chamber music, vocal training and piano, have performance exams. Especially, the exams of instrument training and 8 semesters of obligatory piano course are performed in front of a jury. Researchers accept that the situations in which their performance is evaluated by a professional jury can be more stressful for the musicians (Yöntem, 2012).

It has been observed by the instructors that there have been some small or big decreases in students' performances in these exams. It is aimed to find out whether the performance anxiety experienced by music education students can be reduced by some techniques such as proper breathing, relaxation, etc. or not.

## METHOD

48 randomly chosen voluntary 1<sup>st</sup> and 2<sup>nd</sup> grade undergraduate students took part in the first phase of the experimental study. In the research, the anxiety levels of the students during the 2010-2011 Education year Fall Semester final piano exams have been determined by a questionnaire. Questions of the questionnaire have been prepared to find out the physiologic and psychological reaction levels of the students' right before and during the performance. Besides, the saliva samples have been taken from these students before, during and after their piano exam performances and analyzed by Uludag University Central Laboratories to investigate the cortisol levels that increase with anxiety, stress and excitement. Cortisol measurement in saliva has been used to determine the stress levels of tennis players (Filaire et al, 2009) and autistic children (Hillerd et al, 2011) and to evaluate the stress and pain in upper jaw (maxilla) extension applications (Geçgelen et al, 2011).

Students taking part in the research have been informed about the techniques to deal with performance anxiety since October 2011 once in every week. The techniques to cope with performance anxiety are various. Garner (2012) has stated that yoga, which increases the awareness, flexibility and strength of one's body, mental exercises and Alexander Technique (a method which increases the balance coordination of body and focuses on individual awareness of one's own body) prepare the body for physical performance in a better manner. He also states that, in order to be ready for physico-emotional performance, some techniques such as biofeedback therapy (a kind of treatment which enables people to monitor the

physiologic changes by a monitor that cannot be realized normally), hypnosis therapy and Eye-Movement Desensitization Processing Treatment (EMDR) can be used. Çimen has emphasized that, in addition to the techniques mentioned above, methods such as Rolfing and Feldenkrais can also be used to cope with performance anxiety (Çimen, 2001).

Although there are various methods mentioned above, the following methods have been chosen by psychologists because of the practicality in the Department of Music Education building and applied to the students under the control of the researcher instructor.

### **Breathing Exercise**

In order to make their heads and backs lean to the wall, students are seated on the chairs placed by the wall comfortably. The head is made sure to touch to wall so that there is no space between the neck and the wall. So as to make the students feel breathing, one hand is placed on chest and the other on stomach. They take a deep breath with their eyes closed. The breath is kept for 4 seconds and released from the mouth two or three times slower than inhaling speed. After 5 sets of this exercise, students turn to normal breathing. A couple minutes later, the same procedure is repeated for 5 times more. Then, the exercise ends. This exercise can be repeated 40-60 times a day. It is aimed to make breathing exercises a part of students' daily lives. It is of great importance to take an accurate and deep breath since it is the first step of relaxation. The blood withdrawn to the inner parts of the body from the surface due to stress can reach to the tips of the body after an accurate and deep breathing by which the veins are broaden. Accurate and deep breathing helps people calm down and relax by decreasing or getting rid of adrenaline caused by stress.

(<http://www.aymavisi.org/egzersiz/anti%20stres/anti%20stres%201.html>)



Picture 1. Students practicing breathing exercise

### **Relaxation Exercises**

It is supposed that relaxation training, as a tool of treatment, can reduce tension and anxiety effectively. Step by step relaxation includes deliberate, regular and subsequent tension and relaxation of muscles until there is a complete relaxation throughout the body (Demiralp et al, 2007). Starting with taking a deep breath and releasing it slowly, relaxation exercises are practices based on the relaxation of hand, arm, shoulder, chest, stomach, hips, legs, face, feet etc. muscles, and aim to create a difference on muscles. Relaxation exercises are accompanied by nature sounds such as water or sea sound and relaxing music. It is stated that

pulse slows down, blood pressure falls, respiration and oxygen consumption decreases, metabolic rate slows down, pupils narrow, the state of consciousness changes and perception increases for positive offers with an increase in concentration on a sole mental image (Demiralp et al, 2007).

It is aimed in the study that relaxation exercises are practiced at least 2-3 times a week one of which should be as a group and turned out to be a lifestyle.



Picture 2. Students practicing relaxation exercise

### **Guided Imagery**

This structured approach is used to transform the state of mind into good mood under certain circumstances, to encourage relaxation, to enable to teach how to feel better both physically and psychologically, and even to treat psychological trauma. Musicians use guided imagery method to concentrate on the music during their performances (Owen, 2010).

Students, in a comfortable position and with closed eyes, learn to guide their thoughts to a text they are listening to by listening to a text which can activate their sense organs. With this method, it is aimed to be able to relax, to be able to get rid of the negative thoughts that can be generated during piano exam and to be able to concentrate on the performance.

With breathing and relaxation exercises which take approximately 8-9 weeks, it is aimed to enable students to breath appropriately, to discover their muscles by relaxation exercises, to turn negative thoughts into positive thinking and to relax.

36 of the 48 students that participated in the 1<sup>st</sup> phase took part in the 2<sup>nd</sup> phase of the study. The breathing and relaxation techniques that were tried to be made as the students' lifestyles were practiced accompanied with an instructor once a week before several concerts and midterm exam in January 2012 when the saliva samples were supposed to be taken. The saliva samples that were taken from the students at the beginning of the piano exam, in the middle, and at the end of the exam were reviewed and the cortisol levels were compared with the previous ones using the T test. The students who practiced the breathing and relaxation techniques gave their ideas about the physical and psychological effects of what they felt right before and during the exam via a questionnaire and those answers were compared with their answers in the previous questionnaire using the chi-square test.

### **FINDINGS**

48 students took part in the first, and 36 in the second phase of the research. The first questionnaire included questions about how they felt right before the piano exam at the end of the semester in January 2012. The number and percentage of the student who gave positive answers to these questions can be seen in Table 1.

**Table 1. The Remarks of the Students on Their Feelings Right before the Piano Exam**

	<i>f</i>	%
I have nightmares in which I cannot play piano a night before the exam	15	31,3
I cannot sleep a night before	32	66,7
I have a loss of appetite	35	72,9
I have increasing appetite	13	27,1
I feel tense, anxious and uneasy	16	33,4
I feel nausea right before the exam	30	62,5
I feel heartburn right before the exam	23	47,9
I have headaches right before the exam	25	52,1
I constantly think that I will make a mistake during the exam	46	95,8
I can study better when I am alone	47	98,0

In the second part of the questionnaire students are asked how they felt during the exam. These questions are the same during the two phases of the research. The positive answers given in two phases were compared on the table. The results were evaluated by chi square test and ( $p < 0,005$ ) difference was regarded meaningful when the possibility was less than 0,005.

**Table 2. The Comparison of the Feelings of the Students during the Exam**

	<i>1<sup>st</sup> Exam</i>		<i>2<sup>nd</sup> Exam</i>		<i>Relevance</i>
	<i>(n=48)</i>		<i>(n=36)</i>		
	<i>f</i>	%	<i>f</i>	%	
I feel / felt tense, anxious and uneasy	46	95,8	25	69,4	P=0,0036
I cannot / could not control my muscles	41	85,4	25	69,4	Irrelevant
I feel / felt nausea	28	58,3	7	19,4	P=0,0013
I feel / felt heartburn	22	45,8	3	8,3	P=0,0012
I have / had headaches	29	60,4	7	19,4	P=0,0001
I don't / didn't feel self-confident	41	85,1	29	80,5	Irrelevant
My heart rate increases / increased	47	97,9	30	83,3	P=0,0003
I feel / felt nervous	44	91,7	31	86,1	Irrelevant
My hands sweat / sweated	42	87,5	24	66,7	P=0,045
My mouth goes /went dry	38	79,2	18	50,0	P=0,019
My breathing is / was irregular	38	79,2	26	72,7	Irrelevant
I cannot / could not see the notes	33	68,7	13	36,1	P=0,011
I cannot / could not perform well (100 %)	45	93,7	36	100	Irrelevant
I always think / thought that I will / would make a mistake	45	93,7	36	100	Irrelevant
I cannot / could not concentrate well	45	93,7	32	88,9	Irrelevant

Breathing and relaxation techniques were shown to the students after the first exam. The participation to the practice was voluntary. 33 of 36 students said that these techniques were

more or less useful. The replies to the question of when they used those techniques were like this: 2 of them never used them, 9 of them used them only right before the second exam, 25 of them used them not only before this exam, but also before the quiz, concert or other different situations.

According to these results; the rate of those who said 'I feel / felt tense, anxious and uneasy; I feel / felt nausea; I feel / felt heartburn; my heart rate increases / increased; my hands sweat / sweated; my mouth goes /went dry and I cannot / could not see the notes' decreased, the rate of those who said 'I have/ had headache' increased and there was no noticeable change in other replies.

The cortisol level in the saliva in the second exam was noticeably low when compared with the first exam; the average cortisol level in the first and the second exams were as in the order  $10,886 \pm 4,3\text{ng/ml}$  and  $4,100 \pm 2,4\text{ng/ml}$  (  $t$  test = 8,874 ).

In order to explain the decrease in the cortisol level in the saliva, there have been several analyses in which the cortisol levels were compared according to the number of the participants, finding the exercises useful or not, using the techniques or not using them, whereas it's been impossible to make a meaningful explanation to this noticeable decrease.

## ARGUMENT

The researches about the Music Performance Anxiety have improved for the last 25 years (Valentine, 2002). There have been various researches to determine the level of the music performance anxiety. The effects of factors, such as performing before audience / jury etc. or playing solo or in a band, environment, sex, age, personality, readiness, on the performance anxiety has been researched and experimental studies have been done about how to cope with the anxiety.

Here are some of the researches which are similar to our research in that the performance is evaluated before a professional jury or the stress is analyzed in the performances done before an audience.

One of the 27 high school students who were the members of orchestra was asked to play solo in the study room alone, the other one again in the study room but with the researcher, and the third one was asked to play before a group consisting of all the researchers and his peers and their heartbeats were measured during their performance. It was determined that while the heartbeats were stable in the 1<sup>st</sup> and the 2<sup>nd</sup> performance, there was a substantial increase in the 3<sup>rd</sup> performance (Leblanc et al. 1997).

As Taborsky (2007) extracted, & Broton (1994) observed in his research about comparing the anxiety levels of the students in their performances before and not before the jury that the heartbeats of the students increased substantially in their performances before the jury. In the research, 64 music students of a state university were interviewed, their heartbeats were measured in pre-test and their anxiety levels were perceived by observing their body language and physical behaviors.

As Alptekin (2012) extracted, the anxiety in the sport and musical activities was tested among the 749 men aged between 9-14 in a research by J.A Simon and R. Martens in 1979. The highest anxiety was observed on the men playing a musical instrument solo rather than the men racing in the individual sport races and in the group activities, those playing in a music band had higher anxiety than those playing in team sports games.

Researches about performance anxiety were mostly conducted on adults. One of the several researches Gunnar (1989), & Nachimas (1996) about the effect of stress on children was

conducted by Boucher and Ryan (2011). The outputs of the performance anxiety research which was conducted on 66 children aged 3-4 were collected by means of a scale developed for children, a questionnaire in which families were asked to answer some questions related to their children's behaviors and observation. Besides, the cortisol level determination method by saliva which was used in our research was also used in Boucher and Ryan's (2011) research. As a result, it was found out that children felt nervousness towards music performance, which was an innate and component.

Another research to determine the performance anxiety levels of Turkish musicians was conducted on 112 Turkish musicians composed of classical western music students, classical western music performers, jazz performers and traditional Turkish music performers. The data in this local research was collected by questionnaires and interviews with experienced artists. At the end of the research, it was concluded that Turkish musicians also experienced stage anxiety and classical western music students and performers were more prone to stage anxiety than jazz and traditional Turkish music performers (Teztel et al, 2007).

Methods to lower performance anxiety also aroused curiosity among researchers. Kendrick, Craig, Lawson and Davidson (1982) conducted a research on 53 pianist (aged between 12 and 53) suffering from performance anxiety. The pianists were divided in two groups and cognitive behavior therapy, emphasizing self-instruction and attention based methods were applied to the 1<sup>st</sup> group, while the 2<sup>nd</sup> group did not receive any treatments. A decrease was observed on the performance anxiety of the group that received therapy and similar applications compared to the control group.

In another research, the effects of applications such as muscle relaxation, cognitive therapy and biofeedback therapy on music performance anxiety were emphasized. 12 pianists suffering from performance anxiety took part in a therapy program for six weeks as the experiment group. Considerable changes were observed in the results of the pretests and posttests applied to experiment group. Results have shown that the stage anxiety of pianists suffering from performance anxiety could be decreased by cognitive and behavioral therapies (Nagel et al, Papsdorf, 1989).

In a research on the decreasing effects of yoga and meditation on young musicians' performance anxiety, it has been found out that yoga and meditation techniques can decrease performance anxiety and depression.

James and Savage (1984), in their research to determine the effects of beta-blocker and benzodiazepine drugs on performance anxiety and performance quality, divided 31 stringed instrument students into two groups. They applied beta-blocker to the 1<sup>st</sup> group and benzodiazepine to the 2<sup>nd</sup> group right before two short recitals. There has been a considerable decrease in the heart rates of the group which took Beta-blocker. They also had a better bow control. On the other hand, no changes were observed in the group that took diazepam. In questionnaire answered by 2212 musicians from 47 orchestras, it was found out that one-fourth of these musicians took beta-blocker and 96% of these musicians stated that taking such medicines helped them to decrease performance anxiety they experienced (Fishbein et al, 1988). But Çimen (2001) cited that Grindea supported the idea that beta-blockers were useless and performance anxiety could be controlled by some more traditional methods such as yoga and Alexander technique.

## CONCLUSION

This is a preliminary research. The number of participants is low since only the students in the department took part. That the number of the participants is low is the possible reason why the substantially meaningful drop between two saliva values could not be explained. The drop in cortisol level is important since it is an objective finding. It is believed that the reason of the difference can be explained if the research is applied to more people once again.

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