THE RELATIONSHIP BETWEEN THE STATE-TRAIT ANXIETY LEVELS AND THE ACADEMIC ACHIEVEMENT OF MUSIC TEACHER CANDIDATES

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ABSTRACT

This study aims to test the relationship between state-trait anxiety levels and academic achievement among music teacher candidates. The sample for the study consisted of 80 music teacher candidates who were undergraduate students in the Faculty of Education in Gaziosmanpaşa University during the 2010-2011 academic year. For the purpose of the study, music teacher candidates' anxiety levels were assessed by the State-Trait Anxiety Inventory. Academic achievement scores were acquired from students' official transcripts and a personal information form was used to gather demographic information. Result of the study revealed a significant relationship between music teacher candidates' levels of trait anxiety and their academic achievement. However, no statistically significant relationship was found between state anxiety levels and academic achievement scores. In addition, there were statistically significant differences in academic grade point averages on the basis of class variable. Juniors' and seniors' academic achievement scores were higher than freshmen and sophomores. According to the class variable, there was not any statistically significant difference with regard to state-trait anxiety levels. According to gender, male and female students' state-trait anxiety levels and academic achievement scores did not differ.

Keywords: State-trait anxiety; music education; music teacher candidate; academic achievement.

INTRODUCTION

Anxiety is a state of depression, concern and oppression and some physiologic reaction occurring in various situations in which an individual feels threatened. Anxiety, which is occasionally experienced by individuals and is considered as a normal situation, can sometimes become severe and turn into a pathologic situation. Anxiety can appear in any pried of life and various situations can increase the frequency and severity of anxiety. It is known that a mild level of anxiety increases success by forcing individuals to be more cautious; however severe anxiety situation affects achievement negatively (Yılmaz & Ocakçı, 2010). Spielberger (1966: as cited in Aydın, 2009) divided anxiety to two categories which are state anxiety and trait anxiety. State anxiety makes individuals to feel fear under stressful situations and additionally causes individuals to experience physiological difficulties such as blushing and trembling due to the stimulation of nervous system. When stress level is high, state anxiety level increases as well. On the other hand, trait anxiety is the state of a constant state of discontent and sadness in individuals without a certain reason. Individuals who experience state anxiety perceive numerous situations they experience as a potential threat or danger. In contrast to state anxiety, trait anxiety is not directly related to a certain situation. Anxiety is personality-based (Öner & Le Compte, 1983: as cited in Aydın, 2009).

Factors such as coping with anxiety and stress are popular subjects which are believed to affect academic achievement negatively. Şimşek (2010) investigated how psychosomatic symptoms experienced by an individual affected academic achievement and found that experienced psychosomatic symptoms had a negative effect on academic achievement. In addition, the literature contains studies on different fields of education which found that anxiety situation decreased performance achievement and problem-solving skills (Andrews & Wilding, 2004; Horwitz, 2001; Ma, 1999; Meece, Wigfield, & Eccles, 1990). Studies in the literature also concentrated on the relationship between achievement and anxiety levels. Previous studies generally found that students with high levels of anxiety had low levels of achievement. One of these studies aimed to determine the relationship between achievement levels and different anxiety criteria and it was found that anxiety was a variable which prevented achievement (Gardner & et al., 1987: as cited in Aydın, Zengin, 2008).

Analysis of previous studies on anxiety in the field of music teaching revealed that the literature mainly contains studies which focused on examination anxiety of music teacher candidates. Studies results generally showed that (Kurtuldu, 2009; Küçük, 2010) generally music teacher candidates experienced examination anxiety due to the fear of receiving low marks, inability to be completely prepared for the exam and low performance and that there was a significant relationship between exam anxiety level and musical instrument achievement.

Although music education is a field of education in which cognitive, kinetic and emotional skills are intertwined, it can be stated that music education mostly focuses on developing kinetic skills. Cognitive skills require understanding, comprehension, analysis, defining and synthesizing musical information and mainly involve mental activities. Emotional skills can be considered as subjective and emotional reactions towards music. Kinetic skills define behaviors which require mental and muscle coordination (Yokuş & Yokuş, 2010). Among many psychological phenomena which can affect the development of musical skills for three domains, anxiety is believed to be an important factor for music teacher candidates. In music education which mostly involves kinetic skill areas due to its nature, low performance can be experienced due to physical symptoms.

This study analyzed the relationship between "state-trait anxiety" levels and "academic achievement" scores of music teacher candidates and whether the relationship between state-trait anxiety levels and academic achievement scores were affected by various variables. The significance of the study is that it determines the relationship between state-trair anxiety levels and academic achievement scores based on analyzed dimensions and whether the relationship between trait-state anxiety levels and academic achievement scores varied according to grade level and gender variables.

The following questions were tried to be answered in the study:
1. Do state-trait anxiety levels and academic achievement scores of music teacher candidates vary according to "grade level and gender independent variables"?
2. Is there a statistically significant relationship between state-trait anxiety levels and academic achievement scores?

METHOD

Study Model

This is a field study which used survey model. Survey method is an appropriate and advantageous design to determine the present situation in terms of certain variables (Balcı, 2005). This study was designed to determine whether there was a relationship between state-trait anxiety levels and academic achievement scores of music teacher candidates and whether the relationship between state-trait anxiety and academic achievement levels of music teacher candidates was affected by various variables.

Study Group

Study group of the study consisted of 1. (n=22), 2. (n=20), 3. (n=18) and 4. grade (n=20) students (N=80) enrolled in Program of Music Teaching, Department of fine Arts Teaching, Faculty of Education at Gaziosmanpaşa University who voluntarily participated in the study. Of the students, 51.2% were female, 48.8% were male.

Data Collection Tools

A Personal Information Form was prepared by the researcher to collect data about demographic characteristics of teacher candidates. This form consisted of 5 personal questions about music teacher

candidates who participated in the study. Among these questions, the ones necessary for the study were selected and used. In addition, musical instrument achievements of music teacher candidates were obtained from their transcripts.

State-Trait Anxiety Inventory [STAI] which was developed by Spielberg et al., (1964) and was adapted into Turkish by Öner and Le Compte (1983) was used to measure state and trait anxiety levels of music teacher candidates. The scale is a self-evaluation scale consisting of short statements. State anxiety form gave information only about how an individual feels now while trait anxiety form was developed to measure how an individual has been feeling in the last 7 days. STAI is a Likert-type scale graded between 1-4, consisting of 20 items. Reliability coefficients of the scale obtained on normal and patient samplings varied between .83 and .87 (Aydemir & Köroğlu, 2000; Şahin, Batıgün, & Uğurtaş, 2002). This study used both state and trait sub-scales.

Data Analysis

"Frequency and percentage" calculations were used to determine demographic characteristics of music teacher candidates in terms of determine variables. One factor "ANOVA" was used to determine "state-trait anxiety and academic achievement" levels according to grade level variable and independent group "t" test was used to determine "state-trait anxiety and academic achievement" levels according to gender variable. "Pearson's Product Moments Correlation Coefficient" test was used to determine the relationship between "state-trait anxiety and academic achievement" levels of music teacher candidates.

FINDINGS

In this section, data obtained according to sub-problems of the study were presented in tables and were interpreted.

Sub-problem 1: Do "state-trait anxiety and academic achievement" levels of music teacher candidates vary according to "grade level and gender independent variables"?

Table 1. One Factor Anova Results for "State-Trait Anxiety and Academic Achievement" Levels of Music Teacher Candidates According to Grade Level Variable

State anxiety	Sum of squares	df	Mean square	F	p	Significant difference
Between groups	120.041	3	40.014			
Within groups	2458.655	78	31.521	1.269	.291	
Total	2578.695	81				
Trait anxiety	**Sum of squares**	**df**	**Mean square**	**F**	**p**	**Significant difference**
Between groups	195.724	3	65.241			
Within groups	2235.155	78	28.656	2.277	.086	
Total	2430.878	81				
Adademic achievement	**Sum of squares**	**df**	**Mean square**	**F**	**p**	**Significant difference**
Between groups	3142.666	3	1047.555			
Within groups	8182.157	78	104.899	9.986	.000	4-1, 4-2, 3-1, 3-2
Total	11324.823	81				

It is understood from Table 1 that according to one factor Anova results conducted for "state-trait anxiety levels and academic achievement scores" there was a statistically significant difference between academic achievement scores of music teacher candidates at the significance level of .01 [$F_{(3-}$

$_{78)}$=9.98, p<.01]. According to Scheffe test results, 3. grade ($\overline{X}$= 74.85) and 4. grade ($\overline{X}$= 74.94.) academic achievement scores were higher than those of 1.grade ($\overline{X}$= 60.14) and 2. grade ($\overline{X}$= 67.81) students. In conclusion, this finding indicated that academic achievement scores of 3.grade and 4.grade students were higher than those of 1.grade and 2.grade students. On the other hand, there was no statistically significant difference in terms of "state-trait anxiety level" according to grade level variable.

Table 2. Independent Group "T" Test Results for "State-Trait Anxiety Levels and Academic Achievement Scores" of Music Teacher Candidates According to Gender Variable

State anxiety	N	$\overline{X}$	S	df	t	p
Female	42	45.92	5.93	80	.017	.986
Male	40	45.95	5.39			
Trait anxiety	N	$\overline{X}$	S	df	t	p
Female	42	40.14	5.99	80	.123	.265
Male	40	41.50	4.85			
Academic achievement	N	$\overline{X}$	S	df	t	p
Female	42	70.50	10.34	80	.015	.313
Male	40	67.85	13.19			

As indicated in Table 2, there was no statistically significant difference according to "t" test results performed for "state-trait anxiety levels and academic achievement scores" of music teacher candidates according to gender variable; state-trait anxiety levels and academic achievements of female and male students did not vary.

Sub-problem 2: Is there a statistically significant relationship between state-trait anxiety levels and academic achievement scores of music teacher candidates?

Table 3. "Pearson Product Moments Correlation Coefficient" Results for The Relationship Between "State-Trait Anxiety Levels and Academic Achievement Scores" of Music Teacher Candidates

	N	$\overline{X}$	S	r	p
State anxiety	82	45.93	11.82	-.353	.001
Academic achievement	82	69.21	18.26		
Trait anxiety	82	40.80	5.47	.192	.084
Academic achievement	82	69.12	11.82		

It is understood from Table 3 that there was a statistically significant relationship between "state anxiety levels and academic achievement scores" of music teacher candidates at a significance level of .01. On the other hand, there was no statistically significant relationship in trait anxiety levels of music teacher candidates. In conclusion, it was understood that trait anxiety levels and academic achievements of the students affected each other.

DISCUSSION

Anxiety, which causes individuals to experience the feeling of apprehension and concern towards various situations or events, is considered as an important psychological problem due to its effects on individuals. Orientation, interpretation and evaluation of events by individuals are important factors which increase of decrease anxiety. For example, while some individuals are comfortable and happy in

the same physical and social environment, some others might be extremely tense (Cüceloğlu, 1999: as cited in Arslan, Dılmaç, & Hamarta, 2009). University life and being a university student generally forms the basis of an environment which causes anxiety and stress in Turkey and in other countries. University students might experience fear and anxiety situations caused by various stressful and exciting situations (exam experience, stage performance etc.) in university environment (Bayram & Bilgel 2008: as cited in Yılmaz & Ocakçı, 2010).

Aydın (2009) investigated the relationship between automatic opinions and state anxiety levels of university students. The researcher found that there was a significant relationship between negative or dysfunctional opinions and state anxiety and reported that state anxiety levels of students affected negative opinions at the level of 39% or reverse. Yılmaz and Ocakçı (2010) tried to determine anxiety levels of university students and found that 77.2% of the students experienced a mild level and 19.6% experienced a moderate level of anxiety. The researchers found no statistically significant relationship between anxiety levels of students and demographic variables. İkiz (2000) investigated the relationship between self-esteem, academic achievement and trait anxiety levels of adolescents in different high schools and found that there was no significant relationship between academic achievements and trait anxiety levels of adolescents. The researcher also found that trait anxiety levels and academic achievements of adolescents did not significantly vary according to gender variable.

Engür (2002) analyzed the effect of achievement motivation on state anxiety of athletes and found that there was no statistically significant effect in state anxiety levels according to gender variable. Alver, (2003) analyzed psychological symptoms of the students enrolled in Department of Fine Arts Teaching and found that there was a significant difference between anxiety disorder and global symptom index scores in favor of females. Develi (2006) investigated trait anxiety levels of physical education teachers and found no significant relationship between gender and trait anxiety scores. Başaran, Taşğın, Sanioğlu and Taşkın (2009) analyzed trait and state anxiety levels of athletes from different branches and found that there was no statistically significant difference between trait anxiety scores of athletes according to gender variable, while there was a significant difference between sate anxiety scores. It was found that male students had higher state anxiety levels than female students.

In the study it was found that there was a statistically significant difference between academic achievement scores of music teacher candidates according to grade level variable at the level of .01. 3.grade and 4.grade academic achievement scores of the students were found to be higher than those of 1.grade and 2.grade students. On the other hand, there was no statistically significant difference according to grade level variable in terms of trait-state anxiety level. It was found that there was no statistically significant difference between state-trait anxiety levels an academic achievement scores of music teacher candidates according to gender variable. State-trait anxiety levels and academic achievement scores of female and male students did not vary. It can be stated that this result is in parallel to the results of İkiz (2000), Engür (2002), Develi (2006) and Yılmaz and Ocakçı (2010)

It was found that there was statistically significant difference between "trait anxiety levels and academic achievement scores" of music teacher candidates at the significance level of .01. This result is different from the results obtained by İkiz (2000). Shek (1988) found that there was a relationship between anxiety levels and school marks of secondary school students. This result is consistent with the results of the present study. In conclusion it was understood that trait anxiety levels and academic achievement scores of students affected each other. There was no statistically significant relationship between state anxiety levels and academic achievements of music teacher candidates. It was found that state anxiety level increased in case of high stress and decreased in case of no stress (Develi, 2006). Considering that state anxiety is related with how an individual feels at a certain moment and under certain conditions, it is believed that it would be beneficial to perform measurements to determine the relationship between state anxiety level and achievement for music teacher candidates prior to performance show (singing, playing musical instrument etc).

Based on the findings of the study, psychological counseling services of faculties of education can be used and coping strategies with anxiety can be developed to decrease anxiety levels of music teacher candidates. Thus, negativities caused by anxiety situation can be minimized and academic achievement level can be increased. Furthermore, it can be recommended to carry out similar studies on larger sampling to make study results more generalizable.

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