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Musical Performance Anxiety: Relations between Personal Features and State Anxiety Levels of Pre-Service Music Teachers

Onur Topoğlu[1]

[1]*Adnan Menderes University, Faculty of Education, Aydın Turkey*

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ABSTRACT

Musical performance anxiety, also known as stage fright, is such a significant obstacle to music performance that it can interfere with or even end careers. The purpose of the present study was to investigate the relationship between pre-service music teachers' state anxiety levels just before a concert and their genders, ages, self-efficacy, number of years of playing their instruments, length of daily instrumental practice time, and previous concert performance experiences. Data were gathered from forty-three pre-service music teachers (F=29; M=14) using State-Trait Anxiety Inventory (STAI) (Speilberger, Gorsuch & Luschene, 1970), Self-efficacy Towards Music Ability Scale (Özmenteş & Özmenteş, 2008) and a personal information form including information related with musical performance experience. Additionally, state anxiety inventory was administered to participants just before their solo performances. The results showed that pre-performance state anxiety levels of the female students are significantly higher than for the male students, and significant positive correlations were found between participants' state anxiety and trait anxiety levels. Additionally, negative significant correlations were found between participants' self-efficacy in their musical abilities and the number of years of playing their instruments; and a small negative correlation between state anxiety and self-efficacy was found. Results were discussed with reference to related literature and some suggestions were made concerning the results.

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Keywords:
Musical Performance Anxiety, Self-efficacy, State-Trait Anxiety, Pre-service Music Teachers

Introduction

Canadian pianist Glenn Gould, who was one of the greatest performers in music history, is particularly known for his unique Bach interpretations. Despite his inimitable performance and competence, his solo performance career was brought to a halt in his early thirties as a result of his musical performance anxiety (MPA) and he had to embark on a new career as a recording artist (Clarkson, 2010; Simmonds & Southcott, 2012). Similarly dramatic examples can be found of MPA at all levels of skill and experience. MPA, also known as stage fright (Wilson & Roland, 2002; Kokotsaki & Davidson, 2010) is a mystifying and unnerving experience for musicians at almost all levels, and it often interrupts or ends careers (Nagel, 1993; Brotons, 1994; Rae & McCambridge, 2004; Stern, Khalsa & Hofmann, 2012).

To scrutinize MPA, performance anxiety and social anxiety must be referred. According to Hofmann & Otto (2008), the core feature and also the first diagnostic criterion of social anxiety disorder in DSM-IV is as follows: "marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing". These individual fears can

[1] Corresponding author's address: Faculty of Education, Department of Music Education, Adnan Menderes University, 09100, Aydın, Turkey
Telephone: +90 256 214 20 23- 1582
Fax: +90 256 214 10 61
e-mail: onurtopoglu@gmail.com
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result in unsatisfying, inadequate performances of such tasks. Social anxiety occurs in contexts that are personally meaningful, including shared social values, beliefs and expectations that shape perceptions of social success or failure (Hong & Woody, 2007).

Performance anxiety is a type of social anxiety (Bourgeois, 1991; Yöndem, 2007). Performance anxiety is a problem that most of the people who speak, present or perform in public are faced with. The symptoms of performance anxiety can arise prior to and during performance tasks (Bourgeois, 1991) and can manifest themselves in various ways. Some researchers have grouped the symptoms of performance anxiety into four major categories (Ely, 1991; Sinden, 1999). As physiological symptoms, psychological reactions, cognitive disturbances, and behavioral changes. At first, physiological symptoms may include increased heartbeat, sweating, nausea, dry mouth, shaking, upset stomach, shortness of breath, and other changes within the body. These bodily reactions result from the sympathetic nervous system's response to a perceived threat, and are mediated by an increase of the hormone adrenalin in the bloodstream, which prepares the body for a supreme effort. This naturally occurring survival mechanism was first mentioned by Cannon as the "fight or flight" mechanism (Hingley, 1985). Second psychological reactions are related to the way we perceive a given situation. They affect our responses to that situation and may include irritability, apprehension, or fear of failure. Third, cognitive disturbances describe distortions to our thought processes when affected by MPA and may include racing thoughts, memory lapses, worry, and lack of concentration. Fourth, behavioral changes are related to the performer's changing the way s/he thinks or behaves in order to avoid anxiety-causing situations and may include a stiffly held neck, wringing of the hands, or a worried look (Ely, 1991; Sinden, 1999). Further studies would like to combine the psychological and cognitive manifestations. Cognitive-behavioral theory attributes performance anxiety to negative thoughts and self-statements such as, "I must be approved by the audience in order to feel good." These persistent thoughts psychologically enfeeble self-confidence and negate hours of preparation (Brotons, 1994). Thus the presence of audience can have a negative effect on anxiety level of a performer (LeBlanc, 1994; Osborne & Kenny, 2008). In addition to cognitive-behavioral theory, other research describes a three-system model of anxiety, which consists of physiological, cognitive and behavioral symptoms (Lehrer, 1987; Reitman, 1997; Valentine, 2002; Osborne & Kenny, 2008). The three-system model proposes independent but interlinked response systems triggered by anxiety. According to Brotons (1994), these symptoms are not only applicable to performance anxiety in general but can also be specifically applied to MPA.

As one form of performance anxiety, the term of MPA has been inconsistently defined in the literature. Likewise, Studer et al. (2011) claim, a standardized definition of music performance anxiety is still lacking, and there is no consensus on the use of terms for the phenomenon. Salmon (1990: 3) defines MPA as the experience of persisting, distressful apprehension about and/or actual impairment of, performance skills in a public context, to a degree, which is unwarranted given the individual's musical aptitude, training, and level of preparation. According to Kenny (2011: 433), MPA is the experience of marked and persistent anxious apprehension related to musical performance, which is manifested through combinations of affective, cognitive, somatic and behavioral symptoms. Neftel et al. (1982: 461) defined MPA as an overwhelming sympathetic activation following anticipated anxiety while performing in public. According to Studer et al. (2011: 557), there is a consensus that performance anxiety in musicians is characterized by noticeable apprehension about performing, which may or may not impair the quality of the performance.

As well as trying to define MPA, voluminous studies have attempted to discover the causes of it. A growing body of research has inquired into the factors and the individual features to reveal what causes or affects this obstructive challenge in musicians. The studies show that MPA is associated with various personal differences. In the light of current literature, gender has a significant impact on MPA. Descriptive variables and musical experience related variable has been investigated in the literature influencing MPA. Regarding the one of descriptive variable, female musicians are more likely to experience performance anxiety than male musicians (Nagel, 1988; Abel & Larkin, 1990; LeBlanc et al. 1997; Rae & McCambridge, 2004; Kenny & Osborne, 2006; Osborne & Kenny, 2008). In addition to gender, age can also be a factor (Steptoe & Fidler, 1987; Ryan, 2004; Papageorgi, Hallam &Welch, 2007). The level of MPA can vary with regard to age groups and the occupational tenure of musicians. In research by Steptoe & Fidler (1987) experienced professional orchestra musicians, music students and members of an amateur orchestra were examined. The result of the study has shown that higher levels of musical performance anxiety were

examined on students among all groups. The researchers suggest that this difference in musical performance anxiety could be ascribed to age or to performance experience. However, it was also found that performance anxiety was negatively correlated with age in professional musicians. Fear of disapproval by important others (Lehrer, 1987) and, in a similar vein, the importance of the task (Yoshie et al., 2009; Conklin, 2011) can cause MPA. According to Pacht (1984), the presence of high personal standards and a critical evaluation of self can be related to psychological and physical problems. Therefore, performers with perfectionist standards were particularly susceptible to anxiety (Mor, Day & Flett 1995; Kenny, Davis & Oates, 2004; Yöndem, 2007). In the study made by Hamann (1982), ninety music students (five graduates and eighty-five undergraduates) from five instrument areas were examined. According to the results, a greater number of years of musical education were related with increment in the level of anxiety among music performers.

In addition to descriptive and musical experience related variables, state and trait anxiety has been investigated in the literature. The State-Trait theory of anxiety postulates that situations which impose direct or implied threats to self-esteem, or that involve interpersonal relationships, produce higher levels of state anxiety (A-State) in persons with high trait anxiety (A-Trait) than those who are low in A-Trait (Speilberger, 1972). Studies show that anxiety as a trait is closely correlated to MPA, so that performers who have trait anxiety are prone to experience higher levels of MPA (Hamann, 1982; Hamann 1985; Rae & McCambridge, 2004; Osborne & Kenny, 2008). According to Heinrich (1979), although A-Trait does not directly influence performance, A-Trait influences level of A-State, and A-States have motivational or drive properties that influence performance. According to Speilberger (1972), A-State is characterized by subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system. A-Trait refers to relatively stable individual differences in anxiety proneness, that is, to differences in the disposition to perceive a wide range of stimulus situations as dangerous or threatening, and in the tendency to respond to such threats with state anxiety reactions.

One of personality variable, self-efficacy has also been mentioned in the MPA literature. Self-efficacy refers to beliefs about one's capabilities to organize and execute the courses of action required to produce given attainments (Bandura, 1997; Bandura, 2006). Self-efficacy is grounded in a theoretical framework known as social cognitive theory. According to social cognitive theory, behavior, cognition and other personal factors, together with environmental influences all operate as interacting determinants that influence each behaviour bidirectionally. Bandura (1989) claims that among the types of thoughts that affect action, none is more central or pervasive than people's judgments of their own ability to exercise control over events that affect their lives.

Self-efficacy is influenced through mastery and vicarious experiences, verbal persuasion, and physiological signs (Bandura & Cervone, 1986). High self-efficacy has been associated with adaptive coping skills, health-promoting behavior, and better psychological adjustment to stressful situations, while low self-efficacy has been associated with depression, anxiety, and helplessness. High self-efficacy is associated with positive affect whereas low self-efficacy is associated with negative affect (McQuade, 2008). Self-efficacy influences academic motivation, learning, and achievement (Schunk & Pajares, 2002). Due to musical performance is closely related to academic motivation and learning, self-efficacy has a crucial importance in music performance (McCormick & McPherson, 2003; Nielsen, 2004; McPherson & McCormick, 2006; Ritchie & Williamon, 2010) and therefore is likely to be linked to MPA. Sinden (1999) claims musicians with high self-efficacy tend to have positive previous performances, non-interfering arousal level and encouragement from their social environment. Because environmental factors have a significant role in an individual's self-efficacy, this plays a vital role in the individual's level of performance anxiety. In this respect according to Sinden (1999), lower general self-efficacy is typically accompanied by higher MPA. Self-efficacy for musical performance not only implies a self-recognition of being a good instrumentalist, but also explicit judgments about the skills necessary to perform in front of others, such as in a music examination or concert (McCormick & McPherson, 2003).

Although there are a number of studies carried out on MPA (Şahin & Sağlam, 2007; Yöndem, 2007; Teztel & Aşkın, 2007; Umuzdaş, 2007; Çelik 2009; Küçük, 2010; Başaran, 2010; Yöndem 2012; Topoğlu, 2013) they are not quantitatively enough to manifest the core features of MPA in Turkish culture. The purpose of the present study was to investigate whether there are any significant relationships between state anxiety levels of pre-service music teachers and their genders. Additionally, the study explored the correlation

between the students' state anxiety levels just before the concert and their trait anxiety levels, their ages, self-efficacy beliefs, number of years of having played their instruments, daily instrument practice time, and concert performance experience.

Some possible limitations must be considered for the study. First of all the number of participants are small and the participants were being trained for the career of music teacher. When the music education history in Turkish Republic is investigated before 70's a pre-service music teachers were coached as a music performer rather than a music teacher. After 70's the music education curriculum tends to equalize music teachers' music performer identities with music teacher identities (Çevik, 2004). Although the effect of previous curriculums is being even if just a bit pursued, fundamentally music education programs are aimed to raise music educators. On the other hand although pre-service music teachers are not music performers but they are expected to carry out choir concerts, several music activities and they are expected to play several instruments like recorder, piano, keyboard, melodica ect. in beginner level in their occupational lives. Although pre-service music teachers know that they will not be professional music performers in their occupational lives but they will be performing or conducting various groups in front o people or conducting the national anthem in front of whole students and teachers twice a week. Performance anxiety concerns the fear of performing for an audience such as, giving a public speech, a music performance, or presentations in classes or meetings (Bögels et al. 2010). When these are considered pre-service music teachers' state anxiety levels and factors that influent their state anxiety levels were seen crucial.

The degree to which this study can contribute to the argument as to whether age is a significant variable for state anxiety levels of pre-service music teachers are limited, because the age range of the participants was too narrow for statistical difference. The participants of this study were pre-service music teachers that mostly started to play their instrument in high school. The similar educational backgrounds of the participants limits this study's ability to support evidence for a relationship between level of state anxiety and years of playing the instrument, as in the findings of the study made by Aderman et al. (1989).

Method

Participants

The data were gathered from 43 instrumental pre-servive music teachers enrolled in Department of Music Education at Adnan Menderes University, Aydın, Turkey. Twenty-nine of the participants were females (67.44%), and fourteen were males (32.56%). Ages of the participants ranged from 18 to 25 (M = 20.86, SD = 1.55). The students performed with different instruments. Performances of the students consisted of singing, playing violin, viola, cello, guitar, piano, and flute. Participants were students who were seen as having reached the standard to give solo performances as a result of assessment by instrumental teachers in the spring semester of the 2011-2012 academic year.

Instruments

Personal information form. For the purpose of this study, a personal information form was developed in order to record variables such as gender, ages, grades, years of playing their instrument, daily instrument practice time, and concert performance experiences of the students.

State-trait anxiety inventory (STAI). State and trait anxiety levels of the participants were measured by the State Trait Anxiety Inventory (STAI) (Speilberger, Gorsuch & Luschene, 1970). The STAI is used to measure how an individual feels at a given moment and how an individual feels in general. It is a 40 item inventory that assesses state anxiety and trait anxiety by way of responses to a 4 point Likert scale ("almost never", "sometimes", "often", and "almost always"). The inventory is divided into two subscales of 20 items each, assessing state anxiety and trait anxiety. Each subscale contains items that describe both the presence of anxiety (e.g., "I feel nervous") and its absence (e.g., "I feel relaxed"). The presence in the test of anxiety-absent items, which are negatively correlated with anxiety-present items, is especially important as they are needed to assess lower levels of intensity in anxiety reactions and may indicate positive emotions that reflect a different but related emotional construct (Iwata & Higuchi, 2000). Internal consistency for the inventory ranges from .86 to .95 and test retest reliability ranges from .75 to .86 for intervals of 30 days or less. STAI

was adapted into Turkish by Öner & Le Compte (1983). Cronbach alpha reliability coefficient of the Trait Anxiety Inventory ranged from .83 to .87, and Cronbach alpha reliability coefficient of the State Anxiety Inventory ranged from .94 to .96 for the Turkish version of the inventories. Test retest reliability ranges from .71 to .86 for the State Anxiety Inventory and from .26 to .68 for the Trait Anxiety Inventory in Turkish versions.

There are several reasons for using STAI for measuring MPA. STAI- state subscale is often used in conjunction with MPA specific scales to assess both state anxiety and anxiety in performance situation under particular conditions (Kenny, 2011). STAI is a highly valid and widely used instrument in the study of music performance anxiety (Kokotsaki & Davidson, 2003; Ryan, 2005). In addition, scores in state anxiety and trait anxiety could provide additional information to distinguish the nature of anxiety (Chan). The affective dimension forms the central part of the experience of MPA in many musicians (Steptoe, 2001). According to Studer et al. (2011) there is no gold standard questionnaire to assess MPA. By contrast, the STAI has been widely used in research on (performance) anxiety.

Self-efficacy towards music ability Scale. The Self-efficacy Towards Musical Ability Scale, which consisted of 16 positive and 4 negative items, was developed by Özmenteş & Özmenteş (2008). The scale was developed to measure high school and undergraduate students' perceptions of self-efficacy relating to their musical ability. The scale consists of one factor, and the Cronbach alpha reliability coefficient is .90. Construct validity of the scale was investigated with factor analysis. KMO coefficient .802 and Bartlett test among the scale is significant. Scales' Spearman Brown split-half coefficient was found r:.90. The answers range from 1 (strongly disagree), 2 (disagree), 3(neutral), 4 (agree) to 5 (strongly agree) and the scale's total score ranges from 20 to 100. Higher scores reflect the participants' belief in themselves as being a more capable musician.

Procedure

The State Anxiety Inventory was administered just before the solo performances of the students who subscribed to the study voluntarily. The inventory was given to participants individually, while backstage 5-10 minutes before they took to the stage. The participants filled in the forms alone in a quiet room. The students who had participated in the concert as solo performers had been selected after qualifying in a trial by instrument teachers in Adnan Menderes University Department of Music Education. Trait Anxiety Inventory, Self-efficacy Towards Musical Ability Scale and Personal Information Forms were administered between 9-12 days after the concerts in their regular classrooms, in an environment in which students were not subject to pressurizing constraints of time or recent examinations.

Data Analysis

Before measuring the relationships between gender and state anxiety levels, trait anxiety levels and self-efficacy of the students, a statistical analysis was performed (Kolmogorov-Smirnov $p > .05$) to discover whether the data was distributed normally, to enable parametric analysis (Coakes, 2005). After establishing that the groups were normally distributed, a t-test for independent samples was used to determine the relationship between gender and state anxiety levels, trait anxiety levels and self-efficacy levels of the students. In order to investigate the relationships between the levels of state anxiety, trait anxiety and self-efficacy, ages, years of playing their instruments, daily instrument practice time, concert performance experiences of the students, the Pearson Moments Correlation, Partial Correlation and Linear Regression Techniques were used.

Results

To determine whether there is a significant relationship between gender and state anxiety, trait anxiety, and self-efficacy as regards pre-service music teachers' music ability, the *t*-test for independent samples was conducted. The *t*-test results are given in Table 1.

Table 1. Descriptive statistics and state anxiety, trait anxiety, self-efficacy

	Gender	*N*	Mean	Standard Deviation	*t*	df	*p*
State Anxiety	Female	29	94.82	9.66	3.12	41	0.003*
	Male	14	85.14	9.23			
Trait Anxiety	Female	29	81.51	9.51	1.61	41	0.114
	Male	14	76.92	6.74			
Self-efficacy	Female	29	74.24	9,63	.174	41	0.089
	Male	14	79.78	10.10			

N=43, **p*<.050

A review of Table 1 reveals a statistically significant difference between gender and state anxiety levels of the students. These results have shown that state anxiety levels of the female students (M = 94.82) are significantly higher than state anxiety levels of the male students (M = 85.14; $t(41) = 3.12$, $p = 0.003$). Nevertheless, trait anxiety scores of female participants (M = 81.51) were higher than the trait anxiety scores of the male participants (M = 76.92). Also self-efficacy scores of male participants (M =79.78) were higher than female participants (F = 74.24) and the difference was not statistically significant ($t(41) = -.174$, $p = 0.089$). To investigate the relationship between trait-state anxiety levels of the participants and perceived self-efficacy regarding their music abilities, and their ages, years of playing their instruments, hours of daily practice, and the number of concerts they had performed so far, the Pearson Moments Correlation Technique was used. Regression analysis was performed in order to estimate the relationship between state anxiety and trait anxiety, self-efficacy and years of playing the instruments of participants. Also partial correlation analysis was used to determine the variables' effects that were related to state anxiety. Results of the correlation analysis are shown in Table 2.

Table 2. Correlations between state-trait anxiety and miscellaneous variables

	State Anxiety	Trait Anxiety	Self-efficacy	Age	Years of playing their instrument	Hours of daily practice	Number of concerts performed
State Anxiety	1	0.39**	-.33*	0.05	0.21	0.14	-.20
Trait Anxiety		1	-.26	0.18	0.03	0.17	-.21
Self-efficacy			1	-.26	-.50**	-.21	0.16
Age				1	0.29	0.19	0.17
Years of playing their instrument					1	.01	0.24
Hours of daily practice						1	-.31*
Number of concerts performed							1

N=43, ** *p*<.01, * *p*<.05

Results of correlational analysis showed (Table 2) positive significant correlations between state anxiety and trait anxiety levels ($r = .39$, $p = .009$) of pre-service music teachers. When the effect size towards this finding is established ($r^2 = .15$) it is proven that the variances' 15% can be explained by trait anxiety level. There was a small negative correlation between state anxiety and self-efficacy ($r = -.33$, p = .030). When the effect size towards this finding is established ($r^2 = .10$) it is proven that the variances' 10% can be explained by

self-efficacy. Also negative significant correlations were found between participants' self-efficacy regarding their musical abilities, number of years of playing their instruments (r = -.50, p = .002). When the effect size towards this finding is established (r^2 =.21) it is proven that the variances' 21% can be explained by years of playing the instrument. Partial correlation analysis was used to determine the variables' effects each other that were related to state anxiety. The partial correlation results have shown that when years of playing the instrument is controlled the relationship between state anxiety and self-efficacy (r = -.27, p = .84) becomes not significant. After indicating the relationships between state anxiety and various variables also regression analysis was performed in order to estimate the relationship between state anxiety and, self-efficacy. The results of linear regression analysis have shown that self-efficacy is a significant explanatory in state anxiety of pre-service music teachers ($F_{1\text{-}2\text{-}41}$ =5.03, p=.030, r^2 =.11, t=9.98, p=.000). According to this result one unit of increase in self-efficacy signifies .33 of decrease in state anxiety. Although the correlations between the participants' state anxiety levels and their ages, years of playing their instruments, and hours of daily practice were positive, and the correlations between the participants' state anxiety levels and the numbers of concerts they had performed were negative, these were not significant.

Discussion and Suggestions

The study examined the relationships between pre-service music teachers' state anxiety levels and trait anxiety levels, their genders, their ages, self-efficacy beliefs, years of playing their instruments, daily instrument practice time, and concert performance experience. The results show that there was a significant difference between gender and state anxiety levels of the students. According to this finding pre-service music teachers had higher levels of MPA when compared with male pre-service music teachers consistent to the literature (Abel & Larkin, 1990; Nagel, 1988; Papageorgi, Hallam & Welch, 2007; Osborne & Kenny, 2008). Although this result was confirmed by most of the other studies, the reason for difference between gender and MPA is unclear (Studer et al. 2011).

A small positive correlation between state anxiety levels and trait anxiety levels of participants was found in the study, which was consistent with the findings of similar studies in the literature (Hamann, 1982; Hamann 1985; Rae & McCambridge, 2004; Osborne & Kenny, 2008). Additionally, there was no significant difference between trait anxiety levels of students and their gender, although trait anxiety levels of female students were found to be higher than male students. It is thought that higher state anxiety levels resulted from higher trait anxiety levels of female pre-service music teachers. These results support State-Trait theory of anxiety. According to this theory, individuals with higher levels of trait anxiety are prone to have higher levels of state anxiety when direct or indirect threats to self-esteem are perceived (Speilberger, 1972). Furthermore, it is thought that the difference in the way that male and female musicians experience MPA is derived from psychology and psychological traits. Although the literature shows female musicians experience high levels of MPA in general, the level of MPA in Turkish female musicians would be expected to be higher than for female musicians in Western countries. To support this hypothesis, prevalence of MPA in professional musicians, undergraduate conservatory and pre-service music teachers in the sample of Turkey must be investigated. It is also assumed that culture plays a distinctive role in MPA. The study aimed to investigate the relationship between the undergraduate pre-service music teachers' anxiety levels and their various individual variables for providing information about the possible causes of MPA in Turkish culture. There are a few descriptive studies on MPA on Turkish musicians, music students and music teachers. As mentioned before performance anxiety is a type of social anxiety, and literature shows that social anxiety differs according to culture (Kleinkentcht, Dale & Kleinkentcht, 1997; Dinnel, Kleinkentcht & Tanaka-Matsumi, 2002; Rapee & Spence, 2004; Heinrichs et al., 2005; Hong & Woody, 2007). Several authors have described a disorder labeled the "offensive type" of social anxiety (listed in the DSM-IV under its Japanese name, taijin kyofusho), which is categorized in the DSM-IV as a culture-bound disorder (Rapee & Spence, 2004). According to Miwa (2005), it has typically been considered a culture-bound syndrome described only in Japan and some Asian countries, and is unfamiliar to Western clinicians and researchers. Turkey has a location between Western and the Eastern countries, thus the Turkish community may exhibit features both of individualist and collectivist cultures. According to Yolaç (2009), there is a paucity of research into core and fundamental cognitions in social phobia cases in Turkish societies in which modesty is

seen as virtue, behaving appropriately is considered as decency while adventurous and competitive attitudes are seen as impoliteness. Therefore this study is of considerable importance as one of the few studies on MPA in Turkish musicians.

The findings have shown there was no correlation between the level of state anxiety of pre-service music teachers and the number of hours of daily practice, or number of concerts they performed. It is thought that this is because pre-service music teachers spend most of their time overcoming technical and musical problems rather than devoting time to overcoming MPA. Similar findings were found in a study made by Ryan (2004). Twenty-six six-grade students were examined during a piano recital. According to the results of the study teachers and similarly families were reported by children to advocate practice and focus on technical aspects of the performance as recital preparation. However, while practice is clearly important to having a successful performance, it has not been shown to help anxious performers relieve their anxiety. According to the results of the study there was a small significant negative correlation between levels of state anxiety in pre-service music teachers and self-efficacy beliefs in their musical abilities. Therefore this study has suggested that as the level of state anxiety increases, self-efficacy beliefs in ones music ability decreases or vice versa. As the performers' belief in their musical ability increases, the more they will select challenging tasks and the more time they will devote to trying to accomplish these tasks. The cognitions about the previous experiences lead to low levels of state anxiety and non-interfering arousals. These findings are consistent with previous studies made by Sinden (1999) which 138 college music students were examined in order to manifest the contributions of perfectionism, coping styles, self-efficacy and self-esteem on MPA. Similarly, Abel & Larkin (1990) claim that there is an inverse correlation between state anxiety and confidence. The finding of a negative correlation between level of state anxiety and self-efficacy beliefs in music ability was as expected for this sample but further studies must be made with different groups of performers to confirm it.

The results have shown that there was a small significant negative correlation was found between the pre-service music teachers' self-efficacy beliefs in their music abilities and the number of years playing their instrument. In other words pre-service music teachers' confidence in their musical ability is higher when they are younger and less experienced. As they become experienced and their skills more developed, they are more likely to feel less efficient regarding their musical abilities. This negative relation might have derived from the level of past experiences of experienced students' beliefs in their ability. Self-efficacy beliefs are closely related to the past experiences. Performance accomplishments have proved to be the most influential source of efficacy information because they are based on one's own mastery experiences (Bandura, 1997). One's mastery experiences affect self-efficacy beliefs through the cognitive processing of such information. If one has repeatedly viewed these experiences as successes, self-efficacy beliefs will increase; if these experiences were viewed as failures, self-efficacy beliefs will decrease (Feltz & Lirgg, 2001). The findings of the study show that when years of playing the instrument are controlled, the relationship between state anxiety and self-efficacy becomes not significant. In other words experience in playing an instrument is a vital variable in MPA. This finding also supports the assumption about the relationship between consciousness and awareness of experienced students' beliefs in their ability. There are substantial changes in self-efficacy during the adolescent period. Some studies show that self-perceptions of competence begin to decline in this period whereas some researchers have found an increase in specific domains of self-efficacy with development (Schunk & Meece, 2005). To clarify this negative relation between self-efficacy and age, and years of playing an instrument, further studies need to be made.

To learn more about MPA in Turkish musicians, music students and pre-service music teacher's further studies must be made in larger and different samples, such as professional musicians, conservatory students and various age groups. Literature shows that age can be reducing factor in music performance anxiety. According to Wolfe (1989), distracting thoughts were negatively related to age. The study by Steptoe & Fidler (1987) on professional musicians demonstrated a negative relationship between age and MPA. Also it is known that MPA is derived from a great number of different variables such as personality factors, metacognitive factors, task difficulty, anxiety coping strategies, level of preparation, perfectionism. To manifest the relationships between cultural variables and MPA interdisciplinary studies must be made.

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