

Coping Strategies for Music Performance Anxiety: a Study on Flute Players

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ABSTRACT

This research focuses on identifying differences in trait and state anxiety levels in flute players. The participants of this research were members of Brazilian Flute Association (ABRAF). In total, 142 flute players answered an online questionnaire. Eight of twenty questions are reported in this paper. The participants reported on gender, age, years of flute practice, proficiency level (professional, student, and amateur), and their most anxiety-inducing situation (masterclass, recital, and competition). According to the literature, some musical factors can lead to decrease in music performance anxiety. Some musical factors that can be considered as coping strategies are familiarity with repertoire, sight-reading skills, deliberate practice, musical expression, and memorization. Results suggest that male flute players exhibited higher incidence of music performance anxiety (MPA), professional flute players may cope better with MPA, and the most stressful performance situation did not correlate with MPA in those 142 flute players.

I. INTRODUCTION

Anxiety is a psychological and physiological state characterized by somatic, emotional, cognitive or behavioral components and often associated with activities that demand skills, concentration and self-evaluation. According to Barlow (2000), definition of anxiety is a unique and coherent cognitive-affective structure within our defensive motivational system. At the heart of this structure is a sense of uncontrollability focused on future threats, danger, or other potentially negative events (Barlow, 2000 in Kenny, 2011, 22).

Although anxiety has been studied mainly in psychological area, anxiety can be present in many different fields as medicine, sports, arts or even music. According to Kenny et al (2003), music performance requires a high level of skill in a diverse range of skill areas including fine motor dexterity and co-ordination, attention and memory, aesthetic and interpretative skills. To achieve prominence requires the attainment of near perfection demanding years of training, solitary practice, and constant, intense self-evaluation. These elements, inherent to the musical activity, could contribute to develop negative effects of anxiety among amateur, student and professional musicians.

A. Causes of Music Performance Anxiety

Three factors contribute to music performance anxiety: the person, the task and the situation¹ (Valentine, 2002, 172). The person refers to aspects of the personality of each individual

¹ On Wilson's model (2002), three categories of source of stress are presented: anxiety trait, stressful situation and mastering task (Wilson, 2002).

as: introversion and extroversion, independence, sensibility, anxiety, among others who may exert any influence on behavior. However, the behavior depends of the interaction between the personal and physical qualities, and social environment (Deary *et al*, 1993 in Kemp, 1999, 25). Thus, the behavior can be understood as reaction to the sum of these interactions.

The anxiety aspects as individual characteristic can be presented in two ways: the trait and the state anxiety.² Though, Kemp (1999) explains that the trait and the state anxiety are not easily separate, in conceptual and measurement terms. The author considers that trait anxiety can be seen as a general predisposition to anxiety and state anxiety varies depending on the types of situation (Kemp, 1999, 33). Thus, Wilson (1999) concluded that individuals whose are generally anxious, introverted and prone to social phobias are more likely to suffer from anxiety in music performance (Wilson, 1999, 231).

The task is proportional to the level of music performance anxiety. In other words, the more difficult task, the greater will be the anxiety. Wilson (2002) completes that music performance anxiety may also be associated with failure on mastering of task, or for Fehm et al. (2005) performing tasks that exceed the capacity of the performer (Fehm et al, 2005 in Kenny, 2011, 62). Task can be understood and composed for several musical factors that can influence the music performance; among them are the repertoire, sight-reading, deliberate practice and rehearsal, musical expression and memory.

About the factors, Wilson (1999) notes that there are certain situations that are relatively stressful for the performers, regardless of their individual susceptibility (Wilson, 1999, 231). These situations also were reported and compared by Hamann (1982) a solo performance versus group presentation, public performance versus practicing, competition versus presentation for pleasure, difficult or ill prepared works performance versus those that are easy, common and well learned (Hamann, 1982 in Wilson, 1999, 231). Therefore, it is possible to conclude that the first situation of each group can generate more anxiety than the second one, because it lets the performer more exposed.

B. Trait and State Anxiety

Spielberger (1983) and Lazarus (1991) have defined state anxiety as an unpleasant emotional response while coping with threatening or dangerous situations, which includes cognitive

² According to Kenny et al. (2003), trait and state anxiety were most often mentioned factors in etiology of all forms of performance anxiety (Humara, 1999; King, Mietz, Tinney, & Ollendick, 1995; Little, 1999) (Kenny et al., 2003, 759).

appraisal of threat as a precursor for its appearance (in Tolovic, 2009, 492).

On the other hand, trait anxiety refers to stable individual differences in a tendency to respond with an increase in state anxiety while anticipating a threatening situation. This tendency is consistent across a broad range of situations and is temporarily stable (Tovilovic, 2009, 492). Therefore, trait anxiety is characterized as a general disposition to experience transient states of anxiety, suggesting that these two constructs are inter-related (Spielberger, 1999 in Tovilovic, 2009, 500).

According to Kemp (1996), as professionals, musicians show a stronger disposition toward anxiety than do people who are not performing artists. A predisposition to be anxious (in all aspects of life) makes one susceptible to performance anxiety. The author states some view trait anxiety as an inherent characteristic, research also suggests that an anxious personality results from an accumulation of certain life experiences (Kemp, 1999, 96).

A study by Kemp (1996) concludes that men invariably score higher on introversion and some aspects of independence than women within general populations. On the other hand, women tend to be more sensitive and anxious than men. It is patterns of gender-linked traits such as these that contribute to what we perceive as the difference, not only in more abstract personality terms, but in our predispositions to behave in certain ways and to respond to circumstances in characteristic fashions (Kemp, 1996, 108).

According to Spielberger et al. (1970), state anxiety reflects a transitory emotional state that may fluctuate over time and can vary in intensity. In contrast, trait anxiety denotes relatively stable individual differences in anxiety proneness (Spielberger et al. 1970 in Lin, 2011, 143).

C. Anxiety and Gender

Kenny et al. (2003) review other studies on music performance anxiety that conclude that females are two to three times more likely to experience anxiety than males (American Psychiatric Association, 1994; Lewinsohn, Gotlib, Lewinsohn, Seeley & Allen, 1998) and this relationship appears to hold for Music Performance Anxiety (MPA) where studies demonstrate that females have significantly higher MPA than males (Huston, 2001; Osborne & Franklin, 2002; Sinden, 1999), although this relationship is more complex in children (Ryan, 2003) (Kenny, 2003, 103).

Kinrys and Wygant (2005) in a research conducted in United States appointed that women have a substantially higher risk of developing lifetime anxiety disorders compared with men and evidence has generally observed an increased symptom severity, chronic course and functional impairment in women with anxiety disorders in comparison to men. The authors also appointed that the reasons for the increased risk in developing an anxiety disorder in women are still unknown and have yet to be adequately investigated. The authors suggested that genetic factors and female reproductive hormones may play important roles in the expression of these gender differences, however, evidence of gender differences in treatment response to different anxiety disorders are varying and remain largely inconclusive.

Furthermore, Abel and Larkin (1990) observed in their study on music college students that males showed greater

increases in blood pressure, whereas females showed greater increases in feelings of anxiety, illustrating both gender differences and the fact that different manifestations of anxiety often do not correspond.

D. Anxiety and Situation

Situation of a performance is a broad source of music performance anxiety. Lehmann (2007) states that the most significant element of a performance situation is the presence of an audience. The intimidation posed by anonymous faces in a packed concert hall can be equaled to a smaller audience consisting of more experienced listeners (Lehmann *et al*, 2007).

According to Valentine (2004), a number of studies have demonstrated the effect of the situation. Leblanc (1997) found that self-reported anxiety in high school band players increased significantly across three performances situations: playing a solo alone in a practice room; in a practice room one researcher present, and in a rehearsal room with four researcher and fifteen to nineteen peers present (Leblanc, 1997 in Valentine, 2004, 172-173).

However, Brotons (1994) found it did not matter whether the jury was open, where performers and judges are in full view of each other, or blind, where the performer is behind a screen so that performers and judges are unaware of each other's identity (Brotons, 1994 in Valentine, 2004, 173).

A study demonstrated the interaction between personality characteristics and the situation (Cox & Kenardy, 1993). Reaffirming the words of Wilson (1999), performers with social phobias were much more anxious than non-socially phobic ones in a solo setting, whereas there was little difference between them in group or practice situations.

Finally, the individual or collective action of the factors of the above described can trigger the anxiety in musicians during the preparation and music performance.

II. METHOD

A. Participants

All participants were members of the Brazilian Flute Association (ABRAF), which comprises 1053 members. This research applied the non-probabilistic technique of convenience sampling. Participants were contacted by e-mail through ABRAF in order to obtain the largest possible number of flute players with different proficiency levels.

In total, 142 flute players participated in the study. They reported being 77 males and 65 females, and to belong to one of the following proficiency levels: professional ($n = 52$), student ($n = 68$) and amateur ($n = 22$).

Table 1. Average of years of age and of flute practice.

	Years	
	Age	Practice
Students	23.8	5.5
Amateurs	32.5	13.4
Professionals	34.8	20.1

The average age difference was non-significant between amateurs and professionals, but students were about a decade younger than the other two groups, and the age difference was highly significant ($p < 0.001$). Differences among the three groups in regard to average years of flute practice were also highly significant. The youngest flute player reported to be 13; the most senior, 77.

B. Materials and Procedures

Based on Valentine (2002) and Wilson (2002), an online questionnaire was developed in order to study the three factors that contribute to music performance anxiety: the person, the task, and the situation. Specifically, eight of twenty questions were put forward to address four general areas:

- 1) Questions 1-4: Demographic data;
- 2) Questions 5-6: Trait and state anxiety;
- 3) Questions 7-8: Stressful situation and anxiety level.
- 4) Questions 9-20: Anxiety symptoms and coping strategies.

This paper reports on questions 1-8. Future work is planned to address questions 9-20, which focused on anxiety symptoms (cognitive, behavioural, emotional, and physiological),³ and treatment approaches (psychoanalysis, pharmacology, Alexander technique, bio-feedback, physical activities, and alcohol), as well as musical factors and deliberate practice were considered as possible coping strategies to music performance anxiety.

Question 1 to 3 required participants to specify gender, age and the total number of years have been practicing the flute. Questions 4 and 7 offered three options for proficiency level (professional, student, or amateur) and another three for describing the most stressful situation (masterclass, recital, or competition). Questions 5, 6 and 8 were rated according to a series of 5-point Likert scales.

In question 5, participants rated the frequency in which they feel anxious in everyday life. In question 6, they were asked to rate how anxious they feel while playing the flute in public, as follows: never, rarely, sometimes, generally, and always. Question 8 required participants to rank the anxiety level in the situation that they considered the most stressful for performance (masterclass, recital, or competition). Data

³ According to Valentine (2004), the physiological symptoms of increased heart rate, palpitations, shortness of breath, hyperventilation, dry mouth, sweating, nausea, diarrhoea and dizziness are the result of over-arousal of the autonomic nervous system (Valentine, 2004, 168). The author comments about the behavioural symptoms of performance anxiety may take the form either of signs of anxiety, such as shaking, trembling, stiffness and dead-pan expression, or of impairment of the performance itself. Steptoe (2004) adds other symptoms to these others such as the difficult to maintaining posture, natural motion and technical failures (Steptoe, 2004, 295). The cognitive symptoms consist of loss of concentration, high distractibility, failure of memory, cognition inappropriate, incorrect interpretation of the score, etc. (Steptoe, 2004, 295). Added to these symptoms, you can find negative thinking, which, according to Williamon (2004), is often associated with overidentification of self-esteem and self-esteem with the success of the presentation (Williamon, 2004, 11)

obtained through the online questionnaire were statistically analyzed.

III. RESULTS

A. Trait and State Anxiety

Difference between average levels of the trait and the state anxiety were highly significant ($\Delta = 0.648$, $p < 0.001$), which suggests that flute players report feeling higher levels of anxiety during performances in front of audiences than in everyday life. Of course, this was the main assumption of this paper. The next sections compare which effects may be related to this increase in anxiety level from trait to state.

B. Gender

Mean differences in reported trait anxiety between men and women were highly statistically significant ($\Delta = 0.703$, standard error = 0.212, $p < 0.001$). Nevertheless, mean differences in anxiety state were non-significant. These results reflect the literature previously discussed (section I.C Anxiety and Gender, above) in that women report higher level of anxiety in everyday life. Women did not, however, present significant differences in trait anxiety in relation to men. This result suggests that male flute players may suffer more from music performance anxiety than women do.

Differences between trait and state anxiety within those two gender groups, shows that men present higher increase in reported anxiety level ($\Delta = 0.852$) than women do ($\Delta = 0.355$).

C. Proficiency Level

Univariate analysis reveals that professional flute players report significant lower state anxiety than both students and amateurs. This result is supported by evidence that differences in trait anxiety among those three groups is non-significant. Nevertheless, it is not possible to infer whether professional flute players minimize, or students and amateurs exaggerate their state anxiety. Additionally, multivariate analysis did not yield significant results ($p = 0.070$) at the significance level adopted in this research ($\alpha = 0.050$). Nevertheless, this result could change with more participants.

Table 2. Average levels of anxiety trait and anxiety state.

	Average reported anxiety level		
	Trait	State	Difference
Students	0.279	1.044	0.765
Amateurs	0.182	1.045	0.863
Professionals	0.096	0.500	0.404

D. Most Stressful Situation

The three groups of flute players according to their reported most stressful situation did not present significant difference in state anxiety when compared in neither the context of multivariate analysis (considering all effects), nor as an isolated effect (univariate analysis).

IV. CONCLUSION

Results suggest that male flute players exhibited higher incidence of MPA, professional flute players may cope better with MPA, and the most stressful performance situation did not correlate with MPA in those 142 flute players.

Future work includes the application of this questionnaire to different groups of instrumentalists (pianist, violinist, guitarist, singers) in order to compare differences in their levels of anxiety in most stressful performance situation, as well as preferred treatment approaches, and deliberate practice as coping strategies for music performance anxiety in relation to flute players.

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