

# An empirical study of music performance anxiety under evaluation concerns in a stage environment

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**Abstract:** The purpose of this study was to understand the status of evaluative apprehension perfectionism and performance anxiety among college students majoring in music in a stage performance setting and to verify the relationship between evaluative concern perfectionism and performance anxiety; therefore, a questionnaire survey was conducted with 183 music majors from three colleges and universities in southwest China. The conclusions are as follows: first, both evaluative concerns perfectionism and performance anxiety of music college students have high levels, second, both evaluative concerns perfectionism and the subvariables concerns about mistakes, doubts about execution, and socially compulsive perfectionism are positively related to performance anxiety, and finally, both evaluative concerns perfectionism and the subvariables concerns about mistakes, doubts about execution, and socially compulsive perfectionism can positively influence performance anxiety, with socially compulsive perfectionism having the highest influence on performance anxiety.

**Keywords:** music performance, music education, evaluation concerns perfectionism, performance anxiety

## 1. Background and purpose of the study

When we experience anxiety in public performance situations, it is called performance anxiety, and it is an irrational natural fear response that arises by activating the organism's emergency system and elevating adrenaline (Kenny & Osborne, 2006). The concept of performance anxiety is similar to that of social anxiety in that when meeting situations with strangers or the public occur, individuals who perceive that they are being watched or observed by others may engage in avoidance of communication and fear that they will be negated by others (Papageori, Creech & Welch, 2011). According to Fernholz et al (2019), a study of 48 music performers from different countries reported that 16.5%-60% of the study participants experienced varying degrees of performance anxiety and that this anxiety was experienced for a long period of time both before and after the performance, with only a small percentage being able to demonstrate moderate levels of performance anxiety and control their emotions, and the majority were at excessive levels of anxiety, resulting in a decrease in the quality of the performance and an inability to fully utilize their abilities (DeFelice, 2004). Robson and Kenny (2017) implemented a survey on the performance anxiety experience of American music college students, out of 166 students, 98.8% of them reported performance anxiety experience, in which, in terms of the choice of performance form and musical genre, solo and classical music obtained the highest percentage of performance anxiety experience at 57%, thus, performance anxiety is universal and also can bring performers physical and psychological negative trauma, in terms of physiology, performer's will experience rapid changes in body temperature, limb tremors, breathing disorders, and in severe cases, muscle contractures, limb paralysis, and sensory abnormalities (Studer, Danuser, Hildebrandt, Arial & Gomez, 2011), and in terms of psychological trauma, performance anxiety's performers are characterized by lower self-esteem and self-evaluation, higher guilt, shame, career abandonment with a tendency to mood disorders (Spahn, Walther & Nusseck, 2016, Bartley & Clifton, 2006). Bragues (2011) showed that when performers experience too many failures, they exhibit extreme self-evaluation, negative self-talk, and discrepancies in expected performance outcomes, and in Kenny's (2011) study, high levels of performance anxiety began to worry about mistakes that had not yet occurred and to introspect about mistakes that had occurred, leading to a vicious cycle in which each performance did not go smoothly.

In view of the negative effects of performance anxiety on music learners, some researchers have tried

to alleviate performance anxiety through extrinsic activities. Zhang (2019) used two forms of music appreciation, one for relaxation and the other for image-guided music, with the study participants, and showed differences in the effects of the music appreciation used in the two forms, with relaxing music being more effective for patients with performance anxiety, providing a more frontal relaxation experience for their physically painful or tense inner worlds, enabling them to deal with their tension. Nordoff & Robbins (2007) and Kim (2008) used improvisation to distract players from performance anxiety, with the aim that improvisation accompaniment could make it easier for players to accept their freedom to play and reduce avoidance behavior, and Juwairiyah, Hanizah, and Sariwati (2013) found that four ways to overcome performance anxiety were prayer, relaxed breathing, gaining experience, and doing pre-performance time preparation and mental preparation.

Some researchers have also attempted to use intrinsic factors of individuals to improve performance anxiety in music performers. Huang and Yu (2020) investigated undergraduate music majors in Taiwan, and when students received higher social support, their musical performance failures on stage decreased and they showed a trend of reduced performance anxiety; In a study by Antonio, Patricia, and Pino (2018) in which 270 musicians participated to validate self-efficacy and performance anxiety, the findings showed that students had more performance anxiety than teachers, women had more levels of performance anxiety than men, and that self-efficacy negatively predicted performance anxiety, meaning that increasing performers' self-efficacy also decreased performance anxiety; Margaret, Don, Don (2014) improve music performers' coping strategies, confidence, and focus to reduce performance anxiety; Bianka, Bettina, and Dianna (2019) reported on music professionals in Hungary and showed that women have higher levels of social fear and performance anxiety characteristics and that social fear has a higher correlation with performance anxiety[1-3].

Representative ones are studies that examine perfectionism and musical performance anxiety, in Frank's (2018) study, subjects with higher perfectionism also have higher levels of performance anxiety; Kenny (2009) argues that performance anxiety has a high relationship with perfectionism, and that performers will force themselves to try to eliminate mistakes in order to achieve the perfect performance in their minds, and if the pursuit of perfection is higher, the performance anxiety felt will be higher, and they will also bear more psychological pressure; Steptoe and Fidler (1987) studied performers, music majors and amateur music lovers and showed that the level of performance anxiety and the pursuit of perfection can vary from group to group, with music majors occupying the highest position among the three groups and becoming more likely to feel distressed as they get older, probably because they have higher expectations of their own success and make constant evaluations of their environment as a result of their behavior. On the other hand, for the student body, music majors are more likely to be sensitive to the evaluation of the outcomes of their own performances than to the pursuit of technical perfection in performance or singing, a phenomenon of perfectionist evaluation concerns (Frost, Martin, Lahart, & Rosenblate, 1990).

Dunkley and Blankstein (2000) provided a new interpretation of the definition of evaluative concern perfectionism, based on perfectionism, evaluative concern perfectionism is highly associated with depression, tension, and fear, and people with higher evaluative concern perfectionism are more likely to be aware of the gap between the level of execution and self-competence, show fear of failure, and also show a tendency to doubt self-execution ability. Argus & Thompson (2008) argue that evaluative concerns perfectionism is a personal personality trait that is more difficult to change, mainly reflected in over-criticism of one's own behavior or a gradual desire to be perfect in the face of criticism from others, difficulty in making conscious adjustments even when negative emotions are triggered, and a tendency to focus on the moment of things with critical and receptive thinking and an excessive focus on the experience one has gained.

Some researchers have started to focus on reducing evaluation concern perfectionism to directly affect performance anxiety, Lim (2015) did an empirical study on college students majoring in music and verified that evaluation concern perfectionism has a direct or indirect effect on performance anxiety, and in So and In's (2015) study, reducing music students' evaluation concern perfectionism or increasing social self-efficacy both can reduce performance anxiety, therefore, evaluation concern perfectionism and performance anxiety is a frequent and unavoidable problem for music majors and deserves more attention, but the current research on the relationship between evaluation concern perfectionism and performance anxiety is still insufficient, and it is necessary to observe the mutual influence relationship between the two and then carry out further improvement strategies to provide more follow-up research theoretical basis and practical value for subsequent research[4-6].

## 2. Research Methodology

### 2.1. Research Subjects

The group of this study was music college students from three universities in southwest China, and the questionnaires were distributed and collected by the relevant teachers of the schools. Among the 270 questionnaires distributed, 197 were collected, with a recovery rate of 72.9%. Of the 197 questionnaires recovered, 14 invalid questionnaires were excluded, leaving a total of 183 questionnaires that could be used for analysis. Table 1 summarizes the distribution of the subjects used in the final analysis, with 96 female students (52.5%) and 87 male students (47.5%). By graduation, 31 (16.9%) were freshman students, 38 (20.8%) were sophomore students, 67 (36.6%) were junior students, and 47 (25.7%) were senior students.

Table 1: General characteristics of the study subjects

Ingredients		Frequency (people)	Percentage (%)
Gender	Female	96	52.5
	Male	87	47.5
Grade	freshman	31	16.9
	sophomore	38	20.8
	junior	67	36.6
	senior	47	25.7
Total		183	100%

### 2.2. Research Tools

This study used Lee's (2018) appraisal apprehension perfectionism questionnaire consisting of 28 questions and 3 factors, with a 5-degree Likert scale ranging from "totally disagree" 1 to "strongly agree" 5, of which 15.19.21.25.28 questions were reverse scored with an overall reliability of 0.886. The Performance Anxiety Questionnaire, using Hewitt and Flett's (1991) questionnaire, consists of 20 questions, each scored on a 5-point Likert scale ranging from 1 for "totally disagree" to 5 for "strongly agree". Higher scores represent higher performance anxiety indices, with an overall reliability of 0.793. Table 2 demonstrates the composition and credibility of the questions evaluating scrupulous perfectionism and performance anxiety.

Table 2: Evaluation of scrupulous perfectionism, question composition and reliability of the performance anxiety questionnaire

Ingredients	Topic Composition	Number of questions	Credibility
Concern about mistakes	1, 2, 3, 4, 6, 7, 8, 9, 13	9	0.882
Doubt about execution	5, 10, 11, 12	4	0.853
Socially forced perfectionism	14, 15*, 16, 17, 18, 19*, 20, 21*, 22, 23, 24, 25*, 26, 27, 28*	15	0.920
Perfectionism of evaluation concerns	1-28	28	0.886
Performance anxiety	1-20	20	0.793

\* Reverse scoring

### 2.3. Analysis procedure

In this study, the data collected from music college students were analyzed using the SPSS 25.0 program to test the reliability of the collected data, and then correlation tests and regression analyses were done on the correlation between perfectionism of evaluation concerns and performance anxiety[7-11].

### 3. Study results

#### 3.1. Correlation Analysis

Table 3 allows to determine the correlation between perfectionism of evaluative concerns and performance anxiety, with perfectionism of evaluative concerns and performance anxiety ( $r=0.478$ ), concern about mistakes and performance anxiety ( $r=0.137$ ), doubt about execution and performance anxiety ( $r=0.129$ ), and socially forced perfectionism and performance anxiety ( $r=0.382$ ) being significantly positively correlated.

Table 3: Correlation Analysis

Ingredients	1	2	3	4	5
1 Perfectionism of evaluation concerns	1				
2 Concern about mistakes	.291**	1			
3 Doubt about execution	.336**	.329**	1		
4 Social forced perfectionism	.246**	.470**	.180**	1	
5 Performance anxiety	.478**	.137**	.129**	.382**	1

\*\* . At the 0.01 level (two-tailed), the correlation is highly significant.

#### 3.2. The effect of evaluation concerns perfectionism on performance anxiety

Multiple regression analysis was conducted to examine the effect of evaluation concerns perfectionism on performance anxiety, and the overall level results are shown in Table 4, with a descriptive power of approximately 37.1% for the regression model, with perfectionism of rating concerns as an independent variable and performance anxiety as a dependent variable, statistically  $\beta = .478$ ,  $t = 24.674$  ( $p \leq .001$ ), with a significant positive (+) effect factor, indicating that high perfectionism of rating concerns elevates performance anxiety[12-15].

Table 4: The effect of evaluation concerns perfectionism on performance anxiety

dependent variable	independent variable	B	SE	$\beta$	t	p
Perform-ance anxiety	(Constant)	1.481	.080		18.426	$\leq .001$
	evaluation concerns perfectionism	.553	.022	.478	24.674	$\leq .001$
R <sup>2</sup>		0.371				
F(p)		608.824( $\leq .001$ )				

Among the evaluation concerns perfectionism subvariables, concerns about lapses, doubts about execution, socially compulsive perfectionism as independent variables, and performance anxiety as dependent variables, the overall significant  $F=206.527$  ( $p \leq .001$ ) model of the regression was analyzed as socially compulsive perfectionism  $\beta=0.382$ ,  $t=12.047$  ( $p \leq .001$ ) with a significant positive (+) influencing factor with the highest influence on performance anxiety, followed by worry about mistakes  $\beta=0.337$ ,  $t=9.432$  ( $p \leq .001$ ), with significant positive (+) influence, and finally doubt about execution  $\beta=0.129$ ,  $t=2.268$ , ( $p \leq .001$ ), with significant positive (+) influence, with an explanatory power of 47.6%, indicating that worry about mistakes, doubt about doubt about execution, and socially compulsive perfectionism all elevate performance anxiety, and in terms of magnitude of influence, socially compulsive perfectionism has the highest influence on performance anxiety, followed by concern about lapses, and finally doubt about execution[16-23] , as shown in Table 5.

Table 5: The effect of evaluation concerns perfectionism subvariables on performance anxiety

Depend-ent variable	independent variable	B	SE	$\beta$	t	p
Perform-ance anxiety	(Constant)	1.375	.100		13.801	$\leq .001$
	Concern about mistakes	.219	.023	.337	9.432	$\leq .001$
	Doubt about execution	.055	.024	.129	2.268	$\leq .001$
	Socially forced perfectionism	.307	.025	.382	12.047	$\leq .001$
R <sup>2</sup>		0.476				
F(p)		206.527( $\leq .001$ )				

#### 4. Conclusion

Using the data collected, this study examined the evaluation concerns perfectionism and performance anxiety status of music college students and the relationship between the two variables influencing each other in a questionnaire survey conducted with music college students from two universities in southwest China, and the summary and recommendations of the results of this study are as follows.

The correlation analysis and regression analysis of evaluative apprehension perfectionism and performance anxiety showed that both evaluative apprehension perfectionism and the subvariables apprehension about mistakes, doubt about execution, and social forced perfectionism in the correlation were positively correlated with performance anxiety, which means that higher levels of evaluative apprehension perfectionism are associated with higher levels of performance anxiety. In the regression analysis it was also shown that both evaluative scrupulous perfectionism and the subvariables worry about lapses, doubt about execution, and socially compulsive perfectionism significantly contribute to performance anxiety, and in contrast of influence, socially compulsive perfectionism increases performance anxiety to the greatest extent, followed by worry about lapses and finally doubt about execution, which remains partially consistent with prior research (Patson, Osborne, 2016, Leblanc, Jin, Obert, Siilvola, 1997).

Therefore, based on the analysis of the above study, it is suggested that in order to be able to link performance anxiety in the performance stage environment, the joint efforts of the external environment and the individual themselves are needed. In the external environment, schools and teachers can reduce the requirements and evaluation of students' perfection, encourage students to accumulate stage experience, and allow students to make mistakes or unsatisfactory performance situations on stage, at the same time, individuals themselves need to actively build confidence, whether in the expectations of others or self need to adjust their mindset in a timely manner, allow themselves and the audience to have unsatisfactory evaluation and mistakes after the performance, before the stage performance with a normal and neutral state of mind self-psychological implication, and after the stage performance to face negative and positive evaluation with ease. In addition, the small sample size of this study and the fact that it did not consider the performance anxiety component due to other mediating factors may have contributed to the limitations of this study; therefore, the mediating role of stress in evaluating the perfectionism of scruples and academic anxiety can be considered in subsequent studies. On the other hand, the cultural and educational environments of the East and the West also differ, and a comparative study about performance anxiety in this context is also an area that can be worth exploring if it is conducted and can suggest more meaningful references for the performance of music[24-27].

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