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Perfectionism in Collegiate Musicians

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Honors Project

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Abstract

The primary purpose of this study was to investigate the constructs of perfectionism, music-related stress, and music performance anxiety among collegiate music majors. An additional purpose of this study was to investigate collegiate musicians' strategies for coping with each of the three dependent variables. A total of 52 collegiate music students enrolled at a large, mid-western university participated in an online questionnaire in the fall of 2017, and the response rate was approximately 13 percent. The survey instrument was constructed using items from Cohen, Karmarck, and Mermelstein's *Perceived Stress Scale* (1993), Hewitt and Flett's *Multidimensional Perfectionism Scale* (1999), and the *Kenny Music Performance Anxiety Inventory* (2009). In addition, demographic data was collected.

The majority of participants were either music education or music performance students. Reliability ratings for each of the dependent variable subscales were high, and composite scores were created for each subscale. Participants indicated that, on average, they had elevated feelings of perfectionism, music performance anxiety, and music-related stress in their life. Each of these three constructs was significantly positively correlated with one another ($p < .01$) at modest to moderately strong magnitude. There were no group differences across gender, major area, or level in schooling with regard to each of the three dependent variables. Participants indicated that the main stressors in their lives were performing pressures, lesson expectations, and time management. In order to cope with these stressors, participants indicated that they used breathing strategies, exercising, and mindfulness strategies. Recommendations for both collegiate musicians and professors are discussed.

Introduction

Musicians – particularly professional and college musicians – are held to exceptional performance standards due to a highly competitive market. Consequently, these musicians spend hours upon hours each day preparing for auditions and performances. Ultimately, the expectations and competitive realities of being a collegiate and/or professional musician can contribute to perfectionistic goals, attitudes, and actions. Perfectionism can be briefly described as holding high standards for oneself and doing everything in one's power to reach those goals, even if it leads to unhealthy behaviors. Sometimes perfectionism can be productive and does not negatively affect musicians' mental or physical health. Unfortunately, there are numerous instances where perfectionistic attitudes and goals are not productive. These attitudes can lead to concerning conditions such as music performance anxiety and increased stress, which together can compromise overall mental wellness. College students are uniquely vulnerable to these conditions because of the pressures they face from their classmates and professors in their musical development. In this study, I examined feelings of perfectionism, performance anxiety, and music-related stress among student musicians at a large, mid-western university. I also identified coping mechanisms collegiate music students used to handle these conditions.

Perfectionism among musicians has been studied by several researchers, who determined that perfectionism can be defined as a personality style characterized by striving for flawlessness and setting excessively high standards for performance, accompanied by tendencies for overly critical evaluation of their behavior (Achtziger & Bayer, 2012; Dunkley & Blankstein, 2000; Stoeber & Rennert, 2008). There have been two facets of perfectionism identified through the research: adaptive and maladaptive perfectionism. Comerchero & Fortugno (2013) described adaptive perfectionism as setting high standards for oneself and being satisfied with his or her

performance, whereas maladaptive perfectionism is associated with not only setting excessively high standards but also being unsatisfied with one's performance, no matter how successful it might have been.

Because perfectionism can contribute to elevated feelings of stress (Achtziger & Bayer, 2012; Dunkley & Blankstein, 2000), it is also critical to gauge collegiate musicians' music-related stress levels alongside feelings of perfectionism. Past research on music-related stress has revealed that musicians become stressed due to high expectations set by themselves, as well as their teachers and their peers (Dworsky, 2004). Given the natural relationship between perfectionism, stress, and anxiety, examining music performance anxiety alongside the aforementioned constructs offers an important additional dimension of understanding. Music performance anxiety might best be defined as an apprehension about the potential of making a mistake and not performing to one's standards. Music performance anxiety can manifest itself physiologically, psychologically, or behaviorally. Research on music performance anxiety among collegiate musicians has shown that music performance anxiety can impact one's enjoyment of playing music, as well as have psychological implications (Patson & Osborne, 2016).

Although some coping mechanisms for stress and anxiety have been explored (Dunkley & Bernstein, 2000; Taborsky, 2007), it is important to study the coping mechanisms that are applied by collegiate musicians. Some coping mechanisms that have been studied include group music therapy, muscle relaxation, and medications (Taborsky, 2007). Even though there has been research regarding perfectionism, music performance anxiety, music-related stress and how individuals cope with these constructs, studying the relationship between these variables among collegiate musicians might help that population more effectively identify perfectionism in their

own personalities and actions, so that they might, in turn, address any negative effects these feelings might present.

The primary purpose of this study is to investigate the constructs of perfectionism, music-related stress, and music performance anxiety among collegiate music majors. An additional purpose of this study is to investigate collegiate musicians' strategies for coping with perfectionism, music-related stress, and music performance anxiety. The three research questions guiding this study are:

1. What characterizes feelings of perfectionism, music-related stress, and music performance anxiety among collegiate musicians?
2. Is there a relationship between feelings of perfectionism, music-related stress, and music performance anxiety among collegiate musicians?
3. In what ways do collegiate musicians cope with feelings of perfectionism, music-related stress, and music performance anxiety?

There are numerous reasons why this study may be important to not only the participants involved, but also to musicians across the world. Better understanding perfectionistic tendencies can enlighten all types of musicians to opportunities and ideas of how to cope with feelings of perfectionism. As such, this study could impact numerous musicians in a positive manner and change how they view their practicing and performing goals.

Literature Review

The constructs of perfectionism, music-related stress, and music performance anxiety have been studied extensively across multiple fields of study. However, there is limited research discussing these three constructs among collegiate musicians. Understanding these constructs will help frame the purpose and need for the current study.

Perfectionism

Many scholars have investigated perfectionism through different fields of study, especially in the field of psychology. Scholars have reached a general agreement upon the definition of perfectionism. The construct of perfectionism is characterized by the setting of high performance standards and striving for flawlessness, accompanied by tendency to be extremely critical in evaluating ones' own behavior (Achtziger & Bayer, 2013; Comerchero & Fortugno, 2013; Dunkley & Blankstein, 2000; Egan, Piek, & Dyck, 2015; Rimm, 2007; Stoeber & Otto, 2006; Suh, Gnilka, & Rice, 2017). People may exhibit varying degrees of perfectionism, and feelings of perfectionism can also be context specific. If one wants to experience success in his or her career, they might set high goals and personal standards. In turn, he or she will then work very hard to achieve those goals. The problem lies when people push themselves too far.

Perfectionism operates on a continuum, and there are both positive (i.e., adaptive) and negative (i.e., maladaptive) forms of perfectionism. People who tend to follow maladaptive perfectionistic behaviors have been linked to have:

...higher levels of problematic characteristics, such as high concerns about making mistakes, intense and persistent self-criticism, a chronic perceived sense of inadequacy and inability to reach goals and desired standards.... [and] perceive higher rates of failure, experience mistakes as catastrophic and tend to undermine their successes with lower levels of self-esteem... and elevated levels of depression and anxiety. (Comerchero & Fortugno, 2013, p. 5)

The negative behaviors that maladaptive perfectionists present leads to increasing pressures, not only on themselves but also on those around them. Rimm (2007) describes that children who have perfectionistic behaviors tend to never feel good enough about themselves,

unless they are the best at whatever they are doing. Moreover, they feel anxious when they believe they cannot meet their personal high standards. Maladaptive perfectionism can also lead to physical ailments including stomachaches, headaches, and depression. In efforts to make themselves to feel better, perfectionists may make other people around them feel angry, oppositional, and never good enough. Additionally, perfectionists may unintentionally put other people down. It is through this literature that we find the importance of expanding our understanding of how perfectionism impacts individuals, as well as those around them.

On the other side of the continuum is adaptive perfectionism, which can be defined as having characteristics such as “having high levels of striving without being excessively punitive or dissatisfied with their performance or themselves...having a positive affect and healthy psychological adjustment” (Comerchero & Fortugno, 2013, p. 5). In general, it has been noted that having adaptive perfectionistic behaviors may improve mental and physical health. Those who practiced adaptive perfectionism seem to be happier because they know their limits and have an overall higher self-esteem. What is interesting about adaptive perfectionists is how they respond to failures. If they fail, they do not get upset and worked up, as maladaptive perfectionists do; rather, they simply figure out what went wrong and move forward (Stoeber & Otto, 2006; Suh, Gniska, & Rice, 2017). Adaptive perfectionists do not dwell on what happened. Ultimately, the activities and behaviors characteristic of adaptive perfectionism are largely positive.

Because perfectionism is not entirely dichotomous, it is important to consider that some people may be perfectionistic in some areas but not others (Rimm, 2007). For example, some people may be perfectionistic when it comes to their grades, but not when it comes to the cleanliness of their room. Others might be perfectionistic when it comes to their clothing style

but not their hair style. This aspect of perfectionism is important to remember because perfectionism can be present in anyone; the extent of how that perfectionism is manifested simply depends on how amplified perfectionist behaviors are demonstrated. Still, it is important to frame perfectionism in a positive light, not just a negative one, as perfectionism can be productive within some people.

An aspect of perfectionism that has not been studied as often is what exactly causes perfectionism. Rimm (2007) suggests that children may develop perfectionistic behaviors because they hear extreme praise from the adults in their environment or watch their parents model perfectionistic behaviors. They may even develop perfectionistic tendencies because of their own successes and the perceived need to live up to those standards. There has also been some research suggesting that girls experience perfectionism more than boys (Rimm, 2007), but this may vary in different contexts.

Music Performance Anxiety

One of the leading problems that many musicians face both before and during a performance is music performance anxiety. Music performance anxiety can present itself physiologically (e.g., . increased heart rate and sweaty palms), psychologically (e.g., negative self-talk and catastrophizing), and behaviorally (e.g., avoidance or preparation materials) (Kenny, Davis, & Oates, 2004; Patson & Osborn, 2016; Sinden, 1999; Stephenson & Quarrier, 2005; Stoeber & Eismann, 2007; Taborsky, 2007) There has been significant research on what activities and situations might spur music performance anxiety. Taborsky (2007) describes a study where college students experienced more performance anxiety when students were in a jury setting. During juries, there are higher expectations (from both the student themselves and their professor), and the pressure during these settings is quite significant. When comparing the

expectations and pressures of juries to the lack of pressures in the practice room, the pressures of juries are a notably higher. As such, a student performing in a recital might experience higher levels of anxiety (as demonstrated by higher heart rate, sweaty palms, and so forth) than a student playing in front of their friends in the practice room.

Like perfectionism, music performance anxiety exists on a continuum, and there are instances where this anxiety can lead to a positive result (Kobori, Yoshie, Kudo, & Ohtsuki, 2011). Some students may experience very little music performance anxiety and be able to perform without much worry. On the other end of the spectrum, some students experience an extreme amount of music performance anxiety, prohibiting them from performing to the best of their abilities. As an anecdotal example of music performance anxiety, I think to a colleague in my collegiate music studio. This student had music performance anxiety to the point where she would be unable to play in front of the studio without getting up to play and shaking noticeably. Her breathing was intensified. Over time and with work, this student learned how to manage her music performance anxiety, and she was able to become a fantastic performer before she graduated.

Patston (2013) argues that music performance anxiety is considered almost a normal part of the developmental trajectory of becoming a musician. He also argues that few classroom, studio, and conservatoire teachers have the skills to help their students manage their music performance anxiety. Kenny, Davis, and Oates (2004) reported that 25% of professional orchestral musicians suffered stage fright, 13% acute anxiety, and 17% depression. Kenny and colleagues also found that music performance anxiety is prevalent anywhere from 59% to 70% of professional musicians. Music performance anxiety is a negative aspect of performing, but not

discussed as often as it should be, as normalizing vulnerable experiences is a difficult task in competitive musical environments.

Music-Related Stress

Most college students would agree that stress is inevitable. Chao (2012) argues that college stressors may include academic work, uncertainty about their future, difficulty in interpersonal relationships, dating problems, self-doubt, and family issues. These stressors can have negative effects on the students' overall mental health. If students do not manage their stress in healthy ways, they are more likely to suffer from depression and engage in unhealthy behaviors such as extensive alcohol use and too much or too little sleep.

In regard to music students in particular, music students face the same amount of stress as their colleagues in other majors, but also have to add on the stress of music activities, including practice time, lessons, and ensembles. This leaves little time for free time and relaxation, as well as exercising (Sterbach, 2008). In a study done by Orzel (2010), collegiate musicians consistently indicated that they had high levels of music related stress. The most common stressor was found to be schoolwork and the ability to manage one's time.

Chao (2012) argues that stress can be managed through social support. College students naturally seek support from their families and friends. If their family and friends offer positive support, college students are more likely to have a positive well-being. On the other side of the spectrum, if college students lack the social support from their family and friends, they will be more likely to suffer from a negative well-being. Orzel (2010) found several coping mechanisms that help alleviate the negative effects of stress. The most effective mechanism that alleviates stress was found to be sleep and a close second was seeking support from family and friends.

Breathing exercises, exercising, eating well, and meditation were also indicated to be good coping mechanisms to alleviate the negative effects of stress.

Relationship between Perfectionism, Music Performance Anxiety, and Stress

Several researchers have argued that there is a relationship among perfectionism, music performance anxiety, and stress. Patston and Osborne (2016) found a very strong positive correlation between music performance anxiety and perfectionism. They also found that there was a strong positive correlation with concern over mistakes and music performance anxiety. Patston and Osborne suggest that students are becoming anxious and worried about their music making.

Stoeber and Eismann (2007) argued that perfectionism plays a prominent role in young musicians' motivation, effort, achievement, and distress. They also found that attempting to attain "perfectionism was associated with higher effort and higher achievement, which is in line with the cumulative evidence from studies with non-musicians which show that striving for perfection is a positive characteristic that may help individuals to attain higher achievements" (p. 2190). Another important finding from Stoeber and Eismann's study was that "negative reactions to imperfection were associated with performance anxiety, emotional fatigue and somatic symptoms" (p. 2190). This study showed the clear relationship between music performance anxiety, perfectionism, and stress.

Patston (2013) found that perfectionism plays a key role in the development of music performance anxiety. He stated, "If, over time, a musician is convinced that musical perfection is their goal, their search for the unattainable may lead initially to frustration and ultimately to anxiety, as they fail to reach these self-imposed standards" (p. 92). These failures could potentially trigger feelings of music performance anxiety. Having perfectionistic thoughts can

lead to students to try to reach those goals at all costs, and when students are unable to reach those goals, music performance anxiety may be inevitable.

Ultimately, while we know that perfectionism can present itself in many aspects of life and music performance anxiety affects professional musicians across the world, it is important to further examine these constructs among collegiate musicians (Comerchero & Fortugno, 2013; Kenny, Davis, & Oates, 2004; Patston & Osborne, 2016). This population is uniquely vulnerable to elevated feelings of music-related stress, perfectionism, and music performance anxiety due to the extreme demands on performance and practice time. When considering the already demanding academic schedules of college students, and the high pressures associated with a competitive music environment, collegiate musicians may be particularly susceptible to these conditions.

Methodology

An online questionnaire was developed using preexisting measurements for perceived stress (Cohen, Karmarck & Mermelstein, 1983), perfectionism (Hewitt & Flett, 1990), and music performance anxiety (Kenny, 2009). There were also two open-ended questions regarding personal experience with music-related stress and performance anxiety, as well as coping strategies participants use to help with these potentially negative feelings.

To measure perceived stress, items from Cohen, Karmarck, and Mermelstein's (1983) *Perceived Stress Scale* (PSS) were adapted to fit a music-specific context. For example, the original scale stated, "In the last month, how often have you been upset because of something that happened unexpectedly?" For the purpose of the current study, the wording was changed to, "In the last month, how often have you been upset because of something that happened related to your experience as a performing musician?" Participants also indicated how often they were

stressed about events related to their musical development. For example, participants were asked, “In the last month, how often have you been able to control frustrations specific to music performance?” Perceived stress was rated on a 5-point Likert-type scale from 1 (never) to 5 (very often). Responses suggested reliability estimates for the adapted PSS were strong in this study ($\alpha = .86$).

Feelings of perfectionism were measured using an adaptation of Hewitt and Flett’s *Multidimensional Perfectionism Scale* (1990). Fourteen items were excluded from the questionnaire, as they did not pertain to the current study. Perfectionism was rated on a 7-point Likert-type scale from 1 (disagree) to 7 (agree). For example, participants were asked to indicate the extent to which they agreed or disagreed with the following statement: “When I am working on an excerpt of music, I cannot relax until it is perfect.” Negatively worded items were reverse scored, and the reliability estimate for the perfectionism scale was also strong ($\alpha = .88$).

To measure the final construct, music performance anxiety was gauged through items taken from the *Kenny Music Performance Anxiety Inventory-Revised* (Kenny, 2009). Music performance anxiety was measured on a 7-point Likert type scale from 1 (strongly disagree) to 7 (strongly agree). Participants were asked to indicate the extent to which they experienced music performance anxiety. For example, participants responded to the item, “My worry and nervousness about my performance interferes with my focus and concentration,” by rating their level of agreement with that statement. Reliability estimates for the music performance anxiety scale ($\alpha = .93$) suggested the measure was highly reliable.

The target population for the current study was college students currently enrolled in a performance studio at a large mid-western university. Eligible participants were notified through email with an invitation to participate in October 2017. There was a 2-week participation

window. To increase participation, a request was sent to studio professors to send a reminder email to their students a week following the initial invitation. The questionnaire was closed for participation in early November 2017. The average time for completion was approximately 12.5 minutes, and the overall response rate was approximately 13 percent.

Results

Demographic Data

Participants ($N = 52$) included undergraduate ($n = 31$), masters ($n = 9$), and doctoral ($n = 1$) students. Because demographic questions were voluntary, some demographics are not fully reported. Figure 1 outlines participants' area of emphasis. The majority (32%, $n = 12$) played woodwind instruments, while 21% ($n = 11$) were brass players, 15% ($n = 8$) were vocalists, 12% ($n = 6$) played string instruments, and 8% ($n = 4$) played percussion or piano. There were more female participants ($n = 26$) than male participants ($n = 15$). With regard to major, there was a relative balance between music education majors (37%, $n = 19$) and performance majors (35%, $n = 18$). Approximately 8% ($n = 4$) were composition and theory majors or other majors.

Participants also responded to various items regarding their overall wellness. With regard to eating habits, the majority of participants (35%, $n = 18$) indicated that their eating habits were about average, while 21% ($n = 11$) of participants indicated that their eating habits were somewhat healthy. Approximately 15% ($n = 8$) of participants indicated somewhat unhealthy eating habits and 6% ($n = 3$) of participants indicated a very healthy eating lifestyle. Only 2% ($n = 1$) indicated a very unhealthy eating lifestyle. Participants were also asked to indicate the amount of time they spent exercising per week. The average amount of time spent exercising per week was approximately three hours, although 25% ($n = 13$) indicated that did not spend any time exercising.

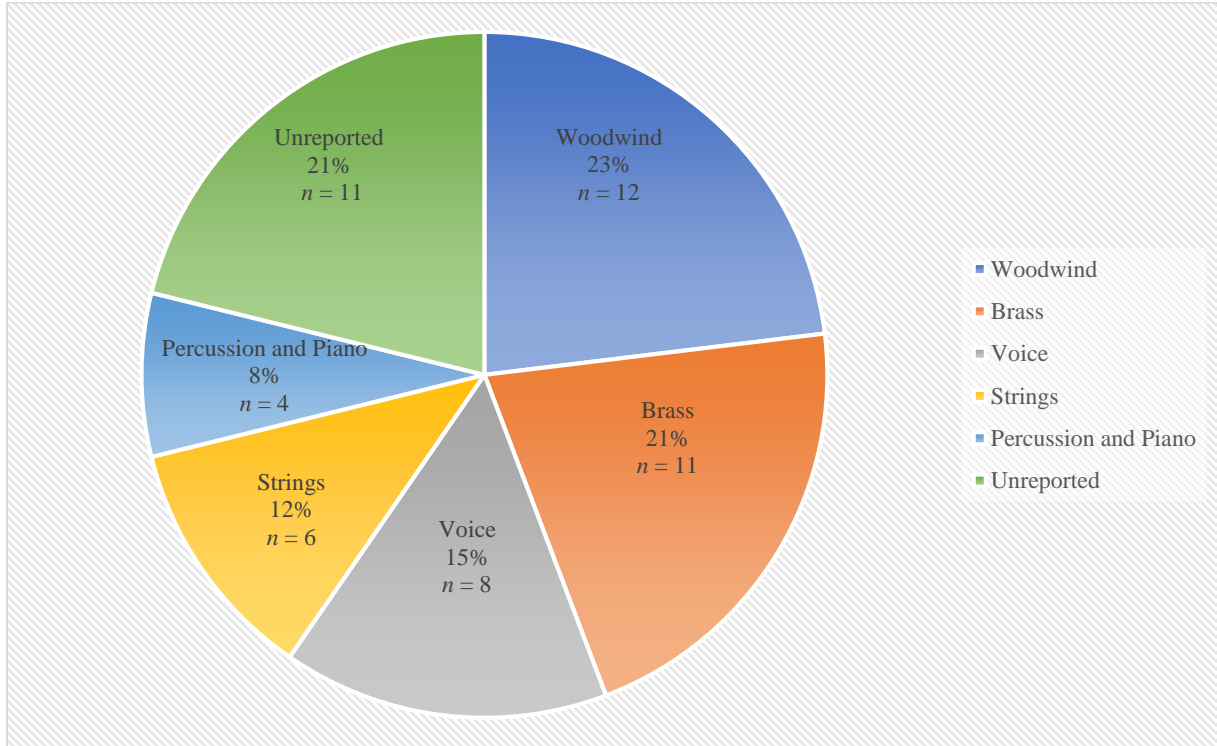


Figure 1. Participants' primary instrument. (N = 52)

The questionnaire also included various items regarding the amount of time participants spent performing each week (see Figure 2). On average, participants spent 8.5 hours a week in ensemble rehearsals (Range: 0-23). Participants were then asked to indicate the amount of time they actually spent practicing per day. The average amount of time that participants spent practicing was 2.10 hours per day, (*SD*: 1.32, Range: 0-6). The average amount of time that participants were *expected* to practice per day was 2.84 hours (*SD*: 1.67, Range: 0-8). A paired samples *t*-test determined that there was a significant difference between hours expected to practice and hours practiced; $t(40) = 3.35, p = .002$.

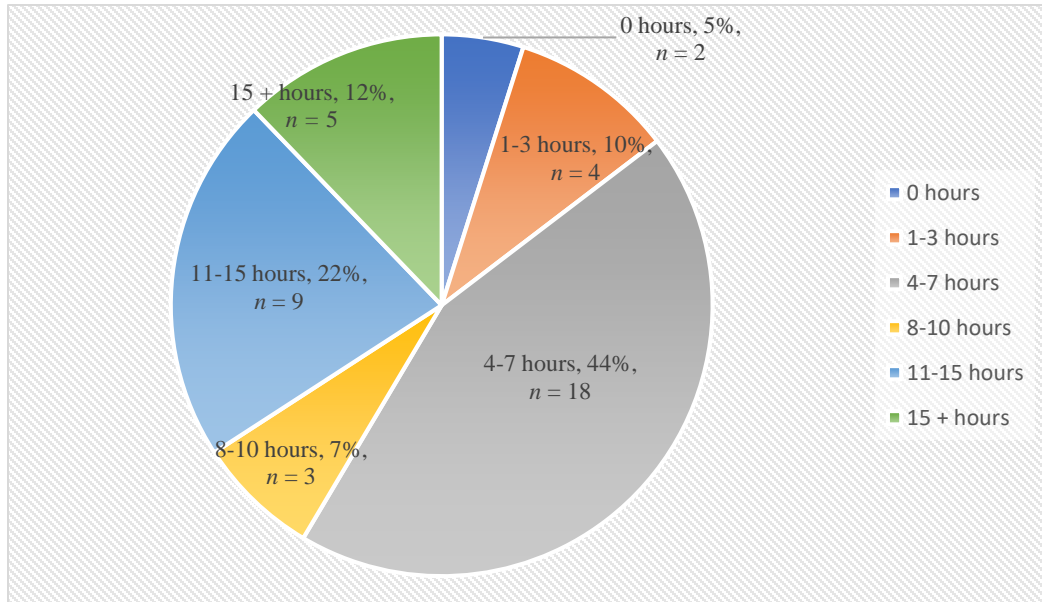


Figure 2. Hours spent in performing ensembles.

In an effort to address the first research question, composite scores were created for the music performance anxiety, music-related stress, and perfectionism subscales. All negatively worded items were reverse scored. Illustrated in Table 1, participants' average music performance anxiety was determined to be 159.15, with a standard deviation of 33.82. The relatively large standard deviation suggests a high degree of variance in responses. With regard to the mean anxiety score of 159.15, the lowest possible score for music performance anxiety was 35, and the highest possible score was 245, suggesting that participants, on average, had relatively high levels of anxiety. The mean music-related stress score 33.77, with a possible range from 10 (no stress) to 50 (extremely high levels of stress). Participants' mean perfectionism scores were 144.08 with a standard deviation of 23.41. Again, due to the possible

score range of 31 (no feelings of perfectionism) to 217 (high feelings of perfectionism), participants seemed to have relatively elevated perfectionistic tendencies.

Table 1

Means, Standard Deviations, and Range for Composite Music Performance Anxiety, Music-Related Stress, and Perfectionism Subscales (n = 48)

Subscale	<i>M</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Music Performance Anxiety	159.15	33.82	73	208
Music-Related Stress	33.77	6.75	16	50
Perfectionism	144.08	23.41	78	194

Note. Total possible ranges for each subscale are as follows: Music Performance Anxiety (Range: 35 - 245), Music-Related Stress (Range: 10 - 50), and Perfectionism (Range: 31 - 217).

To address the second research question regarding the relationship between music performance anxiety, music-related stress, and feelings of perfectionism, Pearson correlations were applied to the composite scores for each of these constructs. The three primary constructs were positively correlated at a statistically significant level ($p < .01$), and the magnitude of these relationships ranged from modest ($r = .44$) to moderately strong ($r = .63$). These results suggest that feelings of perfectionism, music performance anxiety, and music-related stress, though related, are conceptually distinct. These three dependent variables were also examined in relation to the total number of hours practiced per day. There was no significant relationship between hours practiced per day and each of these three constructs. However, there was a weak, negative correlation between hours practiced and both music performance anxiety ($r = -.11$) and music-

related stress ($r = -.01$), which may suggest that the more one practices, the less anxiety and stress one may feel. Pearson correlations are summarized in Table 2.

Table 2

Pearson Correlation Matrix for Composite Scores for Feelings of Perfectionism, Music Performance Anxiety, Music-Related Stress, and Hours Practiced per Day ($n = 41$)

	Music Performance Anxiety	Music Related Stress	Hours Practiced Per Day
Feelings of Perfectionism	.61**	.44**	.14
Music Performance Anxiety		.63**	-.11
Music-Related Stress			-.01

Note. **Correlation is significant at $p < .01$ (2-tailed).

Group differences were also examined to determine if there was a significant difference in feelings of perfectionism, music performance anxiety, and music-related stress across gender, level (i.e., undergraduate or graduate student), and major area (i.e., music education, music performance, or other) using a multivariate analysis of variance (MANOVA). There were no significant differences across group means with respect to each of the three dependent variables.

Open-Ended Items

Participants were asked to answer two open-ended questions, and their answers were coded according to emergent themes. Following the coding process, frequency counts were calculated to determine the most prevalent themes. The first open-ended question asked participants to indicate some stressors in their life, as well as sources of anxiety. The frequency

with which various stressors were reported are summarized in Table 2. Performance-related pressures were the most common stressor among participants ($n = 18$). Lesson expectations were also a common stressor ($n = 14$). Other stressors included social pressures ($n = 12$), negative outcome ($n = 10$), time management ($n = 7$), and perfectionism ($n = 7$). One participant indicated that they felt they experienced no stress in their life.

Table 3

Stressors in Collegiate Musicians

Code	Code Description	Frequency
Performing Pressure	Pressures felt before, during, or after performance	18
Lesson Expectations	Professors' expectations/requirements for lessons	14
Social Pressure	Pressure felt due to perceived expectations from peers	12
Negative Outcome	Fear of negative outcome/stress caused negative outcome	10
Time Management	The feeling of not having enough time	7
Perfectionism	The feeling of needing to be perfect	7
No Stress	No stress is indicated	1

To answer the final research question, participants were asked to indicate any coping mechanisms they used to handle the stress and anxiety that they experienced in their lives (see Table 4). There were many coping strategies that participants used to overcome stress and anxiety. The top three coping mechanisms included breathing ($n = 12$), exercise ($n = 11$), and mindfulness ($n = 10$). Other strategies include redirection ($n = 7$), social support ($n = 4$),

medication ($n = 3$), preparation ($n = 3$), and spirituality ($n = 2$). Two participants indicated that they used no coping strategies.

Table 4

Coping Mechanisms used by Collegiate Musicians

Code	Code Description	Frequency
Breathing	Various Breathing Techniques	12
Exercise	Working out	11
Mindfulness	Using mindfulness/meditation strategies	10
Redirection	Doing something else instead	7
Social Support	Relying on friends and family	4
Medication	Use of physician prescribed medication	3
Preparation	Practice and prepare more	3
Spirituality	Reliance on belief in God	2
No Coping	No coping was indicated	2

Ultimately, the measures used in the questionnaire indicated that a high number of collegiate musicians were experiencing elevated feelings of music-related stress, music performance anxiety, and perfectionism. The measures also revealed that there were moderate positive correlations between perfectionism and music performance anxiety, perfectionism and music related stress, and music performance anxiety and music related stress.

Discussion

The primary purpose of this study was to determine the extent to which collegiate musicians experienced feelings of perfectionism, music-related stress, and music performance anxiety. These three constructs were examined alongside one another due to their interrelatedness as evidenced in previous research (Patston, 2013; Patston and Osborne, 2016; Stoeber & Eismann, 2007) In this study, each of these measures were positively correlated with one another at a significant level, further warranting the exploration of these three constructs alongside one another.

Participants in this study experienced elevated feelings of perfectionism, both in terms of what they expected of themselves and what they felt others expected of them. These results are similar to those found by Stoeber and Eismann (2007) who determined that perfectionism plays a prominent role in various aspects of young musicians' development. In fact, perfectionistic feelings can be associated with high effort and high achievement (Achtziger & Bayer, 2012; Dunkley & Blankstein, 2000; Stoeber & Eismann, 2007; Stoeber & Rennert, 2008); therefore, it stands to reason that collegiate music majors – often accomplished musicians striving to succeed in a competitive environment – might experience elevated levels of perfectionism.

Indeed, this notion was captured in open-ended responses, with one participant commenting, “Everything has to be perfect all the time or else I get very anxious and begin to analyze every small detail that went wrong even if it was negligible. During a performance, this gets in my way and I start to make more and more mistakes.” The participant went on to express, “After a ‘bad’ performance, I continue to beat myself up to the point where I lost motivation to play my instrument for fear of what it will sound like.” This participant demonstrated a high concern with mistakes, which Comerchero and Fortugno (2013) suggest is a symptom of

maladaptive perfectionism. Research has shown that maladaptive perfectionism can have a negative effect on someone's life, and this participant provides an effective example of what maladaptive perfectionism can do to the mind. Another participant stated, "When I perform as a solo musician, I normally feel stressed as I am always worrying how well will I do. During the performance, the idea of messing up is running through my head until it happens." This participant's experience reflects feelings of maladaptive perfectionism, as well. This participant describes perfectionistic tendencies, because they excessively worried about making mistakes in performing. Perfectionism was a common theme in the answers to the open-ended questions, which further supports the notion that perfectionism is a common feeling among collegiate musicians.

Music performance anxiety was measured using the *Kenny Music Performance Anxiety Inventory-Revised*, and results indicated that collegiate musicians also have an elevated sense of music performance anxiety. These findings complement previous research done by various scholars (Kenny, Davis, & Oates, 2004; Patston, 2013), which indicated that music performance anxiety often occurred among professional musicians. Specifically, Kenny, Davis, and Oates found that anxiety occurred in nearly 70% of professional orchestral musicians. Because many professional musicians begin their careers at the college level, it is interesting to note that music performance anxiety does not appear to go away with experience.

The answers to the open-ended questions also suggested that music performance anxiety was very common among collegiate musicians, as open-ended responses were most commonly characterized by anxiety-related themes. One participant reflected on performing a demanding and exposed solo passage: "In rehearsals, I felt rushes of adrenaline just before entering and during the performance my heart rate was above 120 beats per minute. That's the worst stress I

have ever experienced, but I cannot wait to play that piece again.” This participant described an experience of music performance anxiety that had a physiological effect on their body. Many scholars agree that one of the signs of music performance anxiety is increased heart rate and sweaty palms (Kenny, Davis, & Oates, 2004; Patson & Osborn, 2016; Sinden, 1999; Stephenson & Quarrier, 2005; Stoeber & Eismann, 2007; Taborsky, 2007). This participant’s story was interesting because music performance anxiety was experienced, yet not in a debilitating manner; rather, even though performing the passage was a stressful experience, the student still found it to be rewarding and would event do it over again. Another participant stated, “I always feel stress and anxiety when performing at all for another person. This happens more when it’s a performance over just a lesson or practicing by myself or with a friend.” The participant continued, “For performances, I always feel the anxiety afterwards but when coming out of a lesson the anxiety goes away.” This response provided another interesting story about music performance anxiety, because this participant’s anxiety appeared to be situational. The participant felt more anxiety performing in a recital or concert, than if playing for a studio teacher. Taborsky (2007) explained this phenomenon by pointing out the pressures felt during performance situations are much higher than in a practicing session or lesson.

Stress was measured using the *Perceived Stress Scale* (Cohen, Karmarck, & Mermelstein, 1983). Music related stress was high among study participants, but this was not different from what was expected. This study’s results were very similar to those found by Sternbach (2008) and Orzel (2010), who both found that stress is high among collegiate musicians. Musicians deal with a significant amount of stress daily between going to classes, practicing, going to lessons, and going to ensemble rehearsals; there is a unique demand on musicians’ time given all of these academic and performance-related responsibilities. Beyond these obligations, musicians also

have to try to have a social life and maintain their family relationships. Limited time may impact college music students' ability to balance all of these demands, amplifying stress.

In fact, in the open-ended answers, time management (a large indicator of stress) was one of the commonly reported themes. One of the participants stated, "Personally, the greatest source of stress is balancing my time. Being asked to practice a certain number of hours a day while at the same time being required to log a certain number of hours each week on an online module for a different course is very difficult. They compete with each other in my schedule." The participant continued on, stating, "This significantly takes away from my practice time which contributes to my overall stress and anxiety because I am less confident going into my lesson. It seems my music instructor doesn't understand what exactly I am required to do to get a passing grade each week." This response suggested that the biggest stress this participant felt was managing their time. This may be common among collegiate musicians because professors expect students to practice so many hours a day, but students also have multiple other classes for which they need to prepare. Being a collegiate musician seems to translate to a constant struggle with time management. Another participant stated, "I am taking 18 credit hours, working 20+ hours a week, and am involved in organizations on campus that take up a minimum of 3.5 hours a week. I feel the slightest things give me anxiety and stress me out if something were going wrong in rehearsals because I am so busy and I am always trying to be thinking ahead." A class schedule of about 18 hours is very common among collegiate musicians. Most programs require students to take at least 16 hours a semester in order to graduate on time; however, many music majors end up taking more than 18 due to electives or ensembles that they would like to take on top of their required courses.

The second research question focused upon the relationship among the three constructs of perfectionism, music performance anxiety, and music-related stress. Indeed, there was a positive correlation among all three dependent variables. With regard to the relationship between music performance anxiety and perfectionism, collegiate musicians who have a high sense of perfectionism also have a high sense of music performance anxiety. This relationship was also present in studies by Patston (2013) and Patston and Osborne (2016). In both studies, researchers found strong positive correlations between music performance anxiety and perfectionism, making the current study complementary to the existing body of research. Because the current study focused on collegiate rather than professional musicians, it also offers a unique contribution to the literature.

There was also a strong positive correlation between stress and music performance anxiety. In other words, collegiate musicians experienced more music-related stress were also more likely to experience a higher sense of music performance anxiety. To date, no known research has found a correlation between stress and music performance anxiety among collegiate musicians specifically, making this finding another important contribution to the existing body of research. There was also a correlation found between perfectionism and stress; however, this correlation was not as strong as the previous two. This may suggest that stress could be an indicator of perfectionism, but more research on a much larger scale is needed in order to determine the extent to which this may be so. The negative relationship found between the anxiety, stress, and the number of hours practiced suggests that the more students prepare, the less they will experience these negative feelings. Also worth noting, there were no differences across gender, level, or area with regard to the dependent variables. It is interesting that there was no correlation between the constructs and major because one might expect that performance

majors would experience more feelings of perfectionism due to the amplified pressures of pursuing a career as a performing musician. It is also curious that there were no differences across gender and the three constructs, as previous studies have found women were more likely to have perfectionistic tendencies (Rimm, 2007).

The third research question examined the coping mechanisms used by collegiate musicians to alleviate stress. This question was answered through the open-ended questions. The most common coping strategy was focused breathing, with exercising a close second. Indeed, both breathing and exercise elicit physiological reactions that can effectively address music-related stress. The focus upon breathing supports findings by Orzel (2010), who determined that breathing was in the top three most effective strategies for handling stress. Participants also cited exercise as a prominent coping strategy. This finding was interesting because the research has indicated that the schedule of a musician often leaves very little time for exercising (Sterbach, 2008). It is encouraging that the participants in this study made time to take care of themselves and relieve stress through a positive channel. Social support was not as common of a response, with only four participants indicating social support was a positive coping mechanism. This counters research conducted by Chao (2012) and Orzel (2010), who both found that social support was one of the more often applied methods of coping with stress. It is possible that participants in this study, given time constraints, felt limited in their capacity to socially connect with others, therefore citing social support less frequently.

Implications and Future Study

The current study had a small sample size at a single university. To improve generalizability of these results, the study should be done on a larger scale. It is also important to note that due to the small scale of this study, results should be interpreted with caution.

Following the completion of this study, there are several questions that remain, including (1) Why might feelings of music performance anxiety persist despite increased experience?, (2) Why are there no differences across the dependent variables with regard to different demographic groups?, and (3) What are the most effective coping mechanisms for musicians facing these challenges? Answering these three questions would help stakeholders better understand the lives of collegiate musicians, helping to identify coping mechanisms that are the most effective at addressing these health concerns.

There are several recommendations that arose from the current study. Foremost, studio professors and students alike should prioritize a healthy work-life balance while maintaining their performance goals. As one suggestion studio professors might encourage their students to go into the practice room with just a specific task or two in mind, with regard to their repertoire goals. .Once those goals are complete, the student can leave the practice room knowing that they accomplished something. This approach might keep students from spending excessive hours in a practice room, alleviating negative feelings and providing additional time for leisure activities. Moreover, studio professors could also incorporate coping mechanisms into studio class times. At the beginning of each studio class, studio professors might spend a couple minutes on deep breathing techniques, meditation, or yoga. This could encourage students to incorporate these activities into their own lives on a regular basis. A final recommendation is to have one question in the forefront of our minds in order to help students understand the effects stress can have on their body. This question is: “What can we do to help students cope with their stressors in a more efficient manner?”.

As previously stated, this study should be replicated on a larger scale to improve the generalizability of these results. It is important to replicate this study with a larger population to

determine if, among a broader population, there may indeed be significant group differences with regard to the dependent variables. A broader study could also help indicate the most effective coping mechanisms for feelings of perfectionism, music-related stress, and music performance anxiety. In addition to replicating the current study, there could also be a long-term study done to determine if any of these feelings lessen or increase over time, and if so, why. It would also be interesting to look at the number of hours students work each week, how many course hours they are taking, and other unique demands on student time. Looking at these items alongside perfectionism, music-related stress, and music performance anxiety would provide an even better understanding of what collegiate musicians must balance in order to be successful. .

Conclusion

Feelings of perfectionism, music performance anxiety, and stress are common among collegiate musicians. Furthermore, collegiate musicians are stressed about several aspects of their musical study, including performing pressures and lesson expectations. These feelings might be amplified due to the unique demands that require college musicians' time and attention. Even though collegiate musicians experienced numerous stressors in their life, the coping mechanisms (e.g., breathing, exercising, and mindfulness strategies) that participants applied were encouraging. It is important to replicate the current study to further understand how perfectionism, music performance anxiety, and music-related stress affect among collegiate musicians.

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