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PERCEIVED EXTRINSIC FACTORS AFFECTING MUSIC PERFORMANCE ANXIETY IN UNDERGRADUATE MUSICIANS

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PERCEIVED EXTRINSIC FACTORS AFFECTING MUSIC PERFORMANCE ANXIETY IN
UNDERGRADUATE MUSICIANS

By

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Submitted to the School of Honors Committee

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Dedication

Thank you, Lord, for walking beside me through difficult times of my life. I now know that you redeem the mess of my life to bring you glory and your people peace. I am fulfilled in knowing the promise that you will always be with me and never abandon me. To anyone who struggles with anxiety, I pray that you find this research useful as you navigate through the challenges you face.

Acknowledgments

Thank you to Dr. Belfast for your guidance throughout this process, Dr. Miller for your ideas and encouragement to propel me forward, and my family for bearing with me and supporting me through this milestone. Also, thank you to Claudia White for helping me to become a more confident musician.

Abstract

The researcher explored existing literature on music performance anxiety (MPA) that addressed the physiological effects of MPA, its causes, and various methods of mitigating its effects. The influence of self-efficacy and cognitive factors, such as the concepts of focus-of-attention and flow, were researched as they relate to MPA. The music culture and pedagogical approach utilized in institutions providing music education may affect the levels of MPA experienced by music students. Thus, the role of the music educator in reducing MPA in students was also explored. Furthermore, there may be a need for pedagogy within music education curricula that addresses MPA during applied lessons and ensemble rehearsals. The researcher conducted a survey of undergraduate music students in a private liberal arts university in the southeastern United States. Participants completed a questionnaire regarding their musical background and levels of comfort in a variety of performing conditions. On average, the musicians were most comfortable performing in ensembles rather than as soloists, and most uncomfortable when performing in front of an audience or adjudicators.

KEY WORDS: undergraduate music students, music performance anxiety, self-efficacy, music education, pedagogy, focus-of-attention

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INTRODUCTION

Shaky knees, sweaty palms, quivering lips, and tense shoulders are a performer's nightmare. One may practice a musical passage on an instrument until it is mastered; however, when it is time to perform in front of others, the performer may lack confidence as a result of performance anxiety. Musicians often report experiencing symptoms of anxiety related to high performance expectations (Mor, Day, Flett, & Hewitt, 1995). This thesis seeks to explore the causes and symptoms of music performance anxiety (MPA), as well as options for mitigating the effects of MPA to enhance musicianship and expressivity in music performance.

Musicians are tasked with demonstrating technical ability as well as expressivity in their performances; however, many musicians have been hindered by MPA, regardless of their age or level of musical experience. Researchers in the fields of music education and developmental psychology have explored the effect of early childhood music performance experience on levels of MPA and found MPA could be observed in children as young as three or four years of age (Boucher & Ryan, 2011). Boucher and Ryan (2011) noted “[findings] from this study suggest that anxiety actually is present in some children from their very first performances and that these early performance experiences quickly can shape children's responses for subsequent performances” (p. 342). To diminish the impact of MPA, perhaps music educators ought to teach their students strategies for coping with MPA. Music educators help shape student performers' views of performance, and research on MPA (and anxiety in general) may enable teachers to help young children develop the healthy coping strategies necessary to mitigate the effects of MPA in future performances.

Music performance anxiety (MPA) is best understood with knowledge of the stimuli and subsequent reactions associated with performance anxiety in general. As such, this document includes a review of the extant research on performance anxiety. Additionally, environmental factors affecting students within music institutions has been highlighted.

The review of related literature is divided into the following sections: 1) the ways in which musicians are physically affected by MPA, 2) the effect of focus-of-attention on individuals who experience performance anxiety, 3) the various cultural and institutional factors that affect MPA levels, and 4) exhibitions of MPA in children and possible methods of mitigating its effects on young musicians.

The researcher conducted a study regarding musicians' levels of comfort under a variety of performance conditions. The study involved a survey of musicians from a variety of musical backgrounds. Existing research regarding the circumstances affecting MPA provided the necessary support for the composition of a questionnaire for participants. Additionally, the following questions guided this study:

- To what extent does an individual's musical background and training affect his level of MPA in a variety of performance conditions?
- To what extent are music students equipped with methods of performance preparation that incorporate cognitive-related preparation techniques?

The culminating project for this thesis was a lecture recital presented as part of the researcher's senior recital. Information about MPA was included in the program notes. The researcher also gave a verbal lecture on MPA and performed "Be Still My Soul" by Rhonda Larson.

REVIEW OF LITERATURE

Music performance anxiety (MPA) is a significant concern for many professional musicians; therefore, researchers have attempted to determine from where anxiety originates and how it affects a performer's functionality (Amorim & Jorge, 2016; Bandura, 1993; Bogels & Zigterman, 2000; Chanwimalueang et al., 2017; Kenny, 2005; Studer, Danuser, Hildebrandt, Arial, & Gomez, 2011; Studer, Danuser, Wild, Hildebrandt, & Gomez, 2014; Wells, Outhred, Heathers, Quintana, & Kemp, 2012). MPA is known to hinder performance by affecting vital actions such as breathing, which may result in hyperventilation (Studer et al., 2011). Furthermore, if MPA is not regulated, it can contribute to performance-related injuries due to unnecessary tension in the body (Amorim & Jorge, 2016; Baadjou, Roussel, Verbunt, Smeets, & de Bie, 2016). According to Chanwimalueang et al. (2017), the heart and parasympathetic nervous systems react before and during a performance in relation to the levels of MPA experienced by the individual. The researchers compared musicians' cardiovascular response while performing in high- and low-stress situations. When participants performed in a low-stress environment, within a practice-room, their heart rates were more stable than when they performed in a high-stress environment in front of an audition panel.

The results of Chanwimalueang et al. (2017) indicated musicians tended to have higher stress levels, exhibited by higher heart rates, directly before performing in front of an audition panel. These results support the findings of previous researchers who suggested musicians who experience MPA most often experience the highest levels of anxiety in public performance conditions (Ford, 2013; Simoens and Tervaniemi, 2013; Studer et al., 2014; Yoshie, Kudo, Murakoshi, & Ohtsuki, 2009a; Yoshie, M., Kudo, K., & Ohtsuki, T., 2009b).

Simoens and Tervaniemi (2013) found that increased anxiety in public performance conditions was, in part, the result of the musician's low self-efficacy as it related to their performance ability. When surveyed, individuals who indicated they "perceived their instrument as an obstacle ... demonstrated the lowest performance confidence," while those "who felt one with their instrument had lower scores of social phobia, debilitating music performance anxiety, and general music performance anxiety" (Simoens & Tervaniemi, 2013, p. 178). The highly anxious musicians who took part in the study expressed that private lessons were an important venue to receive resources about reducing the effects of MPA. Participants indicated that advice received during private lessons and rehearsals were one of the ways they dealt with MPA, yet "85.6% felt the need for more interventions against music performance anxiety" (Simoens & Tervaniemi, 2013, p. 177). In addition to assisting musicians with overcoming technical obstacles related to their performance, it may be necessary for private lesson instructors and music directors to provide musicians struggling with MPA with techniques to reduce their anxiety.

Strategies to Reduce Music Performance Anxiety (MPA)

There are various ways to reduce MPA, ranging from physical to cognitive techniques, depending on the musician's needs (Bailey & Wells, 2016; Chanwimalueang, 2017; Constantin & Dragulin, 2017; Kenny, 2005; Matthews & MacLeod, 1994; Nordahl & Wells, 2017; Renner, Valentiner, & Holzman, 2017; Robertson & Eisensmith, 2010; Studer et al., 2014; Wells et al., 2012). Musicians struggling with MPA might consider utilizing breathing exercises before a performance to reduce their level of stress (Chanwimalueang, 2017; Robertson & Eisensmith, 2010; Wells et al., 2012). Some musicians report using beta-blockers to manage physical

symptoms of MPA, such as an increased heart rate, and find them effective because they do not inhibit alertness during performance (Kenny, 2005).

Although techniques prescribed to alter a musician's physical state have proven successful, Studer et al. (2014) expressed the need to provide musicians with cognitive approaches to reduce MPA. People with anxiety disorders experience negative perceptions of high-stress situations, such as an audition, that affect their ability to perform appropriately (Barbeau & Mantie, 2019; Bogels & Zigterman, 2000). Studer et al. (2014) found the increased stress the musicians reported experiencing in the public condition may have been due to some level of social anxiety in the participants (Studer et al., 2014; Simoens and Tervaniemi, 2013). Therefore, it is possible that therapies used to reduce social anxiety may help to reduce the effects of MPA.

Renner, Valentiner, and Holzman (2017) screened introductory psychology students for social anxiety and found that personal focus-of-attention, in those with social anxiety, negatively impacted participants' ability to mentally process their environment and caused increased levels of anxiety in participants. Socially anxious individuals' ability to functionally process and respond to their environment is known to be diminished by negative "self-focused attention (i.e., the detailed monitoring of one's thoughts, emotions, behaviors, and physiology)" which can develop dysfunctional beliefs such as, "making mistakes will lead to rejection" (Renner, Valentiner, & Holzman, 2017, pp. 60, 71). Similarly, Barbeau and Mantie (2019) found that when "an event is interpreted as being novel, unpredictable, threatening to the ego, and/or uncontrollable, it generates a stress response" in musicians (p. 411). In these socially anxious individuals, challenges, such as small mistakes during a performance, are perceived as more

highly threatening than they ought, and those negative perceptions cause higher levels of MPA. Since challenges are likely to be encountered by any performer, music instructors and directors ought to educate performers about challenges that may arise during performance, thus making those events less novel in the performers' minds (Barbeau & Mantie, 2019). Moreover, preparing musicians to feel confident to handle unexpected problems may help to reduce subsequent stress responses. Therefore, it is important that instructors educate performers about how to mentally prepare for performance challenges and help anxious individuals reduce negative thoughts and thought-processes (Bailey & Wells, 2016; Matthews & MacLeod, 1994; Nordahl & Wells, 2017; Renner, Valentiner, & Holzman, 2017; Studer et al., 2014).

One way negative thought-processes increase MPA in performers is when thoughts stem from an attitude of perfectionism (Diaz, 2018; Mor & Day, 1995). According to Mor and Day (1995), those who exhibit perfectionist tendencies are known to have higher levels of anxiety. Musicians should beware of becoming so focused on overcoming technical challenges on their instrument that they find performing music is no longer enjoyable to them (Simoens, & Tervaniemi, 2013). According to Diaz (2018), overcoming negative cognitive processes, such as those linked to perfectionism, requires mental training routines tailored to each individual. Instructors should work with students to explore mindfulness and meditation techniques to reduce MPA and increase performance focus (Diaz, 2018). Mindfulness is “the practice of maintaining a nonjudgmental state of heightened or complete awareness of one's thoughts, emotions, or experiences on a moment-to-moment basis” (Mindfulness, n.d.). It is known that students who utilize mindfulness and meditation techniques in their performance preparation routines have lower MPA than those who have a “self-oriented” and perfectionist approach to

performance preparation (Diaz, 2018, p. 150). Mindfulness allows the performer to simply notice thoughts that may distract him from the music, and quickly let them slip away (Robertson & Eisensmith, 2010). Increased mindfulness improves mental focus and reduces MPA in performers; however, performers must dedicate time to mental training to master the technique (Constantin & Dragulin, 2017; Robertson & Eisensmith, 2010).

Focus-of-Attention

Constantin and Dragulin (2017) created a framework of mental training for musicians who are affected by MPA. According to the researchers, the goal in private lessons, when seeking to overcome MPA, should be to increase mental focus while performing as relaxed as possible. In order to help the student reduce MPA, it is vital for private lesson instructors to get to know each student's thoughts and habits regarding performance, and how those thoughts and habits affect the student's level of MPA (Constantin & Dragulin, 2017). Getting to know the music student enables the instructor to create a pre-performance preparation routine tailored to each student's needs (Constantin & Dragulin, 2017; Moulton 2008). According to Moulton (2008), instructors who effectively implement mental preparation into private lessons incorporate "mental rehearsal, breathing and relaxation techniques, ways of improving concentration, detailed performance simulation, pre- and during-performance routines and objective post-performance evaluation" into the training of each performer (p. 66). Furthermore, instructors can help students reduce MPA by "setting realistic practice and performance goals" during lessons (Moulton, 2008, p. 66).

Robertson and Eisensmith (2010) conveyed, in their scratch pad model for reducing distractions that increase MPA, that goals set for the performers should be mastery goals

encouraging “performing as well as one can” as opposed to avoidance goals focusing on preventing performance mistakes (p. 35). Two such mastery goals are “(1) pay attention to the music and (2) do not pay too much attention to pop-ups” (Robertson & Eisensmith, 2010, p. 33). According to Robertson and Eisensmith (2010), the performer must realize “all conscious thoughts ... may interfere with executing task-relevant instructions,” and hinder the performer’s focus on the music (p. 32). Thus, performers should direct focus away from internal narratives, and attain heightened focus on performing the music to the best of their ability. Focal attention, as Robertson and Eisensmith (2010) coin it, does not require the individual to stop thinking certain thoughts, but to redirect attention to something else, such as breathing in a mindfulness exercise during the pre-performance period. When it is time to perform, musicians can retain focal attention by applying the mindfulness techniques developed in private lessons. However, instructors should also prepare students for the increase of anxiety that is inevitable during public and high-stakes performances (Chanwimalueang et al., 2017; Ford, 2013; Simoens and Tervaniemi, 2013; Studer et al., 2014; Yoshie, Kudo, Murakoshi, & Ohtsuki, 2009a; Yoshie, M., Kudo, K., & Ohtsuki, T., 2009b).

It is common for individuals to experience high levels of anxiety during performance in high-stake environments. This experience is not unique to those in music performance settings. It has been noted in a variety of competitive performance areas, such as public speaking, academic testing, and sports (Auer, Calvi, Jordan, Schrader, & Byrd-Craven, 2018; Banks & Smyth, 2015; Bell & Hardy, 2009). Athletes, for example, often perform in high-stakes environments, and must learn to effectively manage stress; otherwise, increased stress may negatively affect their performance and may compromise their health (Kudlackova, Eccles, &

Dieffenbach, 2013). Directing one's focus-of-attention is known to help athletes (and musicians) perform more appropriately under high-stakes conditions (Bell & Hardy, 2009; Duke, Cash, & Allen, 2011; Renner, Valentiner, & Holzman, 2017). Bell and Hardy (2009) investigated the ways in which focus-of-attention might enable athletes to better manage their performance anxiety. Golfers were prompted to focus on the movement of their wrists (internal focus), the strike of the golf club (proximal external focus), and the resulting movement of the ball (distal external focus). In an attempt to increase the participants' anxiety, the golfers were filmed and given a financial incentive. According to the researchers, the athletes with a distal focus-of-attention performed better under the anxious conditions than those with an internal focus-of-attention. Perhaps musicians who perform in high-stakes environments might benefit from changing their focus-of-attention.

Where a musician places his focus affects his effectiveness and comfort in performance (Constantin & Dragulin, 2017; Robertson & Fisensmith, 2010). Duke, Cash, and Allen (2011) attempted to determine whether or not directing musicians' attention to certain aspects of performance affected their motor-behavioral response to the music. The musicians were asked to play a 13-note sequence on the piano. Four foci of attention were tested: on the fingers, on the keys, on the piano hammers, and on the sound produced. The results indicated focus-of-attention affected the motor performance of the musicians. Specifically, a focus-of-attention on the sound produced by the instruments resulted in more evenness of sound than a focus on movement of the fingers or the keys. The results of this research suggest performers' focus may directly affect their performance. Perhaps music educators might help students feel more comfortable performing by teaching them to shift their focus-of-attention from internal factors to the sound of

the music instead (Renner et al., 2017; Robertson & Eisensmith, 2010). As it relates to anxiety, when an individual is focused internally, such as on the physical effects of anxiety or distracting thought-processes, her ability to process the environment in which she is performing is affected (Renner, Valentiner, & Holzman, 2017). Music instructors ought to help performers remove focus from factors that distract from the music, and place focus on finding a state of concentration that enables the musician to perform freely.

Flow

According to Csikszentmihalyi and Wolfe (2014), *flow* is, “the feeling people report when skills become so second nature that everything one does seems to come naturally, and when concentration is so intense that one loses track of time” (p. 173). It is a positive state of focus achieved when the musician’s challenges and skills are balanced. Researchers have previously noted that individuals in a state of *flow* tend to have low levels of MPA (Fullager, Knight, & Sovern, 2012; Kirchner, Bloom, & Skutnick-Henley, 2008). The aforementioned performance research is useful for music educators to help students reduce MPA by addressing performance issues related to *flow* and skill-challenge balance (Csikszentmihalyi & Wolfe, 2014). Music instructors can prepare students to achieve *flow* during performance by setting realistic mastery goals with skill-challenge balance, in combination with incorporating mindfulness techniques into private lessons or ensemble rehearsal periods (Csikszentmihalyi & Wolfe, 2014; Ford, 2013; Moulton, 2008; Robertson & Eisensmith, 2010). Furthermore, music instructors may better prepare students for public performances by teaching them to consider the mental challenge of performing in front of an audience (Ford, 2013). According to Ford (2013),

how musicians address preparation for performance, including the factor of audience in performance, is inconsistent and not always incorporated into private lessons and rehearsals.

Performance Views

Ford (2013) investigated the differences between music and acting students' views on preparation, audience, and performance. She suggested those views affected each performer's interaction with the ensemble as well as the audience. Ford (2013) conducted interviews after music students had the opportunity to work with theatre students to create a presentation that would challenge both groups, especially the musicians, to improvise without preparation outside of rehearsals. The results of the interviews indicated there was a difference between how actors and musicians conceptualized and experienced the preparation, performance, and interaction with the audience. Notably, the musicians tended to view performance as an attempt to produce a perfect example of what the music was supposed to be. Also, the musicians tended to consider the audience as more of an outlier that should be overcome rather than an entity with which they ought to interact. Ford found the "pedagogical practices in music seem[ed] to privilege technique and the mastery of repertoire" while preparation for performance was to be worked on by each musician individually (Ford, 2013, p. 159). Emphasizing mastery of the repertoire and viewing aspects of the performance, such as the audience, as obstacles, can cause increased MPA and cause performers to feel disconnected from the music (Diaz, 2018; Mor & Day, 1995; Paliaukiene, Kazlauskas, Eimontas, & Skeryte-Kazlauskiene, 2018; Robertson and Eisensmith, 2010; Roesler; 2014; Simoens and Tervaniemi, 2013). Conversely, the actors viewed performance as ever-changing and based on the ensemble members' responses to each other's energy as well as to the audience's perceived judgements. The actors were prepared with "a

high degree of consistency ... both in the long term and on the day itself” to perform with their peers and in front of an audience, and the teachers “emphasize[d] performance as a goal of rehearsal” (Ford, 2013, p. 159). Since musicians are known to be more anxious in a public performance condition, it is important for instructors to help students to feel prepared to perform, as a soloist or within an ensemble, in front of audiences (Chanwimalueang et al., 2017; Ford, 2013; Simoens and Tervaniemi, 2013; Studer et al., 2014; Yoshie, Kudo, Murakoshi, & Ohtsuki, 2009a; Yoshie, M., Kudo, K., & Ohtsuki, T., 2009b). Furthermore, helping students to view performance as an opportunity to be connected to, rather than averted from, the audience and others in the ensemble may help to reduce their level of MPA (Perdomo-Guevara, 2014).

Perdomo-Guevara (2014) surveyed performing musicians to assess their views related to their most recent enjoyable performance. Perdomo-Guevara (2014) noted participants who were people-oriented (“in terms of connectedness with others”) and source-oriented (“originating beyond the performer’s conscious-self”) in performance experienced less perceived MPA than participants who were not people-oriented or source-oriented (Perdomo-Guevara, 2014, p. 70). According to Perdomo-Guevara (2014), “approaching performance as an opportunity for connectedness and self-transcendence seemed to help performers feel confident, motivated, and highly joyful when performing,” which reduced MPA in those participants (p. 71). Perdomo-Guevara found the way performers thought about performance affected their emotions as well as their resulting levels of MPA. The researcher also found the way performers approach performance “is in part shaped by the musical genre environment the performer belongs to,” which may have implications in the music classroom (Perdomo-Guevara, 2014, p. 71). As seen in a previous study, student-musicians’ approaches to performance, other than working on the

chosen repertoire, were “weakly institutionalized” which caused them to adopt “idiosyncratic strategies” for performance preparation “or none at all” (Ford, 2013, p. 158). Lack of structured performance preparation can cause MPA in students who feel unprepared to handle certain aspects of performance.

Extrinsic Variables of Performance

The effects of MPA are seen manifested at different levels dependent on the type of performance (Ryan & Andrews, 2009). Ryan and Andrews (2009) sought to determine how susceptible to MPA singers were compared to instrumentalists. The researchers analyzed data related to musicians’ performance history and experience with conductors, and evaluated the effects of those variables on levels of MPA. The musicians either sang in a choir, sang mostly solo works, played in an ensemble, or played mostly solos on an instrument. MPA was frequent amongst the singers yet appeared in only moderate levels. Singers who also played instruments reported experiencing more MPA when playing the instrument than when singing. Additionally, the presence of a conductor was found to be a major source of MPA. Furthermore, musicians involved in larger choirs tended to express a greater amount of MPA than those in smaller choirs. Ryan and Andrews noted a few performance variables the musicians tended to be anxious about. The data presented may help music instructors to narrow down students’ performance preparation strategies for specific variables of performance, and they may guide the institutionalization of performance preparation pedagogy in music schools.

Educational Institutions

Many musicians experience MPA with differing levels of intensity; therefore, it may be useful to explore how experiences within competitive and more exploratory music education

environments affect a performer's views and values regarding music. In a study by Papageorgi et al. (2010b), students who attended educational institutions that placed high-value on solo-performance tended to have higher levels of MPA than those who attended institutions with lower value on solo-performance. Instructors in the institutions play the vital role of fostering an environment of values, such as self-efficacy, that help decrease anxiety for pupils during a variety of settings, including solo-performance (Bandura, 1993; Levine, 2008). Furthermore, instructors and students must understand the factors of audience and competition and how they affect MPA levels.

The presence of adjudicators and peer-competition is known to cause increased levels of performance anxiety (Jacobs, Samarasekera, Shen, Rajendran, & Hooi, 2014; Yoshie et al., 2009a). For example, a performer's perception of audience judgments of a performance is known to cause changes in the levels of anxiety the performers experience (Ford, 2013; Yoshie et al. 2009a). According to Yoshie et al. (2009a), with the presence of an audience, participants' "increase in subjective anxiety appears to have resulted from the misdirection of attention to task-irrelevant social cues," that is, they became distracted by the audience. Individuals who struggle with anxiety may feel a level of threat during certain situations, such as performing before an audience, while the person without anxiety does not feel threatened by those same situations (Bandura, 1993). Furthermore, musicians who struggle with high MPA tend to have low self-efficacy in handling threats. They often avoid situations, such as performing in front of an audience, that will cause them distress (Paliaukiene, Kazlauskas, Eimontas, & Skeryte-Kazlauskiene, 2018; Papageorgi et al., 2010b). According to Bandura (1993), those struggling with anxiety feel unable to cope with their perceived threats in the performing environment, and

“through such inefficacious thinking, they distress themselves and impair their level of functioning” which can cause them to experience high levels MPA (pp. 132-133). Thus, instructors who prepare students to cope with the performance environment may aid in reducing MPA.

Indeed, previous research has been focused on ways in which students’ experiences within the performing environment affect their level of anxiety (Boucher & Ryan, 2011; Ryan & Andrews, 2009). Papageorgi et al. (2010b) studied the levels of self-efficacy in music students and how those levels related to students’ learning approaches as well as each institution’s areas of concentration. A comprehensive survey was also conducted with the students. The results revealed a relationship between students’ individual methods of learning, familiarity with a certain music cultures, and levels of MPA. The students familiar with a performance-based culture, with emphasis on developing solo-musicians, exhibited higher levels of MPA. Those who felt confident in their ability to overcome technical challenges experienced less MPA than those who lacked self-efficacy. The results highlight the effects music-institution cultures have on the musicians they serve. According to Papageorgi et al. (2010b), it is important that institutions provide students with more opportunities to make music for enjoyment, as well as in “cross-genre collaborations” (p. 443).

Competition

Perceived level of peer-competition within institutions is another risk factor for high MPA (Jacobs et al., 2014). Competitive academic culture has been studied to determine if there was a correlation to anxiety levels in general. Jacobs et al. (2014) conducted a study about the grading system within a medical program and its effect on student stress levels. Two cohorts’

performances were observed after completing the program. One cohort used the A–F grading scale, and the other implemented a Pass/Fail (P/F) system. The results of Jacobs et al. (2014) indicated the P/F system resulted in lower stress levels in students than the A–F system. According to the authors, students’ perception of more peer competition in an A-F grading system “presumably from comparing exam performance grades” caused a significant amount of stress (Jacobs et al., 2014, p. 166). In the same way, it is possible that music students in educational institutions with competitive cultures may exhibit higher levels of MPA.

Yoshie et al. (2009b) studied levels of subjective anxiety, autonomic arousal, and electromyographic activity as they relate to competitive and rehearsal settings. The researchers asked professional pianists to play a solo in a rehearsal setting as well as in front of an audience and a group of judges. The judges scored the participants based on technical dexterity, tone quality, and artistic expression. After analyzing the results, Yoshie et al. (2009b) suggested subjective stress, autonomic arousal, and electromyographic activity was higher during the live performance than the rehearsal setting. The researchers also concluded it may be best to increase performance quality by lowering subjective anxiety and muscle hyperactivity for musicians.

Yoshie et al. (2009a) completed a similar study where participants were evaluated based on technical ability and artistic expression when performing. In the study, pianists self-reported their level of anxiety before performing a musical selection of their choice from memory. Musicians performed the music in a competitive setting (cash prizes were to be awarded), in front of a live audience and panel of five judges. Participants also performed in a practice-room with no audience or experimenters present (to simulate a rehearsal setting). During each performance condition, the participants’ autonomic responses were recorded through heart rate

analysis as well as their muscular responses to the stress of performing. Yoshie et al. (2009a) found participants exhibited higher performance anxiety (i.e., increased heart rate, muscle tension, and self-reported anxiety levels) in the competitive performance setting than they did within a rehearsal setting. Researchers have found that the differences in levels of anxiety within various performance conditions can develop from early childhood (Boucher & Ryan, 2011).

MPA in Childhood Development

It may be beneficial to determine when MPA begins to be exhibited in the development of a child, and perhaps to train children to overcome anxiety before it has a chance to develop negative roots. Boucher and Ryan (2011) explored the extent to which nature and nurture played a role in MPA experienced by young, developing musicians. Boucher and Ryan interviewed 66 children from two child care centers about their prior performance experience and their anxiety levels in regards to performance. Pictures were used to make questions more understandable for the children. The purpose of the questions was to assess the children's perceptions of their competence, level of enjoyment, and feelings about performance. Boucher and Ryan (2011) found MPA was evident in early childhood and suggested it ought to be studied further. The researchers noted when children were familiar with the performance venue, they tended to have lower anxiety levels. This study shows that MPA is prevalent in children from a young age; therefore, more research is needed to determine the extent to which some children may be inadvertently taught to be more or less anxious over time as they gain experience in certain performance environments.

Levine (2008) wrote about academic anxiety, its causes, and its consequences in the education system. Levine explored Michel Foucault's theories concerning disciplinary

knowledge and power to challenge educational institutions to foster an environment of learning that reduces anxiety in students. Levine (2008) also highlighted extant research related to the effect of anxiety on students in test-taking situations and mathematics. The researcher posited educational institutions should consider how changes in their system could affect students' anxiety levels, and that these institutions should attempt to reduce the levels of anxiety experienced by their students. Since educational institutions' systems affect levels of academic anxiety, it may be beneficial for music educators to incorporate techniques related to the prevention or reduction of MPA into the music education of all students. One way that music educators can help to reduce MPA in students is by encouraging students to practice repertoire with performance goals in mind that center around building confidence and musicianship, as well as to better connect with the audience and ensemble members (Perdomo-Guevara, 2014; Roesler, 2014).

Music Education: Encouraging Community and Musicianship in Performance

Performance goals that inspire students to perform with musicianship and expressivity in performance are known to reduce MPA levels (Robertson & Eisensmith, 2010; Roesler, 2014). Roesler (2014) wrote about the importance of teachers setting interpersonal goals for young musicians to encourage more expressive music-making. She described experiences in directing an eighth-grade string orchestra, including specific ways in which interpersonal goals were applied to the teaching. She also addressed the negative effects of avoidance goals such as working to get the best score or trying to play all of the notes correctly. Roesler (2014) stated replacement goals should be used, instead, to motivate students and help them overcome their anxieties. She posited that musicians could practice more effectively when the goal was to elicit

an emotional, interpersonal connection with the audience, rather than to impress the audience by performing the music with perfect technique. Thus, setting the precedent for students to focus on interpersonal music performance goals, rather than avoidance goals, is one way to reduce a musician's level of MPA.

If approaching music from an interpersonal standpoint can aid in reducing MPA levels, then educational institutions may benefit from developing pedagogy that promotes the development of musicianship through the ensemble performance experience. Kokotsaki and Hallam (2007) explained the ways in which musicians benefited from learning through the ensemble performance experience and that the musicians felt motivated to continue performing music as a result. The researchers surveyed 78 music students from two English universities. The students surveyed were involved in either traditional music tracks, ethnomusicology tracks, or other modern music studies. The two main questions asked were: "How do you perceive your past or current involvement in musical ensembles?" and "What impact did it have on you?" (Kokotsaki & Hallam, 2007, p. 95). The researchers found the students were motivated to perform in ensembles by "music-making as a musical act... to deepen their musical knowledge and understanding," "music-making as a social act... [as] active contributors to a group outcome ... building up a strong sense of self-esteem and satisfaction," and "music-making influencing the self... in terms of personal skill development facilitating ...the development of self-achievement, self-confidence and intrinsic motivation" (Kokotsaki & Hallam, 2007, p. 93). The participants' responses indicated one of the benefits from the ensemble experience was a sense of increased self-efficacy. The musicians also felt confident they were contributing to the collective achievement of ensemble performance goals. This research provides insight into ways in which

positive and structured ensemble performance experiences can contribute to performers developing self-efficacy and confidence. Results from previous research suggest musicians with strong self-efficacy tend to have less MPA, and as they perceive they are growing in ability and musicianship to handle musical challenges, they will have higher self-efficacy and lower MPA (Bandura, 1993; Paliaukiene, Kazlauskas, Eimontas, & Skeryte-Kazlauskiene, 2018; Papageorgi et al., 2010b; Simoens and Tervaniemi, 2013). The musicians surveyed by Kokotsaki and Hallam (2007) acknowledged their ensemble performance experience was a positive learning experience, and they felt they were growing musically as they participated in ensembles. The participants' enriching ensemble experiences may provide other music programs a model to imitate. Music educators ought to provide opportunities for students to develop a sense of community and connectedness with others within their music programs. This may help students to find confidence and purpose in pursuing music, as well as help reduce levels of MPA.

The researcher explored literature on MPA, its causes, and effects, as well as ways in which performers can mitigate the effects of MPA. It is evident from research that a number of environmental factors may affect musicians' levels of performance anxiety. Furthermore, the musicians' thoughts and preparation for performance can affect levels of anxiety. University music programs may implement pedagogy that prepares students to overcome the mental challenges affecting MPA levels when performing in various conditions. Therefore, the purpose of this study was to assess undergraduate music majors' musical backgrounds and training, cognitive-related performance preparation techniques, and levels of music performance anxiety experienced.

METHODOLOGY

Following a review of extant literature on music performance anxiety, a questionnaire was developed to determine the level of comfort undergraduate musicians experienced in a variety of performance situations. The questionnaire was distributed during instrumental ensemble classes at a small, private, liberal arts university in the southeastern United States. Participants were asked to complete the researcher-designed questionnaire (see Appendix A) related to performance experience and levels of comfort in a variety of performance conditions. Completed questionnaires were then collected and analyzed.

In Part 1 of the questionnaire, participants provided demographic information related to their primary instrument, applied lesson and performance experience, and mental preparation strategies utilized before a performance. Then, in Part 2 of the questionnaire, participants rated their level of comfort in a variety of performance conditions (e.g., solo, adjudicated, improvisation, etc.). Averages for each condition were calculated to compare overall comfort levels amongst the participants.

Furthermore, the researcher gave a short lecture about MPA during her senior flute recital. The researcher introduced one of the pieces, “Be Still My Soul” by Rhonda Larson, with a lecture on the importance of teacher involvement to help students overcome MPA. Information related to MPA was included in the program notes (see Appendix B). Additionally, the lecture-recital was recorded and posted on social media platforms for further exposure to the public.

RESULTS

Undergraduate musicians who completed the questionnaire were members of a university jazz band, string orchestra, percussion ensemble, contemporary band, or wind ensemble. Ten completed questionnaires were eliminated due to incomplete data. The remaining questionnaires ($N = 44$) were coded and analyzed.

Participants included pianists ($n = 3$), brass players ($n = 5$), vocalists ($n = 7$), percussionists ($n = 7$), woodwind players ($n = 12$) and string players ($n = 20$). The genres of music with which participants most frequently reported performance experience included classical (95%), jazz (75%), pop (68%), religious (20%), rock (14%), and Latin American (7%) genres of music. Ninety-five percent of the participants reported previous experience performing classical music; therefore, no between-genre comparisons were made. Nearly all participants (89%) indicated they had received private lessons on their primary instrument. The length of time those lessons took place ranged from one year to 13 years.

In Part 1, participants indicated their experience in ensemble, solo, and adjudicated performance. Respondents indicated ensemble performance experience in band (72%), orchestra (45%), chamber music groups (29%), religious ensembles (26%), and choral ensembles (24%). Examples of more ambiguous responses concerning ensemble performance experience include *parties* and *gigs*. The majority of participants who indicated prior solo performance experience reported those experiences took place in Solo & Ensemble Festivals (33%), religious settings (18%), and recitals (13%). The most commonly reported adjudicated performance experiences included Solo & Ensemble Festivals (57%), Music Performance Assessments (38%), and

competitions (22%). More ambiguous responses include *student day* and *federation*. Other responses for Part 1, regarding performance experience, are listed in Appendix C.

Two participants provided unsolicited information related to their solo performance experiences. One musician, who also indicated high comfort in solo performances, wrote “I have 5 years of solo experience and I absolutely love it. Every time I perform it's like the first time all over again” (Respondent 7). Conversely, another respondent indicated they preferred to perform in larger ensemble settings by writing “Solo and ensemble, not really much of a [soloist] because I'd rather be in an ensemble and not in spotlight” (Respondent 38).

Item G, in Part 1 of the questionnaire, asked participants to indicate ways they mentally prepared for a performance. Responses were reviewed and identified as mental preparation or not related to mental preparation. All responses not related to mental preparation were removed from the data set. Many participants provided vague responses to this questionnaire item; as such, those responses could not be accurately categorized.

Some participants indicated they may mentally prepare for a performance by rehearsing the repertoire individually or with the ensemble, going over the concert order of the repertoire, revisiting tough sections of the repertoire, listening to or mentally rehearsing the repertoire, reviewing tempo of the music, or warming up individually or with the ensemble. On the other hand, some participants stated that they took a break from the music or avoided doing anything music-related just before the performance. A few participants indicated that they utilized breathing exercises to prepare for a performance, while others chose to sleep.

Many respondents also said that practicing was their preparation strategy. A few indicated sentiments similar to the following: “I practiced a ton so there would be no worry on

the day of the performance” (Respondent 8) and “[I] try not to think and let practice and muscle memory take over” (Respondent 25). Some participants practiced with the final performance in mind by “[working] out logistics and transitions, including what will be said” (Respondent 15).

Some statements point to a certain state of mind that the participants try to have in performance preparation, such as “speak and think positively” (Respondent 29) or “I’m actually energized by pre-performance nerves. I love it. I try to channel it into performance” (Respondent 19). Some more ambiguous responses include “try not to stress” (Respondent 50), “stay focused” (Respondent 49), and “[get] in the zone” (Respondent 38). See Appendix D for full quotes of participants’ preparation strategies.

In Part 2 of the questionnaire, participants rated their levels of comfort in a variety of performance conditions. The averages for all participants for each category were calculated (Table 1). Categories rated with the highest levels of comfort on average were “In a large ensemble concert” ($M = 4.9$), “In a large ensemble rehearsal” ($M = 4.9$), and “Alone in a practice room” ($M = 4.5$). The categories rated with the lowest averages were “While sight-reading” ($M = 3.0$), “As a soloist in front of an audience” ($M = 2.9$), and “As a soloist in an adjudicated event” ($M = 2.8$).

DISCUSSION

The results of the study reveal there is little consistency amongst music students' reported methods of mental preparation for a performance. It is unknown whether or not the pedagogy used by private music instructors involved mental performance preparation as a means of reducing MPA. If instructors are not implementing mental preparation techniques into lessons, perhaps they do not see the need for implementing those strategies, or simply do not know of any mental preparation strategies to incorporate into lessons. In either case, the university music program should encourage music teachers to implement mental preparation techniques into lessons and provide resources to music teachers if needed. It may be useful to determine how incorporating mental performance preparation into private lessons might affect students' MPA levels. Doing so might help to identify techniques most effective in reducing MPA in undergraduate musicians.

The results also revealed that, on average, participants felt the least comfortable performing as soloists in front of an audience, performing a solo with adjudicators present, or sight-reading. Participants felt the most comfortable performing within large ensemble rehearsals and concerts, as well as alone in a practice room. Perhaps participants feel less comfort soloing in front of an audience or adjudicators because they fear exposure as suggested by Ryan and Andrews (2009). Similarly, students might believe they are not good sight-readers or fear being judged for making mistakes in front of others. Conversely, when performing with a large ensemble, music students might perceive support from their peers and less pressure overall. Future studies might investigate the reasons undergraduate musicians experience varying levels of comfort in the aforementioned performance conditions.

Most participants had experience in all three of the main genres listed (i.e., classical, jazz, and pop); therefore, no conclusions could be made regarding the effect performance in specific genres might have on MPA in undergraduate musicians. Subsequent research designs might attempt to isolate experimental groups by musical genre in order to explore potential effects on MPA. Furthermore, future studies might consider a larger sample size that incorporates various types of music institutions from a variety of geographical areas. Future studies might also investigate the extent to which specific pedagogical practices contribute to, or aid in reducing, music performance anxiety. Investigations related to the prevalence of anxiety coping strategies as a component of applied music curricula may also be beneficial.

The researcher's senior recital was recorded and posted on social media. The recording included a lecture, by the researcher, about MPA. A viewer later commented on the lecture:

“...‘Music Performance Anxiety’, hence the reason why I quit private piano lessons. I didn't want to play a solo publicly. Did that once when I was younger in elementary, but as I got older, the idea was unsettling. I played the violin and viola in middle school and the flute in high school and felt comfortable because I played with the orchestra and band...how does [the researcher] handle Music Performance Anxiety? Oh, and yes it does affect how you play your music. I don't know about Gianna, but it's like you become dyslexic, missing a note or altering the rhythm.” (C. Montalvo, Personal Communication, March 19th, 2019)

Performers' music education experiences have an impact on their self-efficacy to deal with performance challenges and resulting MPA levels. Some students may decide to quit performing music due to negative experiences within music education. Instructors can help

performers to change their perceptions about performance and help them feel prepared to deal with the challenges that arise so performers do not feel threatened, but feel confident and up to the challenges. Furthermore, interpersonal skills and musicianship gained through the music education experience can encourage students and help reduce MPA. Music educators have the opportunity to influence the effect performance experiences have on students' levels of MPA. With consistent pedagogy that focuses on performance preparation and personal mental training, music students may feel better equipped to experience challenges the performance situation presents. Self-efficacy in music programs, and a sense of community with common goals to help performers develop more musicianship, will help students experience less MPA.

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Table 1

Average Comfort Levels of Undergraduate Musicians

Performance Condition	% of population (n=44)	Average Comfort Rating
In a large ensemble concert		4.9
In a competitive event		3.4
For monetary compensation		3.7
In a small chamber group rehearsal		4
As a soloist in front of an audience		2.9
As a soloist in an adjudicated event		2.8
While being recorded		3.3
In a large ensemble rehearsal		4.9
While sight-reading		3
While being conducted	98	4.4
Alone in a practice room		4.5
In an adjudicated ensemble performance		4.3
In casual social settings (i.e., “jamming”)		4
In a pit orchestra	93	4.3
In a small chamber group concert	98	3.9
In a collaborative arts performance (w/ dancers, visual artists, orators, etc.)	95	4

Note. Some participants did not indicate comfort levels for certain performance conditions. The “% of population” column includes the percentage of participants that indicated a comfort level for the corresponding item on the questionnaire. Where no percentage is reported, participation amongst participants was 100%.

APPENDIX A

MUSIC PERFORMANCE QUESTIONNAIRE

Music Performance Questionnaire

I. Provide an appropriate response for each item below:

- A. Upon which instrument(s) do you play primarily? _____
- B. Place an X beside each musical genre with which you have performance experience:
Classical _____ Jazz _____ Popular _____ Other _____
- If applicable, list all other genres with which you have performance experience:

- C. How many years of private lessons have you taken with your primary instrument? _____
- D. Identify your ensemble performance experience: _____

- E. Identify your solo performance experience: _____

- F. Identify any adjudicated performance experience you may have: _____

- G. Indicate any ways you may mentally prepare for a performance: _____

II. On a scale from 1 (very uncomfortable) to 5 (very comfortable) rate your level of comfort performing your primary instrument under the following conditions:

- | | |
|--|--|
| _____ In a large ensemble concert | _____ While sight-reading |
| _____ In a competitive event | _____ While being conducted |
| _____ For monetary compensation | _____ Alone in a practice room |
| _____ In a small chamber group rehearsal | _____ In an adjudicated ensemble performance |
| _____ As a soloist in front of an audience | _____ In casual social settings (i.e., “jamming”) |
| _____ As a soloist in an adjudicated event | _____ In a pit orchestra |
| _____ While being recorded | _____ In a small chamber group concert |
| _____ In a large ensemble rehearsal | _____ In a collaborative arts performance
(w/ dancers, visual artists, orators, etc.) |

APPENDIX B

SENIOR RECITAL PROGRAM

*Out of respect for those performing,
we invite you to silence all devices and to refrain from recording
or photographing any portion of the performance.*

Sonata in A minor Carl Philipp Emanuel Bach
Poco adagio 1714-1788
Allegro
Allegro

“Trio I” from *The London Trios* Franz Joseph Haydn
Allegro moderato 1732-1809
Andante
Finale: Vivace

Gianna E. Carrasco, flute
Claudia White, flute
Keats Rivas, cello

Be Still My Soul Rhonda Larson

In the Rain Gianna E. Carrasco
1998-Present

Ms. Victoria Keller, piano

Fantasia Gabriel Faurè
1845-1924

Ms. Victoria Keller, accompanist

Be Still My Soul by Rhonda Larson

Music Performance Anxiety (MPA), also known as *stage fright*, causes some musicians to feel hindered from expressing the talent God has given them. MPA inhibits mental focus and physical functions needed to perform music effectively.

Although there exists cognitive as well as pharmaceutical therapies for MPA and other anxiety disorders that increase MPA, many music students may not be aware of how to cope with MPA. While not every music student struggles with MPA, all could benefit from being taught ways to mitigate the effects of MPA. It is difficult for students who put in the effort to prepare each performance, yet still experience the frustration of MPA. I am grateful to have had instructors who can guide students through the issues of MPA.

~~~

Be Still My Soul is a prayer, amidst of what feels like chaos, reminding oneself to place trust in God, for he can bring every thought and feeling back to peace. God is the ultimate healer and walks beside each person, providing strength to those who desire healing.

~~~

hymn lyrics by Katharina von Schlegel (1697– ca.1768)
hymn tune by Jean Sibelius (1865-1957)

Be still, my soul: the Lord is on thy side.
Bear patiently the cross of grief or pain.
Leave to thy God to order and provide;
In every change, He faithful will remain.
Be still, my soul: thy best, thy heav'nly Friend
Through thorny ways leads to a joyful end.

~~~

Do not be anxious about anything, but in every situation, by prayer and petition, with thanksgiving, present your requests to God. And the peace of God, which transcends all understanding, will guard your hearts and your minds in Christ Jesus.

Philippians 4:6-7 (NIV)

This recital is offered in partial fulfillment of the requirements for the degree of B.A. Music.

APPENDIX C

OTHER PERFORMANCE EXPERIENCES

| Ensemble             | Solo              | Adjudicated                                      |
|----------------------|-------------------|--------------------------------------------------|
| Contemporary Bands   | Auditions         | Band Performances                                |
| Country Bands        | Band Solos        | Bands of America                                 |
| Festival Ensembles   | Competitions      | Events of the Florida<br>Bandmasters Association |
| Hip-Hop Groups       | Concertos         | Festivals                                        |
| Salsa Bands          | Gigs              | Indoor Percussion                                |
| Percussion Ensembles | Jazz              | Juries                                           |
|                      | Percussion Solos  | Talent Shows                                     |
|                      | Studio Recordings |                                                  |
|                      | Talent Shows      |                                                  |

## APPENDIX D

### FULL QUOTES CONCERNING PERFORMANCE PREPARATION

#### **Respondent 8**

“I practiced a ton so there would be no worry on the day of performance.”

#### **Respondent 15**

“Practice well ahead of time. Work out logistics and transitions, including what will be said.”

#### **Respondent 19**

“Visualization and deep breaths; calmly rehearsing; I'm actually energized by pre-performance nerves - I love it. I try to channel it into performance.”

#### **Respondent 25**

“Breathing exercises to help calm the mind. Just try not to think and let practice and muscle memory take over.”

#### **Respondent 29**

“Pray, smile, speak and think positivity, breathe deeply.”

#### **Respondent 38**

“Mentally, practicing the piece and getting comfortable with it and getting in the zone, listening to YB.”

#### **Respondent 49**

“Stay focused, run through the pieces in my head.”

#### **Respondent 50**

“Listen to ambient music before a performance and try not to stress much.”