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The Application of Mindfulness Practices in the High School Choral Classroom to Impact Music Performance Anxiety During Solo Performance

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THE APPLICATION OF MINDFULNESS PRACTICES
IN THE HIGH SCHOOL CHORAL CLASSROOM TO IMPACT
MUSIC PERFORMANCE ANXIETY DURING SOLO PERFORMANCE

by

Cassandra M. Pacelli

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ABSTRACT

THE APPLICATION OF MINDFULNESS PRACTICES IN THE HIGH SCHOOL CHORAL CLASSROOM TO IMPACT MUSIC PERFORMANCE ANXIETY DURING SOLO PERFORMANCE

by

Cassandra M. Pacelli

The University of Wisconsin-Milwaukee, 2021
Under the Supervision of Professor Sheila J. Feay-Shaw

Music students are regularly expected to perform in front of live audiences as part of their music education. These public performances can cause music students to experience music performance anxiety (MPA). Some of the impacts of MPA that could potentially impact the quality of their performance include fear, dread, shaking, trembling, and dry mouth. One possible intervention to counteract the negative effects of MPA is through practicing mindfulness. Mindfulness is the practice of being aware and in the present moment without fear, shame, or judgment of self or others. This mixed-methods research study addressed the prevalence of music performance anxiety in adolescent choir students and explored using a mindfulness curriculum as one possible intervention to decrease MPA. The purpose of this study was to determine if implementing a mindfulness curriculum in the high school choir classroom would decrease the MPA of the students while performing solo repertoire. Students in a rural high school in the Midwest (N=14) participated in an 8-week mindfulness intervention titled *Learning to BREATHE* developed for adolescents. Prior to the intervention, the participants took a survey to assess their music performance anxiety levels. During the intervention, students filled out a workbook to track their mindfulness experiences and prepared a vocal solo. Following the intervention, students performed a vocal solo in front of a small audience of peers and then took

the same survey to assess their music performance anxiety levels. The analysis of the student workbook materials provided information used to select five case studies. These five participants provided further perspectives on mindfulness and music performance anxiety in adolescent vocal musicians. Four themes emerged from the study which include (1) the prominence of MPA in adolescent vocal musicians; (2) the impact of MPA on student performances; (3) the absence of mindfulness in adolescents; and (4) the impacts of the mindfulness curriculum, both musical and nonmusical.

Findings aligned with past studies indicating that mindfulness practice can help decrease MPA in musicians, however age and gender did not appear to follow as predictors of MPA levels. The subjects in this study all experienced MPA at varying levels. Music teachers should be aware of how MPA can impact a performance and find methods to counteract the effect it has on their students.

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CHAPTER ONE

INTRODUCTION AND RATIONALE

Public performance is an integral part of a musician's life and education in music.

Musical performance can take various forms including auditions, recitals, exams, and festivals (Dempsey & Comeau, 2019). The act of performing can cause musicians at all stages in their life and musical development to experience music performance anxiety (MPA), and it may or may not hinder the quality of the musical performance (Osborne & Kenny, 2006). Musicians experience the highest levels of MPA when performing solos due to the added pressure and attention on the individual (Spahn et al., 2016). The effects of MPA are psychological as well as physiological. Psychological effects include worry, dread, and apprehension about an impending performance, and physiological reactions include muscle tension, dry mouth, increased heart rate or palpitations, shaking, and/or trembling (Kenny et al., 2011).

This study investigated factors in adolescence, such as age, gender, and years of musical experience which could impact the outcome of applying mindfulness techniques to levels of MPA in adolescents when performing solo repertoire. Many students begin their school choral music experience at the elementary level and continue through twelfth grade. As students get older, the standards and expectations for performance increase. Adolescent musicians are more likely to determine their self-worth based on their own evaluation of their musical performance and the thoughts and opinions of others can cause anxiety, self-criticism, and an increase in MPA (Heaven, 2001; Kenny, 2000; Lapsley et al., 1986). Regardless of the performer's age and level of experience, music performance anxiety can potentially impact the quality of a musical performance (Osborne & Kenny, 2006). Based on previous research by Osborne and Kenny (2005a, 2005b), adolescent female musicians and those with more musical experience yielded higher levels of MPA than their younger, male classmates.

One possible method of counteracting the impacts of anxiety and MPA is by practicing mindfulness (Lin et al., 2008). Mindfulness practice takes place in various forms, and provides learners with the tools to be present, and to be in the moment without fear, shame, or judgment of self or others (J. Kabat-Zinn, 1990). Mindfulness can be used to increase self-awareness and help regulate emotions that go awry when experiencing anxiety (Tantillo Philibert, 2018).

One existing intervention for vocal musicians at the collegiate level is the *Mindfulness for Singers* course (MfS) developed by Czajkowski and Greasley (2015) at the University of Leeds. This program was inspired by the works of J. Kabat-Zinn and was created to incorporate mindfulness in the vocal and choral settings at the collegiate level to help improve vocal technique. Another effort to bring a mindfulness curriculum, specifically created for adolescents, into any general classroom setting is titled *Learning to BREATHE* (L2B). This mindfulness curriculum was crafted by P.C. Broderick, J. Kabat-Zinn, and M. Kabat-Zinn (2013) to specifically address adolescent's emotional awareness, to expand stress management skills, and to help students incorporate mindfulness into their everyday lives.

The focus of the current study then, was to apply the techniques of mindfulness to music performance anxiety in adolescent singers through a choral music program. The purpose of this study was to determine if implementing a mindfulness intervention into the choral rehearsal process could decrease the level of MPA in high school singers when performing solo repertoire.

Review of Literature

The literature review for this study is divided into the following four main sections: (a) music performance anxiety (MPA); (b) mindfulness; (c) mindfulness and music performance anxiety (MPA); and (d) mindfulness curriculums.

Music Performance Anxiety (MPA)

Young musicians encounter many public performance opportunities throughout their music education, including auditions, recitals, performance assessments, and festivals during which they may experience music performance anxiety (Dempsey & Comeau, 2019). Diana Kenny (2009) defines MPA as “the experience of marked and persistent anxious apprehension related to musical performance that has arisen through specific anxiety-conditioning experiences and which is manifested through combinations of affective, cognitive, somatic and behavioral symptoms” (p. 433). Music performance anxiety can potentially impact the quality of a musical performance regardless of the performers’ age or level of musical experience (Osborne & Kenny, 2006). However, MPA can increase with age and commitment to music because of greater expectations and performance standards that musicians place upon themselves particularly during solo performance (Heaven, 2001; Spahn et al., 2016). A survey conducted by the International Conference of Symphony and Opera Musicians (ICSOM) with more than 2000 professional musicians concluded that 24% of participants suffer from stage fright, a form of MPA (Fishbein et al., 1988).

There are various psychological and physiological effects of MPA. The psychological effects on the performer include fear, worry, and nervousness about an upcoming performance (Kenny et al., 2011). While these issues can be considerations on a daily basis of all adolescents, they are amplified by the musical performance setting. The physiological effects on the performer include tense muscles, dry mouth, increased heart rate or palpitations, shaking, and/or trembling (Kenny et al., 2011). Adolescents, more than other age groups, are likely to determine their self-worth based on their own evaluation of their musical performances (Heaven, 2001). Not only are adolescents concerned about their own evaluation of the quality of their

performance, but they are also impacted by the thoughts and opinions of others which causes anxiety, self-criticism, and increases MPA (Kenny, 2000; Lapsley et al., 1986). Formal operations, the cognitive skill used to imagine what others are thinking, can cause adolescents to believe that others are equally as preoccupied with their appearance and thoughts as the adolescents are themselves (Lapsley et al., 1986).

Music Performance Anxiety Inventory for Adolescents

The first standardized self-assessment used to measure music performance anxiety (MPA) is the Music Performance Anxiety Inventory for Adolescents (MPAI-A), an assessment created by Osborne and Kenny (2005a, 2005b). The MPAI-A assessment includes three different factors of MPA; Somatic and Cognitive Features (the fear of making a mistake), Performance Context (performing in a group or as a solo, and the size and demographic of the audience), and Performance Evaluation (from both the performer and the audience). In previous studies using the MPAI-A assessment, scores followed a normal distribution (Osborne & Kenny, 2005a, 2005b). High participant scores on their MPAI-A assessment appear to correlate with higher music performance anxiety. In Osborne and Kenny's measure of MPA in adolescents using the MPAI-A, it was found that adolescent girls and those with more musical experience displayed the highest rates of MPA in comparison to adolescent boys and those with less musical experience (2005a, 2005b).

Summary

Research suggests that MPA impacts musicians of all ages and abilities and can potentially impact the quality of a musical performance (Osborne & Kenny, 2006). While musicians may experience MPA when performing with an ensemble, musicians experience the highest levels of MPA when performing solo repertoire (Spahn et. al., 2016). The factors of

gender, age and years of musical experience in solo performers were examined in the present study.

Mindfulness

Mindfulness, as described by Jon Kabat-Zinn (1994) is “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” to your own thoughts and actions (p. 4). J. Kabat-Zinn (1990) uses the word “awareness” as a synonym for mindfulness. This kind of attention nurtures greater awareness, clarity, and acceptance of present-moment reality. As humans, we have a sense of inner busyness that causes us to be practically mechanical in our day-to-day tasks. An example of this is going on autopilot when driving your car to work and not noticing what you saw along the way, yet managing to arrive safely. Such thoughts of the past and future are energy draining, and mindfulness helps to focus energy on the present, and the current moment (J. Kabat-Zinn, 1990). Mark Williams of the University of Oxford defines mindfulness as “non-judgmental awareness...a direct knowing of what is going on inside and outside of ourselves, moment by moment” (as cited in Tantillo Philibert, 2018, p. 44).

Mindfulness practice provides learners with the tools to be present; to be in the moment without fear, shame, or judgment of self or others.

Mindfulness as Social Emotional Learning

There are various ways to teach and practice mindfulness including through programs that teach social emotional learning (SEL). Social emotional learning programs for adolescents are intended to help them understand and process the hormonal changes in the brain that occur during puberty, particularly the ones that make social issues difficult to navigate. This can include teaching adolescents to overcome peer rejection, to stem the desire to participate in risky behaviors, and to reduce the need for attention from peers (Yeager, 2017). Practicing SEL and

yoga are part of mindful practices used to achieve mindfulness (Tantillo Philibert, 2018).

Examples of SEL exercises can include peer-to-peer collaboration, problem-solving, and other life skills. An example of this may be role-playing a difficult scenario an adolescent may find themselves in, and working through a solution together with peers. Mindfulness practice can include meditation, or body scans (a form of relaxation drawing complete attention to different parts of your body and what your body may be trying to tell you). Other ways to teach and practice mindfulness are through completing simple tasks as if they are the most important task worthy of all your attention, such as mindful breathing, eating, stretching, listening, and moving (Broderick et al., 2013). Drawing attention to the distractions and emotions experienced during mindfulness practice is part of the exercise, and using self-reflection and journaling are encouraged as ways to monitor progress and keep thoughts organized. In the classroom setting, mindfulness can be used to provide strategies to alleviate factors that inhibit learning, such as hunger, fear, pain, past or current trauma, lack of sleep, and more, so that students are able to be present and ready to learn (Tantillo Philibert, 2018). Many schools have begun adopting SEL programs into the curriculum in order to foster the cognitive and behavioral development of their students (Elias et al., 1997). Tantillo Philibert (2018) aligns several aspects of Social-Emotional Learning (SEL) and mindfulness that can be used to meet the SEL requirements in schools, such as awareness and being non-judgmental, as shown in Table 1 (Used with permission, see Appendix A).

Table 1

Mindfulness Competencies Matched with Corresponding Social-Emotional Competencies

Mindfulness	Social-Emotional Learning (SEL)
1. Singularity – focus on a single task at hand. The opposite of multitasking. Being fully present and engaged with one thing at a time. Space to learn and hear what our bodies are telling us. Awareness.	1. Self-Awareness – identify how you are feeling, and how it may be impacting your physical being. Moving learners from powerless to empowered.
2. Intentionality – deliberate action moving past tendencies. The opposite of “responding on autopilot” or falling back into the same narrative. This requires disciplined habits of mind. Ownership.	2. Self-regulation – ability to respond from a place of calm knowing. Finding responsible and resourceful ways of communicating who you are with those around you. Moving learners from impulsivity to intentionally navigating behavioral choices.
3. Non-Judgmentalness – noticing yourself (thoughts, words, deeds) and the world around you without evaluation, appraisal, or assessment. The opposite of “x,y,z was good or bad.” Neutrality.	3. Social Awareness – recognition that our actions impact our classmates, school, community, and ourselves. Moving learners from reactive, victimized mindset to a proactive, communal view of the world around them.
4. Space – Creating mental, emotional, and physical marginality in your life. The space to respond to different personal and social triggers without losing one’s center or sacrificing social rapport. The opposite of dysfunctional “groupthink” or habitual, unconscious reactions to everyday events. Consciousness.	4. Balance between Self-Efficacy and Social Harmony – managing vulnerability with a compassionate understanding of one’s relationship with SELF and with others. Moving learners from projection, assumption, or excessive self-sacrifice to feeling centered, present, and like a valued and contributing member of the world around them.

Note. Retrieved with permission from *Everyday SEL in high school: Integrating social-emotional learning and mindfulness into your classroom* by C. Tantillo Philbert, 2018, p 45.

Mindfulness and Movement

While many of the mindfulness exercises are practiced in a stationary position, some students may benefit from exercises that require movement and find these exercises to be more effective and calming. For this reason, Tantillo Philibert’s (2018) model incorporates yoga into her mindfulness practice, while emphasizing that stress release methods vary from person to person. A one-size-fits-all SEL model is not appropriate for all students, therefore a variety of

practices should be explored. Teaching mindfulness requires the teacher to facilitate adolescents' attention to their own personal experience at a specific moment (Broderick et al., 2013).

Many schools have found success in implementing mindfulness curricula and yoga programs into the regular school day. The benefits reported by the classroom teachers on students who participated in the yoga program included retention of information they learned such as yoga poses and breath exercises, retention of the health benefits of their yoga training, and improved emotion regulation skills (Dariotis et al., 2016). In one study, students had the option to take yoga in place of a physical education class (Noggle et al., 2012). The students who participated rated their experience in yoga overall highly successful while noticing subtle improvements in their mood disturbance, tension, and anxiety. In contrast, the students in the control group showed a decrease in mood disturbance, and an increase in tension, and anxiety (Noggle et al., 2012). Some of the existing mindfulness curriculums, including *Learning to BREATHE* (Broderick et al., 2013) incorporate elements of yoga, including certain stretches and poses, and focus on the breath. Other secondary art educators incorporated mindfulness into the creative process by focusing on risk taking, promoting self-confidence, creative problem solving, and reducing stress. Teaching mindfulness through the creative process in art class helped students use mindfulness in other classes and cope with trauma they have experienced in their lives (McDonough Varner, 2019). It was found that teachers approved of incorporating mindfulness programs into the school curriculum when implemented with organization, and at a time that fits into the instructor's teaching schedule (Dariotis et al., 2017).

Preparation for Mindfulness Facilitation

In order to effectively implement mindfulness in the classroom, it is recommended that the facilitator becomes well-versed in Mindfulness Based Stress Reduction (MBSR) or similar courses (Broderick et al., 2013). J. Kabat-Zinn (1990) recommends that teachers and facilitators of mindfulness practice their own mindfulness regularly since the main principles of mindfulness (non-judging, patience, beginner's mind, trust, non-striving, accepting, and letting go) are best achieved through consistent practice.

Summary

SEL curriculums are becoming an important element in school programs to meet the behavioral and emotional needs of students. The defining qualities of mindfulness and social emotional learning have been shown to help adolescent students navigate the social and emotional challenges faced in the classroom setting on a daily basis. The next section will explore how mindfulness and SEL programs can be used as interventions to improve music performance anxiety.

Mindfulness and Music Performance Anxiety

While mindfulness is not a cure for music performance anxiety, it can be used to decrease its impact during performance (Miescke, 2019). De Felice (2004) examined neuroscience research and determined that performers could use mindfulness to control their emotional balance and the effects of MPA when performing. In a study by Diaz (2018), the effects of mindfulness and meditation were tested on collegiate musicians, finding that the students who independently practiced meditation at least weekly tended to have lower MPA than those who did not practice meditation. While students had a choice in the type of mindfulness practice, the type of practice did not seem to determine the impact of success on affecting MPA levels. In

another study by Lin and colleagues (2008), university music students participated in an eight-week Chan (Zen) meditation program that fostered concentration and mindfulness. The levels of MPA were measured using the Performance Anxiety Inventory (PAI) adapted by Nagel et al., (1981), and the levels of musical performance quality were measured by the Music Performance Quality Rating Form (MPQ), a form developed by the Educational Testing Service (1998). The result of this study indicated that the musicians who participated in the meditation program had a decreased level of MPA and increased level of musical performance quality (Lin et al., 2008). In an additional study examining MPA in professional orchestra members in Australia by Kenny and colleagues (2014), 70% of female musicians experienced higher rates of MPA than their male counterparts. The study results recommended mindfulness exercises to help decrease their MPA, including deep breathing and positive self-talk.

Summary

These research studies examined the effects of mindfulness on MPA in musicians at the university level or older. This demonstrates a gap in studies on the effects of mindfulness on MPA in adolescent musicians at the high school level which could be used to support teaching SEL in schools. In multiple studies, female musicians and musicians with more musical experience demonstrated higher levels of MPA than males and those with less musical experience (Kenny et. al., 2014; Osbourne & Kenny, 2005a, 2005b). Additionally, interventions typically took place outside of the rehearsal process (Diaz, 2018; Lin et al., 2008). The following section will highlight existing mindfulness interventions specifically designed for adolescents and musicians.

Mindfulness Curriculum

The choral rehearsal provides a supportive setting through which to introduce and teach mindfulness practices that can be applied to singing in an ensemble or solo setting.

Mindfulness for Singers

A *Mindfulness for Singers* course (MfS) was developed by Czajkowski and Greasley (2015) at the University of Leeds to incorporate mindfulness into the vocal and choral settings. According to the authors, mindfulness can help college-level vocal music students deal with pressure and criticism in lessons and performance, increase bodily self-awareness, and improve practice habits (Czajkowski & Greasley, 2015). The purpose of their course is to help college vocal music students learn to live in the present moment, and ways to respond rather than react to life circumstances. The program provides daily practice that can be done at the participant's convenience. The course teaches singers strategies to cope with MPA, ways to be mindful and present on stage, and strategies to help singers reduce stress and anxiety in auditions and interviews. The eight-week, online course includes breathing and body scanning exercises, teaches mindful listening and moving, and teaches skills and exercises for independent practice. While this intervention was developed specifically for singers, it was not chosen for the present study because it was not centered on the targeted adolescent population and was unavailable for use at the time of this study.

Learning to BREATHE

Another mindfulness curriculum targeting adolescents was created by P.C. Broderick, J. Kabat-Zinn, and M. Kabat-Zinn in 2013 titled *Learning to BREATHE: A Mindfulness Curriculum for Adolescents to Cultivate Emotion Regulation, Attention, and Performance* (L2B). The L2B mindfulness curriculum has been introduced in music classes, as well as in health,

English, math, science, and social skills classes. The curriculum was designed to take place over 6 full-length sessions, or in 18 mini-sessions centered around one letter of the acronym BREATHE: Body, Reflections, Emotion, Attention, Tenderness, Habits, and Empowerment. The L2B mindfulness curriculum includes step by step instructions for facilitators as well as a student workbook where students respond to written prompts and reflections during sessions. Broderick and colleagues (2013) provide guidelines on eligible administrators of the L2B mindfulness curriculum, which includes classroom teachers, counselors, psychologists, social workers, and health professionals. The rationale behind this list is that “L2B is a program that requires some expertise in group work and adolescent development” (2013, p. 5). The L2B mindfulness curriculum provides detailed scripts for delivery, while leaving room for some flexibility to adapt for specific circumstances “provided the essence and sequence of the program is delivered faithfully” (p. 5). The L2B mindfulness curriculum has been used in various studies and has been shown to be impactful in adolescents, first year college students, teacher trainees, and more (Broderick, 2019). Broderick & Metz (2009) conducted a pilot trial of the L2B mindfulness curriculum on adolescents in high school. Participants in this trial reported increased feelings of calmness, relaxation, self-acceptance, and improved emotion regulation. At the conclusion of the program, participants felt less tired and experienced fewer body aches and pains. The participants provided qualitative feedback on the curriculum that indicated they were pleased with the outcome. The results of the pilot trial implied that teaching mindfulness can enhance emotion regulation and well-being in adolescents (Broderick & Metz, 2009). In another study of 17 to 20 year olds, with the majority of participants being male students of color, participants at the conclusion of the 6-week L2B mindfulness curriculum demonstrated greater self-regulation, attention-awareness, and positive thinking (Eva & Thayer, 2017). In an additional study, 216

regular education high school students reported an improvement in their emotion regulation skills including emotional awareness, access to regulation strategies, and emotional clarity (Metz et al., 2013). These results indicate the effectiveness of the L2B mindfulness curriculum on the development of social and emotional regulation techniques. The L2B mindfulness curriculum was the chosen intervention for the present study because its implementation is encouraged in the adolescent music classroom setting, and because of its successful outcomes on adolescents in previous studies (Broderick et. al., 2013).

Summary

Mindfulness interventions can be used for musicians and students of all ages to help regular education students, singers in particular, learn to be in the present moment, to respond to challenging situations, and to help regulate emotions (Broderick et al., 2013; Czajkowski & Greasley, 2015). There is a gap in mindfulness interventions designed specifically for adolescent musicians leaving an opportunity for more research in this area. The present study explored one possible intervention with adolescent musicians to see if it could improve music performance anxiety when performing solo repertoire.

CHAPTER TWO

RESEARCH METHODOLOGY

The current research study was designed to address a problem of practice in the high school choral setting (Phillips, 2008). This action research was originally planned to investigate the use of mindfulness practices applied to choral rehearsal and performance. The safety guidelines needed to address the COVID-19 pandemic in school year 2020-21, which became a reality a few months before the study was to begin, necessitated a change to solo performance as the focus. This consideration also impacted the sample size that was available for the study but not the issue that was to be addressed.

Theoretical Framework

Emotional regulation or “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” often underpins mindfulness practice (Gross, 1998, p. 275). In fact, higher levels of self-reported mindfulness were significantly related to effective emotion regulation in a student population (Hill & Updegraff, 2012). While there are many theories of emotional regulation (see Gillespie & Beech, 2016), Gross’ (2001) conceptualization of emotional regulation tends to be most prominent (Bosse, 2017). Gross (2001) suggests that emotion regulation targets three facets of the emotional reaction; (1) the experiential component (subjectively how a person feels), (2) the behavioral component (how a person acts in response to that feeling), and (3) a physiological component (a person’s objective bodily responses like trembling) (see Bosse, 2017).

In music, mindfulness can support each facet of the emotional response theorized by Gross (2001). For example, mindfulness has been shown to be a successful tool with singers to support the presence of thought (e.g., the experiential component of emotion regulation), guide

challenging situations such as musical performance (e.g., the behavioral component of emotional regulation), and assist with breathing and vocal tone (e.g., the physiological component of emotional regulation) (e.g., Broderick et. al., 2013; Czajkowski & Greasley, 2015).

Broderick and Frank (2014) also justified using mindfulness as an intervention to assist with emotion regulation and determined the need for a developmentally appropriate mindfulness curriculum for adolescents. In the pilot study of the *Learning to BREATHE* program (L2B), twelfth-grade students displayed a reduction in negative moods and increased calmness and self-acceptance (2014). L2B was designed to be implemented in the adolescent school curriculum, including the music classroom (Broderick et al., 2013). The present study examined implementation of the L2B mindfulness curriculum into the high school choir classroom as a tool to improve students' music performance anxiety (MPA) when performing solo repertoire.

Method

Participants

Since this is action research in practice, the participants in this study are my students enrolled in a choir class in a rural Midwest high school. In this study, demographic factors were examined including age, identifying gender, and years of experience in high school choir. The demographic of these students is minimally diverse, primarily white and middle class. Of the 43 students in the choir class, 18 students provided consent and assent to participate in this study. Of the 18 participants, 14 participants completed all aspects of the study providing data that was analyzed. Participants range in age from 14-18 and identified as male, female, and non-binary or third gender. In this study, there were 4 male-identifying students, 9 female-identifying students, and 1 student that identifies as non-binary or third gender.

Measures

Demographic Questionnaire

Students were asked to include parameters such as year in school (freshman, sophomore, junior, or senior), identifying gender (Male, Female, Non-binary or Third Gender, or Prefer Not to Say), and years of experience in high school choir (1-4) prior to answering questions on the MPAI-A assessment.

Music Performance Anxiety Inventory for Adolescents (MPAI-A)

Students completed the 15-question MPAI-A survey as a pretest prior to implementation of the L2B mindfulness curriculum and again as a posttest following the final performances (see Appendix B). Example survey elements include, “Before I perform, I get butterflies in my stomach”, and “I would rather play on my own than in front of other people” (Osborne & Kenny, 2006). Participants are asked to rank each statement using a 7-point Likert scale ranging from 0 (Not at all) to 6 (All of the time). The participant’s score, ranging from 0-90, is determined by adding the sum of the rankings of the 15 questions and using reverse scoring on item 10. In previous studies using the MPAI-A assessment, the average score for Australian adolescents aged 14-19 was 48.35 ($SD = 20.72$), and the average score for females aged 14-19 was 54.50 ($SD = 20.56$) and followed a normal distribution of scores (Osborne & Kenny, 2005a, 2005b). The MPAI-A demonstrated strong internal consistency ($\alpha = .91$) in multiple sample sizes making it the most appropriate survey to be used in this study.

The Wisconsin School Music Association (WSMA) Vocal Rubric (2003)

The participants' final performances were assessed using the WSMA vocal rubric (see Appendix C). Elements on the WSMA vocal rubric, which included tone, intonation, accuracy, and style, used an inverted numerical scoring system ranging from 5-50. The Style category on the rubric addressed elements such as confidence and musical expression. The researcher made additional qualitative comments in the Style category based on the observed physiological signs of MPA including muscle tension, shaking, and/or trembling (Kenny et al., 2011), poor posture, and eyes directed only at their music. This vocal rubric was chosen because it was carefully crafted by a panel of master teachers and adjusted through frequent use for adjudicating students during vocal events at the district and state solo and ensemble festivals, and due to accessibility and granted permission for use (see Appendix A).

Procedure

A mixed methods approach was used for this study. After receiving IRB approval through the University of Wisconsin-Milwaukee (see Appendix A), students from a high school choir class were recruited to participate in this study. All choir students, regardless of participation in this study, selected a vocal solo to sing for the final performance. Students were given a list of 12 solos of varying difficulty from which to choose (See Appendix E). Students with more experience in high school choir were encouraged to choose one of the more difficult solos on the list, and students with less experienced were encouraged to choose a less difficult solo; however, it was ultimately the students' decision. Students who participated in the district solo & ensemble festival were granted permission to sing their chosen solo from that event even if not included on the list provided. All students were provided with sheet music and a recording

of their piano accompaniment to use for independent practice, and for use during small group lessons with their choir teacher.

After solos were selected, student participants for the study completed the Music Performance Anxiety Inventory for Adolescents (MPAI-A; Osborn & Kenny, 2006) pretest during choir class time. The MPAI-A pretest was administered through Qualtrics^{XM} survey software using their individual school-provided laptop. In order to remain anonymous in the initial phase of data collection, students were given an identifying code provided by another teacher in the building to be used throughout the duration of this study. Participants in the study entered their student code on the survey. The MPAI-A pretest data was kept sequestered during the study to avoid interactive bias with ongoing teaching.

Certified professionals that work with children and adolescents are considered qualified to deliver the *Learning to BREATHE* mindfulness curriculum (Broderick et al., 2013). Dr. Sheila Feay-Shaw recorded the L2B mindfulness curriculum materials for this study to provide a voice that was not the choral teacher. Feay-Shaw received her credentials from the Certification Board for Music Therapy in 1985. During her internship, she specialized in programs for youth and adults with psychiatric, behavioral and substance abuse issues which included guided imagery practices. After completing teacher certification in music, she worked for several years as a music therapist in Middle and High School programs for students with learning, behavioral and emotional needs. The 18-session L2B mindfulness curriculum recordings ranging from 15-20 minutes in length were played for the choir students during regular class time over the course of eight weeks to determine if mindfulness practice would have an impact on Music Performance Anxiety (MPA). The audio sessions introduced the techniques of mindfulness exercises which allowed the students to practice them as a group and gave students the tools to practice these

techniques outside of the choral classroom. Broderick and colleagues (2013) allowed the L2B instructor to make connections and use real-life examples within the recorded texts that would relate to the lives of the students utilizing the program. Within each session, the script was adapted to include connective statements to relate the material back to vocal music performance, which is encouraged in the L2B materials (see Appendix F). I modeled the physical exercises with students (i.e., mindful breathing, yoga, etc.) while the audio recordings were being played during class time. This helped students to understand and replicate what was being described in the audio recordings.

The student workbook that is a part of the L2B mindfulness curriculum is available as a free download through New Harbinger Publications (Broderick, 2021). Each student received a printed copy of the student workbook that served as a supplementary tool to the L2B mindfulness curriculum. The workbook includes follow-up questions and reflection prompts that connect to the material discussed in the audio recordings. Students were asked to complete certain workbook pages during and outside of sessions. Participants in the study used their student code and turned in their workbook at the conclusion of the study.

The school followed an alternating block schedule meaning that students had choir class 2-3 times per week for 85 minutes and completed one L2B session each class period. Fifty-five minutes into the block, students would leave for a thirty-minute lunch break and then return for the last half hour of the class. The Wisconsin Department of Public Instruction (DPI) guidelines for indoor singing during the COVID-19 Pandemic allowed extra time for non-singing activities. During the time of this study, the DPI guidelines suggested that instructors “limit instructional time to 30-minute intervals. For indoor spaces, at least one HVAC air exchange should occur before using the same room again” (Underly, 2020, p. 2). This allowed the class to be structured

so that the first 20 minutes were dedicated to the L2B mindfulness curriculum, then the next 30 minutes would be used for rehearsal time before the students exited for lunch. The students leaving for lunch allowed time for the recommended air exchange. Students then returned after lunch and sang for the remaining 30 minutes of class.

The mid-point performances took place during week 4 prior to spring break and week 6 following spring break after nine L2B sessions were administered. All students in high school choir met with the choir teacher either in small groups or by themselves to rehearse their solo. I provided qualitative comment statements about the student's progress in learning their solo and the physiological signs of MPA observed in each student such as: "The student lacks breath support on certain phrases" or "The student is swaying out of tempo from side to side while singing." These comments, which were specifically identifiable with the student, were shared with the students to help them improve for their final performance.

The L2B mindfulness curriculum ended after eight weeks. The students completed their final performances during weeks 9 and 10. These performances were held during class time, during resource time (the last hour of the school day), or after school based on student availability. Small groups of 3-5 students met with me in a separate location from the remainder of the class for these solos. I used the Wisconsin School Music Association (WSMA) vocal rubric to assess each students' vocal performance (see Appendix C). The rubrics were identified to each student's vocal performance.

Immediately after performing their vocal solo, student participants completed the final component of the study, the Music Performance Anxiety Inventory for Adolescents (MPAI-A) posttest, using their student code. Students completed the survey using their school-provided

laptop. This assessment uses a Likert scale following statements of emotional responses to music performance in the exact same format as the MPAI-A Pretest.

Data Analysis

Quantitative analysis of the comparison between the participants' scores of their MPAI-A pretest and posttest was completed with descriptive statistics. Dependent *t*-tests were conducted to examine students' MPA level in the pre and posttest matched by student codes. Linear regression tests were conducted to examine relationships between singers' age, gender, and years of musical experience to determine how this impacted MPA levels. The regressions tests were conducted only on the posttest to place emphasis on the results following the L2B mindfulness curriculum.

A qualitative assessment of all 14 anonymous student workbooks was conducted using the open coding techniques of Emerson, Fretz, and Shaw (2011) and theme identification techniques of Saldaña (2016). In order to select students for further case study analysis, the 14 student workbooks were solely examined for revealing comments relevant to the present study including the effect that music performance anxiety had on the student, the presence of mindfulness or mindlessness during music performance, and the impact of mindfulness practice on music performance anxiety. Following analysis of the 14 workbooks, five students with thoughtfully crafted responses and revealing comments relevant to the present study were selected for the case studies using the techniques of Flick (2009). The students that were not chosen for the case study had incomplete data in the student workbook or did not provide any revealing comments related to mindfulness or music performance anxiety. The chosen participants for the case study then had their workbook materials connected with their mid-point performance comments, final performance rubric, and MPAI-A assessments through re-

identification of student codes. The remaining 9 mid-point performance comments and final performance rubrics were paired together for each student and analyzed for revealing comments relevant to the physiological signs of music performance anxiety. Pseudonyms were chosen for each of the participants of the case study to protect their identity and personal information.

Bias Risks

There is inherent bias in this qualitative data because the assessment of performance was done by the researcher who is also the teacher for these students. To mitigate the issue, the student workbooks remained in the students' possession and student codes were kept from the teacher until the analysis stage of the study. There was a potential for bias in the participant's responses in the student workbooks based on an individual's connection to the teacher. To reduce researcher bias when reviewing student materials, student codes were assigned and used throughout the study until data linkage was needed for further analysis. The MPAI-A pretests and posttests were kept sequestered from the teacher until the conclusion of the study.

CHAPTER THREE

RESULTS

The purpose of this study was to determine if a mindfulness intervention would decrease music performance anxiety (MPA) for solo singing in adolescent choir students aged 14-18. To determine if mindfulness practice would help decrease MPA, students participated in an 8-week mindfulness curriculum titled *Learning to BREATHE* (L2B). All participants completed Osborne and Kenny's (2005b) Music Performance Anxiety Inventory for Adolescents (MPAI-A) before and after the intervention.

Quantitative Results

The following quantitative methods were implemented for data analysis: (1) descriptive statistics for all psychological measures; (2) a multiple regression analysis test to determine if singers' age and years of musical experience could predict MPA levels, and (3) a dependent *t* test to explore whether the L2B mindfulness curriculum decreased the subjects' level of MPA pretest to posttest.

Descriptive Statistics

In addition to the questions on the MPAI-A surveys, students were asked to include their age, year in school, and years of experience to determine if it would have an impact on MPA levels. Table 2 provides a summary of the participants' (N=14) year in school, years of experience in choir, and a comparison of the average MPAI-A Pretest and Posttest scores before and after the L2B mindfulness curriculum. The range of year in school was freshman-senior, and the range of years of experience singing in Choir was 1-4 years. The average year in school among the participants was 2.57 (*SD* = .938), which falls between sophomore and junior, and the average amount of time spent as a member of the Choir was 2.57 years (*SD* = .938). The scores

on the MPAI-A pretest range from 29-80 (with a potential high score of 90) with an average of 56.57 ($SD = 15.515$). The scores on the MPAI-A posttest ranged from 19-60 with an average of 43.86 ($SD = 15.53$).

Table 2

Descriptive Statistics from MPAI-A Posttest

Variable	N	Mean	Std. Deviation
What is your year in school?	14	2.57	.938
Including this year, how many years have you been a member of the Choir?	14	2.57	.938
MPAI-A pretest Score	14	56.57	15.515
MPAI-A posttest Score	14	43.86	15.530

Note. Year in school labeled numerically; 1=Freshman, 2=Sophomore, 3=Junior, 4=Senior

In this study, there were 9 female-identifying students, 4 male-identifying students, and 1 student that identified as non-binary or third gender. Tables 3 and 4 provide a summary of the gender breakdown of the participants and scores on the MPAI-A pretest and MPAI-A posttest. The average MPAI-A pretest score for females was 58.78 ($SD = 15.336$) with a range of 40-80 and the average MPAI-A posttest score for females was 44.33 ($SD = 14.30$) with a range of 19-59. For males, the average MPAI-A pretest score was 52.75 ($SD = 19.363$) with a range of 29-73 and the average MPAI-A posttest score was 40.75 ($SD = 14.056$) with a range of 27-60. The MPAI-A pretest score for the student that identified as non-binary or third gender was 52, and the MPAI-A posttest score was 54.

Table 3

MPAI-A Pretest Scores by Identifying Gender

Identifying Gender	N	Minimum	Maximum	Mean	Std. Deviation
Female	9	40	80	58.78	15.336
Male	4	29	73	52.75	19.363
Non-binary or Third Gender	1	52	52	52	

Table 4

MPAI-A Posttest Scores by Identifying Gender

Identifying Gender	N	Minimum	Maximum	Mean	Std. Deviation
Female	9	19	59	44.33	14.30
Male	4	27	60	40.75	14.056
Non-binary or Third Gender	1	54	54	54	

In this study, there were two freshman, four sophomores, six juniors, and two seniors participating. Tables 5 and 6 provide of a summary of the scores of the MPAI-A pretest and posttest by grade level. The average score of the two freshmen on the MPAI-A pretest was 62.50 ($SD = 14.849$) with a range of 52-73, with the average score on the MPAI-A posttest of 56 ($SD = 2.828$) with a range of 54-58. The average score of the four sophomores was 48 ($SD = 19.166$) with a range of 29-74 on the MPAI-A pretest and 38.75 ($SD = 18.839$) with a range of 19-59 on the MPAI-A posttest. The average scores of juniors on the MPAI-A pretest were 56.50 ($SD = 15.043$) with a range of 42-80 and 41 ($SD = 10.863$) with a range of 27-59 on the MPAI-A posttest. The average score of the two seniors on the MPAI-A pretest was 68 ($SD = 7.071$) with a range of 63-73. The average score of seniors on the MPAI-A posttest was 50.50 ($SD = 13.435$) with a range of 41-60.

Table 5

MPAI-A Pretest Scores by Grade Level

	N	Minimum	Maximum	Mean	Std. Deviation
Freshmen	2	52	73	62.50	14.849
Sophomores	4	29	74	48.00	19.166
Juniors	6	42	80	56.50	15.043
Seniors	2	63	73	68.00	7.071

Table 6

MPAI-A Posttest Scores by Grade Level

	N	Minimum	Maximum	Mean	Std. Deviation
Freshmen	2	54	58	56.00	2.828
Sophomores	4	19	59	38.75	18.839
Juniors	6	27	59	41.00	10.863
Seniors	2	41	60	50.50	13.435

Inferential Statistics

Dependent *t*-tests reflected a significant decrease of MPA reported at the conclusion of the L2B mindfulness curriculum ($M=43.86$, $SD = 15.53$) compared to the start of the program ($M = 56.57$, $SD = 15.515$), $t(13) = 3.189$, $p < .01$. The results of the regression analyses indicated that students' year in school did not predict MPA levels, $F(1, 12) = .098$, $p = .759$, $R^2 = .008$, and that years of experience in high school choir did not predict subjects' MPA levels, $F(1, 12) = .098$, $p = .759$, $R^2 = .008$. Due to the small sample size, there was no correlation found between identifying gender and MPA levels.

Summary of Quantitative Data

Results of the dependent *t*-tests indicated that the L2B mindfulness curriculum was effective in decreasing students' MPA levels. Results of the linear regressions indicated that

participant's age and year in school could not predict MPA levels. There was no correlation between participant gender and MPA levels. The inferential statistics indicate that females had the largest overall range in scores and the highest scoring on the MPAI-A pretest. Freshmen and seniors had the highest average scores on both the MPAI-A pretest and posttest. Juniors and Seniors demonstrated the highest decrease in score from the MPAI-A pretest to posttest.

Qualitative Results

While the quantitative data for this study provided a specific comparison of attitudinal results from the pre- and posttest data across several variables, the written data gathered through the L2B workbooks and the performance assessments was analyzed using a qualitative approach. Qualitative analysis of the student workbooks followed the open and focused coding techniques of Emerson, Fretz, & Shaw (2011) and the theme identification techniques of Saldaña (2016) to more deeply examine the relationships between MPA and the L2B mindfulness curriculum. The identified themes included (1) the impact of MPA on adolescent student performances, (2) mindless manifestations in music performance, and (3) the musical and non-musical impacts of the L2B mindfulness curriculum. Responses from all five students' MPAI-A Pretests, MPAI-A Posttest, student workbooks, and performance rubrics helped to create an understanding of adolescent vocal musicians' MPA and how mindfulness practice has impacted these musical performances.

The Workbooks

The 14 student workbooks which were completed throughout the use of the L2B mindfulness curriculum were analyzed for trends relating to the practice and impact of mindfulness in participants' musical and non-musical lives. Students used their workbooks to record the activities that they most often completed while practicing mindfulness. Eight students

indicated that they were most mindful when completing school-related work. Four students were mindful when driving a car. Four students practiced mindfulness while playing sports. Three students stated they practiced mindfulness prior to singing, and three students practiced mindfulness while creating artwork. Students recorded the activities that they completed mindlessly or without mindfulness practice as well. Five students recorded eating mindlessly. Four students did repetitive body gestures of which they were unaware such as fidgeting or swaying, and were unaware of these behaviors until they were brought to their attention by someone else. Three students reported singing mindlessly. Two students recorded watching TV mindlessly, and two students recorded walking mindlessly.

Students also recorded the impact of mindfulness practice on their lives in their workbooks. Ten of the 14 students recorded an improvement in their ability to focus and pay attention. Eight students reported increased awareness during musical performances. Seven students recorded an improvement in breath awareness. Four students recorded feeling calmer and more relaxed, and four students reported a mood boost following the mindfulness practices introduced during the L2B sessions.

Mid-Point Performance Assessment

The 14 students' mid-point performance assessments which were filled out by the researcher, were analyzed for comments regarding commonly observed physiological behaviors of music performance anxiety. Twelve out of the 14 participants displayed physiological signs of MPA including swaying from side to side out of tempo, poor posture or poor placement of hands, lack of eye contact with the audience, poor breath support, and rushing the tempo of the piece. Seven of the students sang with their eyes directed at their music and neglected to look up during their performance. Four students swayed from side to side out of tempo. Four students

had poor posture from slouching and having their weight shifted to one side. Four students had poor hand placement with their hands on their hips, arms crossed, or their hands clasped in front of their body. Four students struggled with breath support and sang with a nearly inaudible volume. Three students rushed the tempo of the piece.

Final Assessments

All 14 final performance rubrics were analyzed for commonly observed physiological signs of music performance anxiety. Thirteen out of the 14 students demonstrated physiological signs of MPA during their final performances, including tension or poor posture, shaking or trembling of the body and voice, swaying, and having their eyes directed only on their music. Seven students sang with poor breath support leading to intonation issues and singing with a nearly inaudible volume. Three students sang with poor posture and slouched shoulders. Three students rushed the tempo of their piece, and two students had their eyes only directed at their music, neglecting to look up at their audience.

Case Studies

In order to create a more detailed profile of individual cases of music performance anxiety, five students were chosen to examine all data components including the student workbooks, mid-point performance comments, final performance rubrics, and the MPAI-A pre- and post-assessments. The participants for the case studies were chosen based on responses in their student workbooks that related to mindfulness and music performance and were relevant to the present study. The workbook materials of each chosen participant in the case study, mid-point performance comments, final performance rubric, and MPAI-A pre- and post-assessments were connected through re-identification of student codes for a more comprehensive view of each participant's experience with mindfulness and MPA.

Of the five participants chosen for the case study, four identified as female and one identified as male. The student who identified as non-binary was not chosen for this portion of the study due to a lack of thorough completion of the student workbook responses. There were three juniors, one sophomore, and one senior represented in the case study group. This cross-analysis data added depth to specific students' experiences with MPA and the L2B mindfulness curriculum.

The Performers

Kristen and Megan, who both identify as female, are juniors in high school with three years of experience singing in choir. Heidi is also a junior, identifying as female and is a high-achieving singer that has sung in high school choir for three years. Courtney is a sophomore in high school that identifies as female. She is a high-achieving singer that has been singing in high school choir for two years. Carson is a senior in high school that identifies as male. He is very musical, singing in choir for four years.

Some of these students receive musical training outside of choir class which can positively or negatively affect their level of MPA. Kristen and Carson are both self-taught on piano. Courtney takes private voice lessons outside of school. Carson plays saxophone in the school band and taught himself how to beatbox using video tutorials he found online. Megan was in band up until high school before deciding to switch to choir.

In the choir program, there are several opportunities for students to sing outside of the performances required for choir class. Kristen, Courtney, Heidi, and Carson all chose to sing in the extracurricular choral ensemble. Every year, the top 4-8 students from each school's choir program are selected by the choir teacher to participate in the Big East Conference Honors Choir. Courtney, Heidi, and Carson have all been selected for this honors choir event. Students have the

option to participate in the district solo and ensemble festival with the potential to advance to the state level. Courtney, Heidi, and Carson have all participated in and have advanced to the state level solo and ensemble festival for singing. Courtney and Carson have had multiple lead roles in the school musical, and Heidi has had multiple supporting roles. Unlike Courtney, Heidi, and Carson who have extensive performance experience, this was the first time I had heard Kristen and Megan perform a solo.

Evidence of Mindfulness Impact

Mindfulness Habits

The five students recorded how they incorporated mindfulness in their lives through their student workbook. Kristen felt she was very mindful when it came to her own emotion regulation. She stated, “I am mindful when I am meditating or trying to bring myself back from an anxiety attack. It usually makes me feel very light and calm.” Courtney and Heidi felt most mindful when performing music. When performing or practicing, Courtney felt she is extremely focused and attentive to the music being worked on because she can “really close in and pay attention to what I am doing.” Before Heidi performs, which is often, she mindfully takes big deep breaths and will “constantly make sure [her] throat is clear.” Heidi, in the opposite way, found it more nerve wracking to prepare for a performance mindfully due to her desire to feel “completely perfect and ready to perform.” Heidi’s preparation methods are meticulous. She said, “I always make sure to practice my piece so much that I can perform it in my sleep.” Carson is mindful during the creative process when he is singing, playing saxophone, performing on stage, or working on a project. Megan and Carson reported being the most mindful when doing the things that are the most important to them. Megan felt mindful when she is in her element playing sports including volleyball, softball, and football. In her free time, she enjoys

watching shows on Netflix and feels that she watches them mindfully and distraction-free. When spending time with her friends, she feels she is able to “listen and give advice to others.” When Carson is completing schoolwork or weightlifting, “focusing on doing things correctly and to the best of my ability” is his goal.

Reported Benefits of Mindfulness Practice

The students recorded the perceived benefits of how practicing mindfulness impacted their lives. Kristen acknowledged the benefits of some of the mindfulness exercises used in the L2B mindfulness curriculum, such as the body scan, and has applied them to situations outside of choir class. She did a body scan before a test and found that it “really helped keep me focused during my test.” Mindfulness helps Courtney feel more “focused and engaged.” Courtney noticed a difference in her mood and energy levels after practicing mindfulness in choir class. She shared, “I feel relaxed. The mindful breathing really helped calm me down. I feel refreshed and less tired.” According to Megan, it took her some time to notice the benefits of mindfulness practice. In the early pages of the student workbook, Megan carefully wrote down the distracting thoughts she experienced during the exercises, including “Want more chocolate. . . love chips and dip... should probably stop. . . I kinda want a sandwich. . . craving cheese curds.” In the later pages of the student workbook, Megan reported feeling calmer and more relaxed and was able to sleep better as a result.

The five students acknowledged the areas of their life where they were mindless and needed additional mindfulness practice. When playing a song on piano that is well-known to her, Kristen tends to play mindlessly. Her workbook comment stated, “I allow my mind to wander and my fingers to travel on their own.” Courtney associated mindfulness with control. Mindlessness, in contrast, made her feel “out of control.” Courtney mentioned this when she

talked about eating mindlessly: “I will keep eating and eating and not even notice how much food I am consuming. After being mindless for a while it makes me feel out of control or not having control.”

Megan is aware of her mindless habits. She tends to daydream and sit in awkward positions without notice. She acknowledged that she will frequently “zone out.” If Megan is distracted in conversation, she will begin dancing mid-conversation by adding in some dances from TikTok that were popular at the time of this study. Outside of choir class, Megan mentioned that she will start singing “random songs stuck in [her] head.”

While there are elements of Heidi’s performance preparation that are mindful, there are some mindless habits that come out during and leading up to performances. For instance, Heidi reported in her workbook that she will pick at the skin around her fingers when she is nervous. When performing, she may sway side to side or move her hands along to the beat “without realizing.” Heidi recorded, “These habits help me control my nerves. I never realized what I was doing until after the fact.”

Some of Carson’s mindless habits include body gestures of which he is unaware including fidgeting or blinking. These habits were brought to his attention from his choir teacher and after watching his own performance recordings. Things that Carson has done repeatedly are now “muscle memory” including elements of his job.

Room for Growth

The five students acknowledged where there was room for growth in their mindfulness journey based on a reflection prompt in their student workbooks. One of Kristen’s goals was to improve her mindful listening skills and “stay involved in the conversation as closely as I can and really observe [others’] body movements and nonverbal communication.” Carson, Kristen,

and Megan expressed the need for reminders to be mindful throughout the day. This could include focusing on the breath, thinking kind words about oneself, or focusing in on one sound around them. Some of the solutions Kristen proposed were to set an alarm on her phone every couple of hours reminding her to take a minute to be mindful. Carson and Megan suggested setting a reminder to slow down and breathe and to focus on the breath. One way Carson practices this is during vocal warmups at choir rehearsal and taking time to do a quick body scan. In her future mindfulness practice, Heidi hopes to be a more active listener by being attentive, comprehending and processing what others are saying. Outside of rehearsal, Carson wants to continue to “recognize high stress environments and focus on [the] breath to center yourself.”

Impact of MPA on Mid-Point and Final Performance Assessments

The five participants chosen for the case study then had their mid-point performance comments paired with their final performance rubrics. The data was analyzed for comparison of the observed physiological signs of MPA from the mid-point performance to the final performance. The comments made on each student’s mid-point performance by the researcher were shared verbally with the individual immediately following their performance to draw attention to their mindless habits and physiological signs of MPA while performing.

Kristen performed the song *The Nightingale* by Alexander Alabieff. Some of my comments made during Kristen’s mid-point performance were that she was mindlessly patting her leg to keep tempo, had poor posture with her shoulders slouched and feet together, and that she never looked up at her audience. While some of these habits improved for the final performance, she still sang with poor posture and did not look up at her audience.

Courtney chose to perform the song titled *The Water Mill* by Ralph Vaughan Williams that she learned for the WSMA district and state music festivals. For the mid-point performance,

she sang her solo in a musical theatre style rather than the appropriate classical style and tone quality. Courtney took this feedback well from the researcher and applied it to her future performances of the same piece.

Prior to the final performance for this study, Courtney created and submitted video recordings of her singing for the WSMA district and state music festivals. These performances of the song would normally have occurred in person, however protocol was changed due to the COVID-19 limitations on large group gatherings and performances. With the video recordings, Courtney had the opportunity to record and re-record as many times as desired. In her final performance for a live audience, Courtney displayed more physiological signs of MPA than she had in the video recordings I watched previously. Courtney missed several entrances that she had not missed in prior recordings. She had poor posture, neglected to look up at her audience, and did not sing with musical expression.

Megan performed the song *April Showers* by Louis Silvers. The comments I made during her mid-point performance were posture-related because she had her hands on her hips, her balance was uneven, and her eyes were only directed at her music. These issues were improved upon for the final performance. In the final performance, there were several moments where Megan's singing was out of tune with the piano but she was able to get back in tune quickly.

Heidi performed the song titled *Preludios* by Manuel de Falla. Some of the comments I made during her mid-point performance were related to her poor posture. She tended to sway side to side out of tempo with her hands clasped in front of her body. Heidi fixed most of these habits in her final performance, but also made some different mistakes. There were some wrong notes and rhythms, and she did not sing with expression or style.

Carson chose to sing *Vagabond* by Ralph Vaughan Williams which was the song he also performed for the WSMA district music festival. His final performance for this study was his first time performing the piece for a live audience. Although Carson did not do a mid-point performance, it was evident that he took advice from the clinician that assessed his performance for the district music festival regarding breath support and vocal technique and applied it to his singing. Carson rushed several entrances during the final performance.

Change in MPAI-A Pre- and Posttest Scores

On Kristen's MPAI-A Pretest, she scored a 70 out of 90 which indicated she had one of the highest levels of music performance anxiety amongst the participants. On the MPAI-A Posttest, her score was 41 indicating a decrease of 29 points.

On the MPAI-A Pretest, Courtney scored a total of 49 points out of 90. Compared to her classmates, this was one of the lower pretest scores. Following the L2B mindfulness curriculum and solo performance, Courtney scored 19 out of 90 on the MPAI-A Posttest. Her MPA level decreased by 30 points and had the lowest posttest score of the 14 participants.

Megan's MPA levels prior to the L2B mindfulness curriculum was at 49, which is one of the lower scores of the group. Following the L2B mindfulness curriculum, her score decreased to 46 demonstrating only a small change of three points in MPA.

Heidi's score on her MPAI-A pretest was only 42, making it the second lowest score of the participants. On the MPAI-A posttest, her score decreased to 38 indicating a decrease of four points.

On the MPAI-A Pretest, Carson scored 73 and scored 41 on the MPAI-A Posttest showing a decrease of 32 points from the pretest to the posttest. Carson had the highest score on the pretest.

Participation and Attendance Impact

Attendance was taken prior to each L2B session and prior to each choir lesson.

Qualitative observations were made on student participation in the sessions, completion of the student workbook, and level of preparation of their solo during private choir lessons.

Of the 14 participants, 13 students had three or fewer absences during the L2B sessions. One student missed seven of the 18 sessions.

Kristen was present for all but one of the L2B sessions when juniors had to take the ACT. She actively participated in the sessions and completed the corresponding workbook activities to the best of her ability. Kristen spent a lot of time preparing her solo. She practiced by playing her notes on the piano and listening to recordings of other performers singing the same song online. She came in for the required three lessons and an optional, additional lesson with me and was able to articulate where the trouble areas of the song were that needed extra practice.

Courtney was an active participant in each session and put a high level of effort into her workbook responses. Courtney had worked on her musical piece both in the required three lessons with me and with her private voice instructor outside of school. She received feedback on the piece from multiple sources including myself, her voice teacher, and a clinician, and had time to refine every detail of her performance.

Megan was present for all but two L2B sessions, however she put a high level of effort into completing her workbook responses. Megan was mostly engaged in the sessions. She participated in the activities and wrote out thoughtful responses in the workbook, though it was evident that she fell asleep or seemed distracted during a few of the mindfulness exercises. Megan attended two out of the three required lessons in preparation for her final performance.

Since I had only heard Megan perform portions of her song in lessons, it was clear she had practiced outside of school because she was able to sing the piece in its entirety.

Heidi was present for all but three L2B sessions. During the sessions, Heidi was engaged and appeared invested in the class activities through her participation and completion of the student workbook exercises. Heidi sought out extra lessons with her choir teacher in addition to the three required choir lessons. She researched and listened to recordings of her song found online. She learned most of the notes, the Spanish lyrics and the pronunciation on her own. Prior to the final performance, she submitted a recording to be reviewed by a clinician for the WSMA state music festival.

Carson was present for all but two L2B sessions. During the sessions, Carson appeared focused and engaged in the activities. He was an active participant and volunteered for demonstration in the sessions. He was focused and wrote thoughtful responses in his student workbook. Carson did not complete a mid-point performance assessment, but he did submit a recording of his song for the WSMA district solo and ensemble festival. Carson stated that he had not practiced the song straight through until the night before the recording was submitted. He recalled doing many recordings of the performance before submitting it.

Observations from the Teacher

The qualitative data revealed a brief narrative of each student's experience during the L2B mindfulness curriculum and the impact that the curriculum had on their MPA during the final performance assessment. My role as both choir teacher and researcher made it impossible to remove bias from the study. The teacher lens can, however, add additional detail to each individual story being revealed.

Kristen had minimal solo performance experience prior to this study. She demonstrated a high level of preparation of her solo, attended the required choir lessons, and had a high level of attendance of the L2B sessions. There were some improvements made on the physiological signs of MPA during her final performance assessment. Her MPAAI-A score decreased 29 points following the L2B mindfulness curriculum.

Courtney demonstrated a high level of preparation on her solo, attended the required choir lessons, and had a high level of attendance at the L2B sessions. Courtney had extensive performance experience prior to this study. While there were improvements made on the technical vocal elements of the performance, Courtney demonstrated more frequent physiological signs of MPA than she had in previous performances. Courtney's MPAAI-A score decreased 30 points following the intervention.

Megan had minimal solo performance experience prior to this study. She demonstrated a moderate level of preparation on her solo, attending only two out of the required three choir lessons. Her participation in the L2B sessions was moderate since she appeared distracted or asleep during some of the sessions. Megan had the lowest score of the case study participants on her final performance assessment, and her score decreased only three points on the final MPAAI-A assessment.

Heidi had extensive performance experience prior to this study. She was prepared to perform her piece and attended more than the required number of choir lessons. She missed the most L2B sessions of the students selected for the case study analysis. Heidi eliminated some of the physiological signs of MPA for her final performance, but also displayed new signs of MPA. Heidi's MPA score decreased four points in her MPAAI-A posttest.

Carson did not attend his mid-point performance assessment which demonstrated a moderate level of preparation of his piece. He had a high level of attendance at the L2B sessions. Following the L2B mindfulness curriculum, his MPAI-A posttest score decreased by 32 points.

Summary of Qualitative Data

In the qualitative data and the analysis, there is inherent bias because I am both the researcher and the instructor having built a relationship with these students over time. The nature of this action research relies on applying new techniques to my specific choral teaching setting while also acknowledging the inherent flaws it can create in research and design outcomes.

The most commonly reported physiological symptoms of MPA experienced by the students in the study included swaying out of tempo, lack of eye contact with the audience, poor breath support, slouching, improper hand placement, and rushing of the song's tempo. When students were made aware of their physiological signs of MPA during the mid-point performance assessment, some students made improvements while others demonstrated different and new signs of MPA in their final performances. Performance experience was not an indicator of MPA or final performance scores.

Summary

Based on the results from the MPAI-A assessments and the student workbook responses, all 14 participants experienced music performance anxiety and acknowledged they have mindful and mindless habits in their daily lives. Courtney and Carson reported being mindful during musical performances and other activities that are important to them. Kristen and Megan admitted to being mindless when performing music. While Heidi was mindful during performances, she found that performing mindfully increased her anxiety about the performance. There was a wide range of MPA levels prior to and following the L2B mindfulness curriculum.

In comparison to previous studies, Carson and Kristen started with higher levels of MPA while Courtney, Megan, and Heidi started with average MPA levels. While all of these students demonstrated a decrease in their MPA following the L2B mindfulness curriculum, there was a wide range of MPA change between them. Megan and Heidi, who had the lowest attendance and participation levels in the L2B session, experienced the smallest change in MPA with less than a five-point difference. Carson showed the highest MPA decrease with a difference of 32 points, followed by Courtney and Kristen's scores which decreased 30 and 29 points respectively between the MPAI-A pretest and posttest. The following chapter will explore which parameters had an impact on MPA, and the implications for music education.

CHAPTER FOUR

DISCUSSION

The current study was developed out of a question of teaching practice in the choral classroom. The two questions that guided this study were: (1) will implementing a mindfulness curriculum decrease students' music performance anxiety (MPA) when performing solo repertoire; and (2) will students' age, identifying gender, and years of experience singing in choir impact MPA. Coding analysis of the Music Performance Anxiety Inventory for Adolescents (MPAI-A) Pretest, MPAI-A Posttests, student workbooks, and performance rubrics revealed multiple themes for consideration. Despite the limitations imposed by a small sample size overall and only five case studies, the themes emerged reveal information that can be used to support students in the reduction of MPA during solo singing.

MPA in Adolescent Vocal Musicians

The data collected from this study revealed that all participants experienced MPA when performing solo repertoire. The results of the MPAI-A Pretest ($M = 56.57$) compared to the MPAI-A Posttest ($M = 43.86$) echoed previous research on the effectiveness of mindfulness on reducing MPA (De Felice, 2004; Diaz, 2018; Mieske, 2019). These results build on existing evidence that MPA is prevalent in adolescent musicians (Osborne & Kenny, 2005a, 2005b). This study revealed that age, gender, and years of experience did not have an impact on MPA. The results did not correlate with the theory that adolescent females and those with more musical experience have the highest MPA levels with this population (Osborne & Kenny, 2005a, 2005b; Kenny, 2014). This could be a result of a small sample size that may not reflect the larger group of 43 singers enrolled in choir class and cannot be generalized to a larger population without further study.

For the purpose of this discussion, each of the data forms will be examined: (1) the MPAI-A pretest and MPAI-A posttest, (2) student workbooks, (3) mid-point performance comments, and (4) final performance rubrics.

The MPAI-A pretests and MPAI-A posttests of all participants involved in this study were analyzed for change in MPA. The average decrease in score from the MPAI-A pretest to the MPAI-A posttest was 13 points. It was predicted that scores would decrease from the MPAI-A pretest to the MPAI-A posttest. These results are in line with the hypothesis that implementing the L2B mindfulness curriculum would decrease students' MPA. It was predicted that students with more musical experience would have the highest levels of MPA compared to their younger classmates based on previous research by Osborne & Kenny (2005a, 2005b). On the MPAI-A pretests and posttests, the seniors and freshmen had higher MPA levels than the sophomores and juniors. This does not align with the previous studies that indicated age and years of experience has an impact on MPA (Osborne & Kenny, 2005a, 2005b). In this choir class, all grade levels were present from freshmen to seniors. For the freshmen, the added social pressure of performing a solo in front of their older peers could have resulted in higher MPA levels (Pham, 2019). According to McKenzie (2009), freshmen "struggle to meet the same behavior expectations that work for seventeen- and eighteen-year-old students" (p. 16). On the MPAI-A posttest, juniors and seniors demonstrated the greatest decrease in MPA following the L2B mindfulness curriculum. This could be due to the increased maturity in the upper class students compared to the freshmen. This may be mitigated by the additional musical background that some students had. It is also difficult to know if the changes needed to mitigate COVID-19 exposure impacted the results in any way.

The five students selected for the case study all had revealing comments in their student workbooks related to their mindful and mindless habits, their experience with the mindfulness exercises in the L2B mindfulness curriculum, and how they planned to be mindful in the future.

Heidi and Courtney, who had the most performance experience, had the lowest MPA levels among the group. Carson, who identifies as male, is older, and has an equal amount of performance experience as Heidi and Courtney, scored higher levels of MPA on his posttest. These results negate the theory that adolescent females and those with more musical experience have the highest MPA levels (Kenny, 2014; Osbourne & Kenny, 2005a, 2005b). Both Heidi and Courtney completed their mid-point performances that provided them a chance to practice performing their solos before the final performance. Carson's decision not to complete a mid-point performance assessment resulted in less performance practice than his peers and could have impacted his MPA at the final performance.

Courtney's score decreased 30 points from the MPAI-A pretest to the MPAI-A posttest. In addition to attending all of the required choir lessons, Courtney took private voice lessons outside of school. She had high attendance and participation in the L2B sessions. In contrast, Heidi's score changed minimally by decreasing only 4 points, and Megan's score decreased only 3 points. Megan only attended two out of the three required choir lessons and demonstrated moderate participation during the L2B sessions. Out of the five case studies, Heidi missed the most L2B sessions. These results indicate that attendance at the L2B sessions, the mode through which students learned and practiced mindfulness techniques, and level of preparation of the solo could have impacted the effectiveness of the L2B mindfulness curriculum in showing a decrease in the overall MPA score through the MPAI-A results.

Student Performances

The final performance rubrics of all participants in this study were analyzed for revealing comments on their strengths and weaknesses in comparison to their mid-point performances. For the mid-point performances, qualitative comments were written describing each student's observed physiological signs of MPA including swaying side to side out of tempo, poor posture, lack of eye contact, and shaking in their voice (Kenny, 2011). The comments made on the mid-point performance were compared to the comments made on the final performance rubric to determine strengths and weaknesses of the performer and to determine if any improvements were made on the physiological signs of MPA.

Of the five students selected for the case study, four completed a mid-point performance. During Heidi's mid-point performance, comments outlined poor posture with hunched shoulders and swaying side to side. For her final performance, her posture improved which implies that Heidi made a conscious decision to check her posture and demonstrated increased self-awareness and mindfulness during the performance. Megan had posture issues on her mid-point performance which were adjusted for the final performance. Based on the results of the MPAI-A posttests, both Heidi and Megan experienced minimal change in their MPA following the L2B mindfulness curriculum and demonstrated moderate MPA levels on their MPAI-A posttest. This seems to indicate that the MPAI-A results did not reveal a complete picture for these two students. While their perceived MPA revealed in the assessment answers did not show significant change, the outward behaviors observed through their performance did show growth. In contrast, Courtney appeared quite confident during her mid-point performance of her piece. She demonstrated proper singing posture and was able to direct her eyes off her music. In her final performance, her posture was worse. She had slouched shoulders and did not look up at her

audience. Courtney had one of the largest decreases in MPA following the L2B mindfulness curriculum. It is possible that while Courtney's physiological signs of MPA regressed during her final performance, the psychological impacts of MPA including worry, dread, and performance apprehension improved (Kenny, 2011).

Additional Factors Impacting MPA

There are factors that could have potentially impacted students' MPA that are not presented in the data. Kristen was open about her anxiety in her student workbook and recorded how it presented itself and how she copes with it. For Kristen, the large reduction in MPA indicated that she felt less anxious during her performance even if it may not have looked like it from her physiological signs of MPA including poor posture and lack of eye contact with her audience.

Prior to Courtney's final performance, she submitted a video recording of herself singing the same song for the solo and ensemble festival. She recorded multiple takes for her video submission and had the chance to listen back to each before choosing the one to submit to the clinician. She recalled feeling added pressure to submit a perfect recording in contrast to the live performances where you only get one chance. This, and Courtney's large reduction in MPA following the MPAI-A posttest, could indicate that Courtney feels the least amount of MPA during live performances in comparison to pre-recorded ones.

Heidi had one of the lower scores following the MPAI-A assessment. Heidi's performance anxieties take the form of physical movements that she may not realize she is doing. While she may not notice she is doing them, she feels they help calm her nerves. This may cause the audience to perceive higher levels of MPA due to these physiological behaviors despite Heidi's identified lower level of MPA.

For someone who has a lot of performance experience, Carson demonstrated a high level of MPA on the MPAAI-A pretest. This could have been a result of increased MPA while performing for a live audience in comparison to singing a pre-recorded video performance. It is possible that while Carson does not show that he has MPA on the outside, his MPA presents itself psychologically rather than physiologically. This shows that students may experience MPA differently in similar circumstances.

Mindlessness in Adolescents

The responses in the student workbooks revealed that all participants acknowledged in which situations they experienced mindless thinking, which is the opposite of being mindful. These results imply the impact that mindlessness has on the daily lives of adolescents.

In Session 2 of the L2B mindfulness curriculum, there was an entire activity dedicated to mindful eating. The activity encouraged students to focus on food presented to them by noticing the texture, taste, and the sensations that follow eating it (Broderick et al., 2013). Five of the participants had not experienced eating mindfully prior to this exercise and became more aware of their mindless eating habits and how it affects them. In Session 10 of the L2B mindfulness curriculum, there was a mindful walking activity. Students were encouraged to practice awareness of the present moment while walking, and to consciously move their feet through space and to connect their feet to the floor (Broderick et al., 2013). In the student workbooks, two students recorded walking mindlessly and two others recorded watching TV mindlessly. One possible explanation for performing these activities mindlessly is due to adolescents' attempts to multitask. There is evidence suggesting that multitasking is non-productive, can have safety consequences, and can decrease efficiency of tasks such as walking (Levine et al., 2012). Thus, when we perform activities while multitasking, it reduces mindfulness.

Another frequently occurring mindless habit in the participants was performing music that was familiar to them. From experience, this can happen in any ensemble. When a piece has been performed numerous times, the students put less effort and concentration into the performance because they feel too comfortable with the song and know it so well. Often when students perform mindlessly, they began to move their body and fidget. This deterioration of performance quality in familiar music could be the result of lapses in attention due to long periods of rest before a performance or the lack of an established warm-up routine (Anshel & Wrisberg, 1993). After students performed their mid-point performances, it was clear that many of the students were unaware of what their body was doing while performing and were eager to fix these mindless body movements for their final performance.

In conclusion, the results of this study indicate that mindlessness is prevalent in the lives of adolescents. In most cases, students are unaware of their mindless habits until brought to their attention by someone else. Having students practice everyday activities mindfully, such as eating or performing music, can raise students' awareness of how mindlessness impacts their musical lives.

Value and Impact of the *Learning to BREATHE* Mindfulness Curriculum

During a school year not impacted by the COVID-19 Pandemic, one might argue that dedicating 20 minutes from every class period for mindfulness activities could take away from valuable rehearsal time. In a study on rehearsal pace by Duke, Prickett, & Jellison (1998), rehearsals that featured quicker and more frequent shifts between teacher talk and student participation were favored over slower and less frequent shifts. Each L2B session featured a variety of different activities that alternated between being instructor and student led. The students and instructor welcomed the change of pace from the sometimes-monotonous rehearsal

structure. If implemented with proper preparation and quick pacing of activities, the L2B mindfulness curriculum could be an effective addition to any musical classroom curriculum. The final assessment at the conclusion of the L2B mindfulness curriculum was to have students perform a vocal solo while it was originally planned for choral singing prior to the pandemic. There is overlap in what is considered proper vocal technique in solo and choral singing. Both types of singing value breath management, coordination between your breath and vocal tone, and resonance (Miller, 1995). Working with students individually on their vocal solos and emphasizing proper vocal technique helped strengthen their solo voice and strengthened the sound of the choir as a whole. Performing in front of audiences is a fundamental part of being a musician. At the conclusion of the solo performances, the results of the MPAI-A posttest indicated there was a decrease in MPA among the participants. Due to the positive impact the L2B mindfulness curriculum had on performers, the results imply that implementing a mindfulness curriculum in the music classroom would be a worthwhile addition to the rehearsal process.

In the present study, students provided qualitative feedback on their experiences with mindfulness during the L2B mindfulness curriculum in their student workbook. The most frequently identified benefits reported by the participants included: (1) improved breath awareness; (2) a sense of calm and relaxation; (3) increased awareness when performing music; and (4) improved attention and focus. All of these benefits mirror the original Broderick & Metz (2009) study results, and could have a positive impact on both musical solo and ensemble performances.

Many of the mindfulness exercises in the L2B mindfulness curriculum center around focusing on the breath, which is vital to proper singing technique. This included the mindful

breathing exercises, movement warm-ups, and body scan exercises (Broderick et. al., 2013). Study participants reported focusing on breath awareness during and outside of musical performances. Students stated that focusing on their breath was important when in high-stress environments, including before an important musical performance, test, or athletic competition. Additionally, there was a strong connection between singing and breath awareness. Bauer (2013) stated that before a singer can focus on producing a tone with resonance, they must understand the function of breath management. When students struggle to sing freely, voice teachers or choir directors often instruct singers to examine what is going on in their body. The outcome, then is found to be a result of insufficient breath support (Chen, 2019). Thus, the breath awareness exercises not only help students to be more mindful, but can also improve singing technique.

Following increased breath awareness while practicing mindfulness, students reported feeling a sense of calm and relaxation. Kristen stated she practiced mindful breathing to assist with test anxiety in another class. Other additional reported benefits of the program included increased awareness and concentration both while performing music and in other situations. Students felt more “focused and engaged” on the music when mindfulness techniques were applied during their performance. Outside of musical performances, students reported an increase in their emotional awareness and attentiveness in social situations. One student’s goal was to observe body movements and nonverbal communication to keep them engaged in conversation. Other student goals were to think before acting and increase awareness of their surroundings. These results indicate that the skills taught in the L2B mindfulness curriculum can transfer to other academic areas and social situations.

In summary, the results of this present study imply that students experienced a decrease in MPA following the implementation of the L2B mindfulness curriculum. There were several

unpredicted benefits following use of the program. Some benefits could be applied to musical performance while others were more applicable to social situations or students' emotional awareness. Having each student learn and perform a solo helped improve and strengthen each individual's singing voice and in turn, the sound of the whole choir. Additionally, students reported improvements in breath awareness, mood, increased awareness during musical performance, and a general improvement in attention and focus.

Connection to Theoretical Framework

The L2B mindfulness curriculum was a helpful tool in assisting singers with emotion regulation. Throughout the L2B mindfulness curriculum students were given the tools to practice presence of thought during performance and acknowledgement of their psychological and physiological signs of MPA. The students learned the importance of breath and its connection to their vocal tone, and how to navigate challenging situations such as singing a solo in front of their peers.

Limitations

This study took place during the COVID-19 Pandemic. This led to several restrictions that heavily impacted musical ensembles and music instruction including limitations on large groups gatherings and concerts, social distancing (students must remain 6ft apart from one another), required use of facemasks, and strict indoor singing guidelines (Underly, 2020). Rather than conducting class in the choir room, the class relocated to the auditorium. Students sat 6ft apart from one another and were required to wear facial coverings. The combination of physical distancing and wearing a face covering made it difficult to hear other singers and muted the sound of the choir. Rather than performing choir concerts for an audience, the students pre-recorded their concert set that was then sent to families later. For the final performances in this

study, students performed for small groups of 3-5 singers while wearing facemasks and remaining 6ft apart. Even with all the restrictions, the students were able to perform their solos following all safety protocols put in place.

Due to teaching in a small rural K-12 district, there was a small number of high school choir students that were eligible to participate in this study. The majority of the students in the choir class were under the age of 18 and had to provide both consent and assent in order to participate in this study and unvoiced concerns on the part of both parents and students reduced participation. The participants in this study did not adequately represent all the students in the choir class therefore limiting generalizability of these results to other choral programs. On the MPAI-A pretest and posttest, there were two questions that yielded the same response. One of the questions was “What is your year in school?” and the other was “Including this year, how many years have you been a member of the choir?” All of the participants in this study had been a member of the choir for as long as they had been in high school. There were other students in choir class that had not been in choir for all of their high school career. This included juniors and seniors that had fewer years of experience than their classmates.

One of the goals of this study was to determine if gender played a role in MPA. The results of this study did not align with the hypothesis that female-identifying students would have the highest MPA. One possible explanation for this was the small sample size and overall background and musical experience of the students that participated in the study.

Implications for Music Education

Music performance anxiety will continue to be an issue in adolescent singers as long as performance remains an integral part of music education. In the present study, students assessed their MPA levels following a solo performance shortly after participating in the L2B mindfulness

intervention. It is not realistic to provide students with a mindfulness curriculum prior to every performance opportunity. Students in the present study recorded where there was room for growth in their mindfulness journey, which emphasized the need for continued mindfulness practice. Choir teachers can incorporate short mindfulness exercises in vocal warm-ups, rehearsals, and before a performance without taking up too much class time (see Appendix G). Teachers are encouraged to practice mindfulness on their own to be the best facilitator of mindfulness exercises to their students (J. Kabat-Zinn, 1990).

The original intention of this present study was to test the MPA of a choir after performing in concert for a live audience. Since concerts could not take place during the time of this study due to the restrictions in place because of the COVID-19 pandemic, students performed solos for small groups of classmates. This change allowed students to improve their solo singing voice which in turn improved the sound of the whole choir. Many of the students had never performed a solo prior to this study. It is possible that after having this experience, students may seek out more solo performance opportunities such as the district music festivals.

Following the restrictions in place because of the COVID-19 pandemic, there was an increased presence of video performances used in place of live performances. Video performances can be a valuable assessment tool for teachers. Students may prefer this method of performance or assessment due to the ability to record as many times as desired before submission. Additionally, video recordings may raise awareness of students' physiological signs of MPA such as swaying out of tempo, lack of eye contact, and poor posture. On the contrary, one negative effect of video performances observed in this study was that Courtney, Heidi, and Carson struggled in different aspects of their live performances of the same piece they had video

recorded previously. This study showed that pre-recorded performances and live performances do not necessarily yield the same levels of music performance anxiety in the performer.

This study would benefit from being repeated with a larger sample size. It may reveal different results with how identifying gender, year in school, and years of experience play a role in MPA when performing solo repertoire. This study could be repeated with the goal to have students perform a solo at the conclusion of the L2B mindfulness curriculum, or to have students perform as a choir and test MPA levels following the performances. The techniques could also be applied in instrumental music classes to see how MPA levels compare amongst adolescent vocal and instrumental musicians.

The awareness built through this study demonstrates that students need to be encouraged to perform mindfully on pieces that are well-known to them. There are several techniques that students can follow to practice mindfulness during warm-ups, rehearsals, and performances based on the techniques presented in the L2B mindfulness curriculum (see Appendix G). To encourage mindfulness while also encouraging musical expression, directors could encourage stylistic alterations to the piece including varying the dynamics, or articulations, and encourage students to reflect on the song they are performing. By providing strategies that increase students' connection to the music, directors are promoting mindfulness during performance.

Conclusion

As music educators we have the unique opportunity and responsibility to showcase the hard work and talent of our students through frequent public performances. We need to acknowledge that performances can cause varying levels of music performance anxiety in our students. It is our responsibility to provide students with the tools to combat the negative effects of music performance anxiety or to connect with another professional that can. While it may be

unrealistic to implement an entire mindfulness curriculum yearly, teachers can implement short mindfulness exercises into the daily rehearsal process. Teachers that work with adolescent music students benefit from the results of this study and previous studies on how music performance anxiety affects singers and how mindfulness practice can help reduce it.

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APPENDICES

Appendix A: Permissions

Table 1: *Mindfulness competencies matched with corresponding social-emotional competencies*

1. Everyday SEL in High School : Integrating Social-Emotional Learning and Mindfulness Into Your Classroom			Billing Status: Open
Order License ID	1101615-1	Type of use	Print License
Order detail status	Completed	Publisher	Republish in a thesis/dissert...
ISBN-13	9781138207844	Portion	Taylor and Francis,Taylor an...
			Chart/graph/table/figure
			0.00 USD
			Republishing Permission
			Publisher Terms and Conditions
 Hide Details			
Publication Title	Everyday SEL in High School ...	Language	English
Author/Editor	Tantillo Phillibert, Carla	Rightsholder	Taylor & Francis Group LLC -...
Date	09/12/2017	Publication Type	Book
Portion Type	Chart/graph/table/figure	Distribution	Worldwide
Number of charts / graphs / tables / figures requested	1	Translation	Original language of publica...
Format (select all that apply)	Print,Electronic	Copies for the disabled?	No
Who will republish the content?	Academic institution	Minor editing privileges?	No
Duration of Use	Life of current edition	Incidental promotional use?	No
Lifetime Unit Quantity	Up to 499	Currency	USD
Rights Requested	Main product		
Title	The relationships between ...	Institution name	University of Wisconsin-Mil...
Instructor name	Dr. Sheila Feay-Shaw	Expected presentation date	2021-08-31
The requesting person / organization to appear on the license	Cassandra M. Pacelli		
Title, description or numeric reference of the portion(s)	Table 2.1 Mindfulness Comp...	Title of the article/chapter the portion is from	Chapter 2: Connecting SEL a...
Editor of portion(s)	N/A	Author of portion(s)	Tantillo Phillibert, Carla
Volume of serial or monograph	N/A	Publication date of portion	2017-09-12
Page or page range of portion	45		

Permission to Reprint WSMA Vocal Rubric

Hi Cassie,

This email serves as written permission to include the WSMA vocal rubric in the appendix section of your thesis as a current graduate student at UW-Milwaukee pursuing a masters degree in music education.

Best of luck as you complete your graduate work!

Sincerely,
Kevin Thays
WSMA Director of Communications

Appendix B: Music Performance Anxiety Inventory for Adolescents

Please think about music in general and your major instrument and answer the questions by circling the number, which describes how you feel.

	Not At all	About half the time	All of the time				
1. Before I perform, I get butterflies in my stomach.	0	1	2	3	4	5	6
2. I often worry about my ability to perform.	0	1	2	3	4	5	6
3. I would rather play on my own, than in front of other people.	0	1	2	3	4	5	6
4. Before I perform, I tremble or shake.	0	1	2	3	4	5	6
5. When I perform in front of an audience, I am afraid of making mistakes.	0	1	2	3	4	5	6
6. When I perform in front of an audience, my heart beats very fast.	0	1	2	3	4	5	6
7. When I perform in front of an audience, I find it hard to concentrate on my music.	0	1	2	3	4	5	6
8. If I make a mistake during performance, I usually panic.	0	1	2	3	4	5	6
9. When I perform in front of an audience I get sweaty hands.	0	1	2	3	4	5	6
10. When I finish performing, I usually feel happy with my performance.	0	1	2	3	4	5	6
11. I try to avoid playing on my own at a school concert.	0	1	2	3	4	5	6
12. Just before I perform, I feel nervous.	0	1	2	3	4	5	6
13. I worry that my parents or teacher might not like my performance.	0	1	2	3	4	5	6
14. I would rather play in a group or ensemble, than on my own.	0	1	2	3	4	5	6
15. My muscles feel tense when I perform.	0	1	2	3	4	5	6

Appendix C: WSMA Vocal Rubric

Wisconsin School Music Association • District Solo & Ensemble Festival

Vocal Solo	Student Name:						Class:			
	Name of Piece:						Selection:			
Site:	Composer:						Transfer#:			
Index:							School:			
Time:							Accompanist:			
Evaluation	* I 5 - 8 (A Only)	I 5 - 11 9 - 11	II 12 - 22	III 23 - 33	IV 34 - 44	V 45 - 50	Adjudicator			
Tone	1	2	3	4	5	6	7	8	9	10
<ul style="list-style-type: none"> • Breathing • Vowels (ee, a, ah, oh, oo) 	C & B: Focused tone for this class with consistently appropriate breathing, vowel placement in all ranges and registers. A: Open, resonant, full tone in all registers and ranges. Consistently appropriate breathing and vowel placement skills.		C & B: Focused tone for this class with minor lapses in correct breathing, vowel placement skills. A: Characteristic tone most of the time. Minor breathing, vowel placement problems in outer ranges and volumes.		C & B: Unstable tone for this class in some ranges due to incorrect breathing, vowel placement skills. A: A basic tonal concept. Notable breathing, vowel placement problems in outer ranges and volumes.		C & B: Thin or forced tone for this class most of the time due to lack of breath support, incorrect vowel placement. A: Weak tone production most of the time due to incorrect breath support, vowel placement skills.		C, B, and A: A lack of understanding of how to produce the basic tone. Fundamentals of breathing, vowel placement skills need work.	
Intonation	1	2	3	4	5	6	7	8	9	10
<ul style="list-style-type: none"> • Breath Support • Pitch 	Accurate intonation with correct breath support in all ranges and registers. Pitch adjustments are made instantly.		Minimal intonation and breath support difficulties. Pitch adjustment skills are usually successful.		Mostly accurate intonation and breath support with some out-of-tune notes. Pitch adjustment skills are still developing.		Some sense of intonation, but with significant breath support problems. Pitch adjustment skills are not developed.		An unawareness of tuning problems. Needs development of pitch adjustment and breath support skills.	
Adjustment Skills										
Accuracy	1	2	3	4	5	6	7	8	9	10
<ul style="list-style-type: none"> • Notes • Rhythms • Intervals • Pulse 	Outstanding accuracy. All notes, rhythms, intervals are performed accurately. Correct pulse throughout.		Infrequent errors. A few minor problems with stepwise intervals in technical passages. Pulse is mostly correct.		A lack of consistency in notes, rhythms, stepwise intervals and/or pulse in technical passages.		Numerous inaccurate notes, stepwise and large intervals, rhythmic passages. Technical passages and pulse are mostly incorrect.		An unawareness of correct notes, intervals, rhythms and/or pulse.	
Technique	1	2	3	4	5	6	7	8	9	10
<ul style="list-style-type: none"> • Posture • Diction • Consonants 	Consistently appropriate posture and diction. Consonants are clearly enunciated at beginnings, middle and ends of words.		Minor errors in posture, diction and/or consonant enunciation at beginning, middle or ends of words.		Several errors in correct posture, diction and/or consonant enunciation, especially during technical or melismatic passages.		Incorrect posture, diction, consonant enunciation during technical and melismatic passages.		A lack of understanding of correct posture, diction, consonant enunciation.	
Expression	1	2	3	4	5	6	7	8	9	10
<ul style="list-style-type: none"> • Style Elements • Interpretation • Phrasing • Dynamics • Tempo 	Musical, confident, expressive, correct style and interpretation throughout. Sensitive phrasing and dynamics enhance performance.		Accurate expression most of the time with occasional lapses in dynamics, phrasing, style elements, and/or interpretation.		Expression is often rigid and mechanical. Dynamics, phrasing, style elements, and/or interpretation are often missing.		Expression is rigid and mechanical. Attention to dynamics, phrasing, style elements, and/or interpretation is missing.		A lack of understanding of correct style elements, dynamics, interpretation, phrasing, and correct tempo.	

_____ **TOTAL POINTS**

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Appendix D: Institutional Review Board Approval



Department of University Safety & Assurances

New Study - Notice of IRB Exempt Status

Date: February 15, 2021

To: Sheila Feay-Shaw

Dept: Music Education

CC: Cassandra Pacelli

IRB #: 21.216

Title: The relationships between mindfulness and music performance anxiety in the high school choral classroom

Melody Harries
IRB Administrator
Institutional Review Board
Engelmann 270
P. O. Box 413
Milwaukee, WI 53201-0413
414-662-3544

uwm.edu/irb
harries@uwm.edu

After review of your research protocol by the University of Wisconsin – Milwaukee Institutional Review Board, your protocol has been granted Exempt Status under Category 1 as governed by 45 CFR 46.104(d).

This protocol has been approved as exempt for three years and IRB approval will expire on February 14, 2024. Before the expiration date, you will receive an email explaining how to either keep the study open or close it. If the study is completed before the expiration date, you may notify the IRB by sending an email to irbinfo@uwm.edu with the study number and the status.

Any proposed changes to the protocol must be reviewed by the IRB before implementation, unless the change is specifically necessary to eliminate apparent immediate hazards to the subjects. You are responsible for adhering to the policies and guidelines set forth by the UWM IRB, maintaining proper documentation of study records and promptly reporting to the IRB any adverse events which require reporting. You are also responsible for ensuring that all study staff receive appropriate training in the ethical guidelines of conducting human subjects research.

You must also adhere to UWM and UW System Policies, and any applicable state and federal laws governing activities which are independent of IRB review/approval (e.g., [FERPA](#), [Radiation Safety](#), [UWM Data Security](#), [UW System policy on Prizes, Awards and Gifts](#), state gambling laws, etc.). When conducting research at institutions outside of UWM, be sure to obtain permission and/or approval as required by their policies.

Contact the IRB office if you have any further questions. Thank you for your cooperation, and best wishes for a successful project.

Respectfully,

A handwritten signature in cursive script that reads "Melody Harries".

Melody Harries
IRB Administrator

Appendix E: Solo Song List

26 Italian Songs and Arias (Medium High Voice and Medium Low Voice)

Edited by John Glenn Paton

Caro mio ben	Giuseppe Giordani
Alma del core	Antonio Caldara
Tu lo sai	Guisepe Torelli

Easy Songs for the Beginning Soprano

Edited by Joan Frey Boytim

April Showers	Louis Silvers
Cradle Song	Johannes Brahms
Golden Slumbers	Arr. Charles Vincent
The Nightingale	Alexander Alabieff

The First Book of Mezzo-Soprano/Alto Solos

Edited by Joan Frey Boytim

The Sky Above the Roof.....	Ralph Vaughan Williams
El majó tímido.....	Enrique Granados

The First Book of Soprano Solos

Edited by Joan Frey Boytim

El Tra La La y El Punteado.....	Enrique Granados
Let Us Dance, Let Us Sing	Henry Purcell
Hear My Cry, O God	César Franck

Appendix F: Example of Connective Statements in the *Learning to BREATHE* Curriculum

L2B Session 2

Mindfulness is “really meaning” to pay attention. What’s another way of saying that we really mean to do something (intention or intending)? We intend to pay attention to what’s happening “right now” inside and outside of us. We do this with an attitude of curiosity, interest, and kindness. Mindfulness is a way of paying attention to our experience that helps us live our lives in a healthy way - on purpose, in the present moment, and without judgement. Think back to the mindful eating exercise, and how you experienced the food’s texture, smell, taste, and other ways your other senses interacted with one another. *How can we be mindful during music performance? How can we use our senses before, during, and after we sing? Perhaps we are taking in the smell of a familiar performance venue, the sound of audience members conversing in the lobby before a performance, or noticing how our body responds to nerves – sweaty hands, wobbly knees, and how our breathing is affected.*

Note. Italicized text indicates connective statement relating back to music performance that were added in by the instructor.

Note. Retrieved from *Learning to breathe: A mindfulness curriculum for adolescents to cultivate emotion regulation, attention, and performance* by P.C. Broderick, J Kabat-Zinn, & M. Kabat-Zinn, 2013. Copyright 2013 by ProQuest Ebook Central version.

Appendix G: Mindfulness in Music Performance Techniques

1. Before You Sing

- a. Do some mindful movements (rag doll stretch, crescent stretch, warrior pose). Take 2-3 breaths per movement and repeat on the opposite side.
- b. Do the Short Body Scan exercise (use recording)
- c. Do the Full Body Scan exercise (use recording)
- d. Breathe in for 3 counts, exhale for 6 counts, controlling your exhale (can be done on your own)
- e. Mindful Breathing exercise (use recording)
- f. Bring your attention/awareness to the present experience. When in doubt, bring your attention back to the breath at your belly.

2. During Warm-Ups

- a. Notice and acknowledge where you may be holding your tension. Take a few deep breaths into those tense areas (particularly back, shoulders, neck, head, jaw).
- b. Adjust your posture: relax your shoulders and make sure they are down and back, feet shoulder-width apart, unclench your jaw, unclench your brow, keep your hands out of pockets
- c. Practice loving kindness to yourself as you vocalize. Replace thoughts such as “That sounded awful. Are my neighbors listening? Can my family hear me?” with “Warming up isn’t meant to sound pretty. I am taking care of my voice while preparing my body to sing” Remember, your thoughts are just thoughts, and are not factual.
- d. Bring your attention/awareness to the present experience. When in doubt, bring your attention back to the breath at your belly.

3. During Practice or Rehearsal

- a. Notice and acknowledge where you may be holding your tension. Take a few deep breaths into those tense areas (particularly back, shoulders, neck, head, jaw).
- b. Adjust your posture: relax your shoulders and make sure they are down and back, feet shoulder-width apart, unclench your jaw, unclench your brow, keep your hands out of pockets
- c. Take inventory of how you are feeling and practice loving kindness to yourself as you vocalize. Avoid making excuses or cover-ups. Replace thoughts such as “Did anyone else hear he hit that wrong note? Am I singing too loud? Did I sing that correctly?” with “I am learning, just like everyone else. Nobody is perfect.” Remember, your thoughts are just thoughts, and are not factual.
- d. Bring your attention/awareness to the present experience. When in doubt, bring your attention back to the breath at your belly.

4. Right Before or During Performance

- a. Take inventory of all five senses to avoid going on autopilot or “blacking out” during a performance (What do you see, hear, taste, smell, feel?)
- b. Do the Short Body Scan exercise (use recording)
- c. Practice loving kindness to yourself. Recognize that your negative thoughts are simply thoughts, and not factual. Replace thoughts such as: “Will I remember all my lyrics? What if my voice cracks? Will my friends and family be proud of my performance?” with: “I am prepared, I am talented, and I will do my best. I will be proud of my performance, and so will the audience.” You may even choose to recall a situation that makes you happy, or recall a time when someone extended kindness to you.
- d. Bring your attention/awareness to the present experience. When in doubt, bring your attention back to the breath at your belly.