What are effective mindfulness-based methods to treat the physiological and mental impairments caused by music performance anxiety in singers?

Arisa Kusumi Sullivan
Module 1 code: BMPF7047D
Voice Study Centre - Cohort M
Spring 2024

Arisa Kusumi Sullivan
Module 1 code: BMPF7047D
Voice Study Centre - Cohort M
Spring 2024

Critical Evaluation: What are effective mindfulness-based methods to treat the physiological and mental impairments caused by music performance anxiety in singers?

Introduction

Music Performance Anxiety (MPA) is a debilitating, multidimensional and multi-causal condition that affects performers primarily in 3-ways: somatically (physiologically), cognitively, and behaviorally (Kenny, 2011). The condition is characterized by negative symptoms such as, negative self-talk, preoccupation with not meeting an imaginary and perfectionistic standard, concerns about negative judgment from others, fear of humiliation, catastrophizing, and defining one's self-worth based on one's musical performance. (Dews & Williams, 1989; Kendrick, Craig, Lawson, & Davidson, 1982; Kenny & Osborne, 2006; Osborne & Kenny, 2008; Steptoe & Fidler, 1987; Wilson & Roland, 2002). In a 2011 study of professional opera choristers, 50% of the singers studied showed characteristics of trait anxiety as measured by the Spielberger's State Trait Anxiety Inventory (STAI), a rate three time's higher than the normative sample for the test showing that there is a strong association between trait anxiety and music performance anxiety without regard to musical genre, age, experience, technical mastery, or gender (Kenny, 2011). But given the widespread prevalence of this issue, there has been relatively little done to conglomerate data and define the most effective methods for singers to overcome MPA (Kenny, 2011; Osborne, 2020). I am a professional opera singer who has experienced serious complications of MPA in all three of the ways defined by Kenny surrounding performances. At the time that I began having these problems, there was still very little support for singers, so I created my own individual method to relieve MPA from a patchwork of methods that existed at that time. I found relief through meditation, Olympic sports psychology methods like visualization, and yoga, including pranayama breath work. The effects of my personal struggle with MPA have motivated me to do my own research on what treatments for MPA currently exist in order to create a strategy that can be effective for all singers with MPA. There has been very little research done to find singer-specific solutions for these issues (Jahn, 2009; Kenny, 2004, Sandgren, 2018). Therefore, this paper will explore 1) the various ways researchers have defined MPA 2) what studies and mindfulness methods have been used to ameliorate the condition for musicians, specifically singers 3) the commonalities

among the studies that resulted in success which we will use to create a singer-specific strategy that singers and their teachers can use to treat MPA.

Defining Music Performance Anxiety

While some researchers believe that the "analysis and eventual understanding," of what constitutes MPA are imperative to define a clear solution to the problem (Kenny, 2011), others such as Brandfonbrener (1999) take a different stance on the matter entirely, insisting, "call it performance anxiety, stage fright, or musical performance anxiety, I think we all understand what we mean" (p. 101). In the oft quoted definition from Salmon's *Medical Problems of Performing Artists,* MPA is "the experience of persisting, distressful apprehension and/or impairment of performance skills in a public context," (Salmon, 1990; Choi et al, 2023; Osborne et al, 2002). Herman and Juncos delve a little deeper, finding that MPA occurs when there is a perceived threat and manifests physiologically, cognitively, emotionally, and behaviorally," (Steptoe, 2001; Burin & Osório, 2017; Junco s et al., 2017).

Table 1: Manifestations of Music Performance Anxiety (Juncos et al., 2017)

Manifestations of Music Performance **Anxiety** Juncos et al., 2017)	
Cognitive symptoms	• Worry and apprehension. • Narrowed attention onto perceived threats
Physiological symptoms	• Shallow = breathing • Heart palpitations • Tachycardia • Dry mouth • Increased physical tension • Shaky hands and feet • Tightness in the chest, etc.
Behavioral avoidance	• Avoiding auditions • Avoiding soloing • Avoiding more challenging repertoire • Avoiding drawing attention to one's self, etc.

A consensus has not been reached among researchers and music professionals of how to define MPA, nor whether the terms performance anxiety, stage fright, and MPA are synonymous or just related entities of the same condition. However, despite the challenges of sorting out the complexities of MPA, one can find a simpler path in identifying solutions by

analysing the commonalities amongst the findings in various types of research conducted on MPA.

Help for Singers with MPA

Singer-specific MPA is important to distinguish from other musicians' MPA due to the unique and often internal, delicate muscles, physiologies, and techniques involved in singing, e.g. needing volitional control over movements that are normally unconscious or involuntary reflexes, the voice's inseparable link to emotional and physical well-being, and the externally focused nature of singing – performing and being subject to scrutiny by facing an audience or judge panel (Jahn, 2009). Mazzarolo et al. (2023) and Wesner et al. (1990) found that singers are more likely to address MPA in their voice lessons and classes than through psychological and cognitive behavioral therapy. Studies have also shown that only about 15% of undergraduate student musicians suffering from MPA seek psychological help (Wesner et al. 1990). The accessibility of receiving help in voice lessons and classes, the costs of psychological therapy and the stigma attached to receiving psychological care are all contributing factors to why it is important to equip voice educators with the skills to identify and teach MPA management in their educational environment (Stern, 2012). Along these lines, the more common paths of using anti-anxiety medications such as beta-blockers or SSRIs, in addition to cognitive behavioral therapy psychotherapy that has been used to treat musicians with mild to moderate cases of MPA, have proven to be very effective, but again, may not be as accessible to singers due to the reasons named above. (Juncos et al., 2018; Kenny et al., 2012; Clark & Agras, 1991; Braden et al., 2015; Osborne et al., 2007). In order to identify the most effective methods to improve MPA in singers, I have studied some of the research conducted on singers in my exploration. Through the evaluation and assessment of these studies, I hope to identify methods which have proven to be the most effective in managing MPA in singers thus far (Paese, 2023; Juncos, et al., 2018; Hatzigeorgadis, 2009; Stern, 2012; Mazzarolo, 2023; Flock, 2021; Irie et al., 2023). Using this data, I will create a strategy that I hope will be easily accessible and feasible for singing teachers with proper training to implement in an educational context.

Meditation and Mindfulness

The term meditation, which includes mindfulness, is a practice that refers to multiple mind and body contemplation techniques which originated as spiritual practices in Hindu and Buddhist traditions (Nash et al., 2013; Sedlmeier et al., 2012). Mindfulness is a form of meditation that involves maintaining focus on the present moment without forming judgments (NIH National Center for Complementary and Integrative Health, 2022).

Meditation can also be in moving form, such as yoga or walking meditation, as well as breathwork, or *pranayama.* For this paper's purposes, the term *meditation* will be used to encompass all the types of meditation, including mindfulness, yoga, breathwork, etc.

The use of meditative techniques to reduce MPA has been explored at length by researchers in the last 20 years, using both quantitative and mixed research methods.

Table 2: Sample List of Tools Used to Measure Effectiveness of Meditative Techniques

RESEARCHER	DATE	METRIC TOOLS USED
Paese et al.	2023	• Performance Anxiety Questionnaire (PAQ) • Kenny Music Performance Anxiety Inventory (K-MPAI) • Profile of Mood States Brief Form (POMS) • Semi-structured interviews
Stern et al.	2012	• State-Trait Anxiety Inventory (STAI-T) • Home practice log • Yoga questionnaires
Gilbert and Procter	2006	• Hospital Anxiety and Depression Scale (HADS) • Weekly diary measuring self-attacking and self-soothing. • Functions of the Self-Criticizing/Attacking Scale (FSCS) • The Forms of the Self-Criticizing/Attacking and Self-Reassuring Scale (FSCRS) • Social rank variables • Other as Shamer Scale (OAS) • Social Comparison Scale (SCS) Submissive Behavior Scale (SBS)
Lecuona et al.	2023	• Self-consciousness Scale (SCS) • K-MPAI • Five facets of mindfulness questionnaire (FFMQ) • Toronto mindfulness scale (TMS) • Positive and negative affect schedule (PANAS)
Juncos et al.	2018	• Believability of Anxious Feelings & Thoughts (BAFT) scale • Philadelphia Mindfulness Scale, (PHLMS) • K-MPAI

The ability for musicians to harness emotional arousal is a vital part of reaching peak performance, as well as for connecting with the audience and maximizing their expressive abilities (Paese et al., 2023; Wilson & Roland, 2002). However, when the emotional arousal exceeds comfortable limits, it can become debilitating for the musician and manifest as MPA (Paese et al., 2023; Lehmann et al., 2007). Meditation has proven to be a helpful tool for singers in achieving a balance in energies to provide a more stable performing experience for singers.

Mindfulness Based Stress Reduction

Amidst my research to find the best meditative methods for managing MPA, I found a variety of components that were measured using assessments and interviews, such as the ones listed above. Paese et al.'s (2023) approach investigated Mindfulness Based Stress Reduction (MBSR) body scan therapy, which has proven to be one of the most effective techniques. It consists of bringing attention to and scanning the parts of the body in sequence from the feet to the head or vice versa, while inhaling and exhaling (Paese et al. 2023). Additional MBSR type methods used in their research were: Shamata breath nose meditation, meditation with movement: Osho meditations, shaking, walking meditation, five senses, yoga, pranayama, and meditations on the breath. Paese relied on experts in various fields of music to try the techniques on their students. Two of the experts were singing teachers, and therefore could report on what worked best on singing students. The experts 2 and 10 (the singing experts) found shaking to be an effective method to release excess tension and adrenaline before a performance. Meditations with movement, such as walking and yoga/pranayama were particularly preferred as a preliminary step before trying meditation (Paese et al. 2023).

Other successful meditation techniques for singers in this study were 1) self-compassion, affect-centered meditation – (Paese et al., 2023; Steptoe & Fidler, 1987; Wilson & Roland, 2002), 2) Positive factors: sharing thoughts and feelings 3) Mantra meditation: repeating syllables or words, and transcendental meditation (Paese et al., 2023). In conclusion, Paese et al. stated that the experts found most success in using a range of meditations, given the multifaceted nature of the phenomenon of MPA.

Evidence of the success of mindfulness as an effective treatment for MPA can be seen in the quantitative results of other studies such as Gilbert and Procter's Compassionate Mind Training (CMT), a psychological method developed for people with shame and self-criticism issues to increase their confidence through mindfulness activities centered around self-warmth and self-acceptance. Participants in this study showed significantly lower mean

scores on the evaluative tools and diary at week 12 than at week 1, after they had undergone CMT.

Table 3: Gilbert and Procter's CMT results (Gilbert and Procter, 2006)

Changes in the seven measures over the 12-week therapy ($n = 6$)

Scale	Subscale	Mean score at week 1	Mean score at week 12	T	Z-score	Associated P value
HADS	Anxiety	14.67 (SD = 3.78)	6.83 (SD = 2.93)	0	−2.20	0.03
	Depression	10.33 (SD = 2.67)	4.3 (SD = 2.73)	0	−2.21	0.03
Diary	Self-Criticism	54.20 (SD = 8.80)	18.80 (SD = 18.00)	0	−2.20	0.03
	Self-Compassion	10.20 (SD = 5.53)	56.40 (SD = 13.46)	0	−2.21	0.03
Functions of self-criticism	Self-Correction	28 (SD = 15.79)	21.67 (SD = 11.74)	2.75	−1.05	NS
	Self-Persecution	17.5 (SD = 8.62)	9.6 (SD = 8.45)	0	−1.83	0.05
Forms of self-criticism and self-reassurance	Inadequate Self	31.33 (SD = 5.16)	14.5 (SD = 7.01)	0	−2.02	0.07*
	Hated Self	15.17 (SD = 3.76)	5.67 (SD = 5.40)	0	−2.20	0.03
	Reassure Self	6.17 (SD = 6.40)	19.83 (SD = 8.21)	0	−2.20	0.03
Others as Shamer	Others as Shamer	48.5 (SD = 17.27)	36.33 (SD = 12.13)	0	−2.20	0.03
Social Comparison	Social Comparison	34.83 (SD = 21.50)	58.67 (SD = 26.00)	0	−2.21	0.03
Submissive Behaviour	Submissive Behaviour	42.67 (SD = 11.52)	30 (16.95)	1	−2.00	0.05

*sig at 10% level for small numbers.

Copyright © 2006 John Wiley & Sons, Ltd.
Clin. Psychol. Psychother. **13**, 353–379 (2006)
DOI: 10.1002/cpp

Similar successful results of reduced MPA metrics are evidenced in additional meditative MPA reducing methods such as in Lecuona's "Freeing the Performer's Mind…" study (Lecuona et al., 2023), Juncos' ACT (Juncos et al., 2018), and Stern's yoga intervention (Stern et al., 2012).

Acceptance and Commitment Therapy

Another facet of mindfulness was explored by David Juncos et al. in their research on Acceptance Commitment Therapy (ACT) as a clinical anxiety treatment and performance enhancement program for musicians (Juncos, et al., 2017). Acceptance and Commitment Therapy, or "ACT" (pronounced as a word, not individual letters) is one of the "third-wave" behavioral therapies characterized by placing an emphasis on acceptance and mindfulness (Juncos, et al., 2016, 2017, 2018; Hayes et al., 1999, 2011). Rather than changing the internal thought processes to be more rational and positive (cognitive restructuring) or to change thinking patterns, as one does with cognitive behavioral therapy, ACT teaches clients to mindfully observe those internal experiences without changing them. (Juncos, 2017; Kahl et al., 2012; APA.org, 2017) ACT clinicians teach clients to let go of negative self-talk by adopting a more accepting and self-compassionate view of internal experiences.

The focal point of ACT therapy is psychological flexibility, and becoming, “less reactive to one’s unwanted internal experiences, and cultivating a transcendent sense of self,” (Juncos, et al. 2018; Hayes et al., 2011). In the 2018 MPA study using ACT, Juncos et al. used the six behavioral processes known as the “ACT Hexaflex” (Hayes et al., 2011) to promote psychological flexibility (see Appendix 4). These six processes are made up of:

Table 4 Hexaflex Processes (Juncos et al., 2017)

1) Contact with the present moment (mindfulness) (Juncos et al., 2018; Hayes et al., 2011)
2) Acceptance of one’s unwanted internal experiences
3) Cognitive defusion (the learned ability to become less reactive to one’s unwanted internal experiences
4) Cultivating a transcendent sense of self, which in turn cultivates a transcendent sense of self
5) Identification of one’s values
6) Commitment to action consistent with values

In 2017, Juncos et al. studied the effects of ACT on seven undergraduate and graduate vocalists. Treatment in each study consisted of an ABA design, a three-phase process that includes a baseline measurement without treatment (A), the treatment with a manipulation introduced (B), and withdrawal from the treatment (A). In this case, this involved establishing the participants’ baseline functioning with self-report measures, 10–12 individual ACT therapy sessions using an established treatment manual, i.e., ACT for Anxiety Disorders (Eifert & Forsyth, 2005), and follow-up assessment(s) (Juncos, et al., 2017). Results from the study showed every participant exhibiting significant improvement using at least one Hexaflex process. The singers scored an average of 54% lower than their baseline score on the BAFT, 71.5% lower than their baseline score on the K-MPAI after ACT treatment, and an average of 73% higher than their baseline score on the PHLMS [Acceptance Subscale] after ACT treatment (Juncos et al., 2017). Furthermore, significant reductions in MPA were found after Hexaflex improvements were observed for the majority of participants (Juncos et al., 2018).

Combination of Somatic, Mental, and Behavioral Techniques

In 2012, Stern, et al. performed a study of a yoga intervention for MPA on conservatory musicians including vocalists, expanding upon a 2009 study by Khalsa et al. at Tanglewood Music Institute with “elite professional musicians” (Stern, 2012) which showed statistically significant improvements in participants (Khalsa, 2009). Yoga, which incorporates cognitive (meditation), somatic (physical), and breathing (exercises) elements, has proven to be

especially therapeutic and effective in treating MPA in singers (Stern, J. et al. 2012). As evidenced in other later studies of singers with MPA, (Flock, 2021; Irie et al., 2023; Mazzarolo et al., 2023), the combination of mindfulness/breathwork with behavioral/mental and somatic elements of therapy seems to produce the best results in MPA treatment. Breathing exercises, positive self-talk, and both physical and mental practice were the most popular strategies used by musicians to relieve MPA symptoms before, during and after performances (Irie et al., 2023). Positive self-talk and visualization, techniques used originally for competitive athletes (Hatzigeorgiadis, *et al.*, 2009; Cohen & Bodner, 2018), have proven to be effective in reducing performance anxiety and has since been successfully utilized for dancers and musicians (Hatzigeorgadis, 2009; Klockare, 2014; Gerena, 2015; Cohen & Bodner, 2018).

While some students prefer to receive support for MPA from those in the field of psychology, students expressed a need for support from their teachers as well (Mazzarolo, 2023). With the support of the teacher to provide guidance in a combined technique of breathwork, physical and mindfulness work to improve MPA symptoms, the combined techniques seem to be the key to having the most successful results. Examples of the combination of treatments include:

Table 5: Research Using Combined Methods to Treat MPA

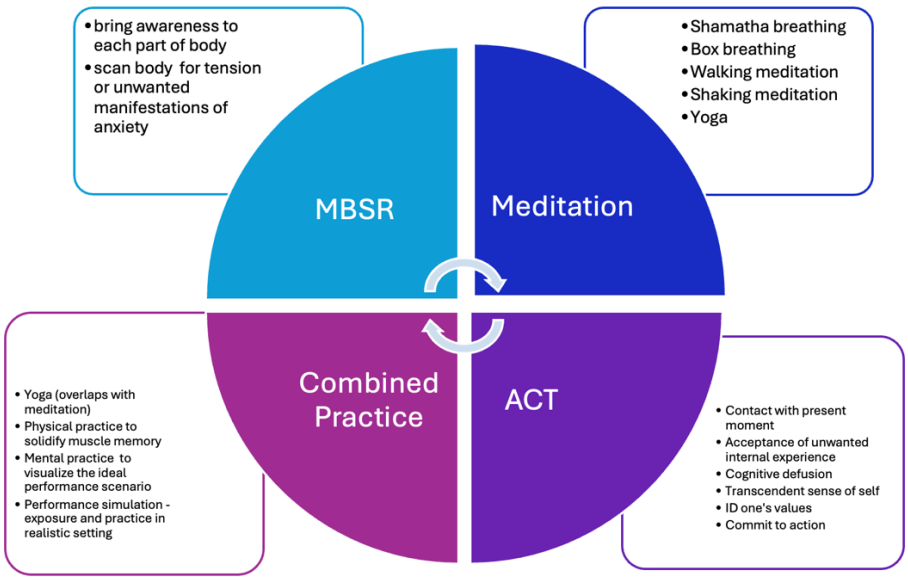
Researchers	Method Used	Date
Lydia Flock, et al.	Study specifically of singers - Fitzmaurice Voice Work was used in combination with psychological, physical, and spiritual training techniques, such as Alexander Lowen's Bioenergetics, energy work, and yoga. By combining physical exercises with psychological and holistic techniques, Fitzmaurice Voicework aimed to strengthen the mind-body connection (Bassam 2007) and thereby reduce physical and breath tension. Ziva meditation was used in combination with Fitzmaurice technique (Flock et al., 2021).	2021
Nanako Irie, et al.	Study of how musicians (15% singers) experienced MPA and what coping strategies (categorized into mental, physical, and performance) worked best for them to prevent and control MPA symptoms around performance periods. Musicians showed best results when combining mental, physical, and performance strategies, such as mental rehearsal, deep breathing exercises, positive thinking, and self-talk. (Irie et al., 2023). Positive self-talk, a part of psychological skills training, comes from studies on athletes and dancers to enhance performance and reduce anxiety (Hatzigeorgadis, 2009; Klockare, 2014; Gerena 2015).	2023

Table 6: Research Using Combined Methods to Treat MPA cntd.

Judith Stern et al.,	A study on conservatory musicians (33% Vocalists) employing yoga as a method to reduce MPA symptoms. Consisting of cognitive (meditation), somatic (physical poses), and breathwork aspects, yoga consistently and significantly reduced anxiety scores in test subjects receiving yoga therapy on a variety of assessments. (Stern et al., 2012)	2012
Susanna Cohen & Ehud Bodner	A study of musicians, including singers, in an 11-week course focusing on 1) mental skills training (positive thinking 2) developing physiological awareness 3) enhancing musical communication by emphasizing improvisation instead of "getting things right." 4) simulated performance (Cohen & Bodner, 2018)	2018

Strategy

Figure 1: Strategy for Singers to Ameliorate MPA Symptom



Based on the effective methods and results of the above studies and my own work with treating MPA, I have designed a strategy that voice teachers can use in their lessons to support students suffering from music performance anxiety. I, myself, found many of these steps incredibly useful in improving my ability to reduce MPA during performance. I was better able to represent myself and my capabilities on stage by first gaining awareness of the discomforts in the body, my fears, and negative self-talk, and then resetting my mindset with self-compassion and positive self-talk, gaining freedom in my body with physical movements to release excessive energy, and allowing the body and mind to practice and

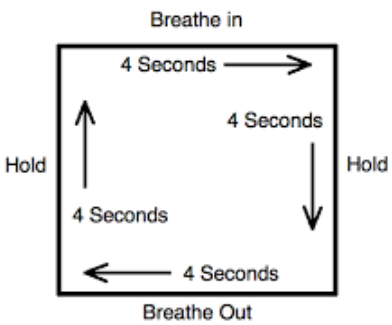
prepare for performance in a positive way. Teachers can practice this method with students of any level to support them by moving through the following cycle:

1) MBSR body scan, bringing awareness to each part of the body from feet to head or vice versa and inhaling/exhaling.
2) They can then do a guided meditation to loosen any tense or nervous parts of the body that they became aware of in their scan. Among the meditations that students can choose from (or do all):
    - A Shamata, calm abiding, breath nose meditation (Kerzin, 2018; Stern, 2012)

Appendix 1: Shamata Meditation Pose (aurahealth.io, 2024)

Box breathing: a still, sitting meditation focusing on breathing in on four counts, holding for four counts and breathing out on 4 counts and then holding for 4 counts and repeat (Headspace, 2023). Singers can specifically focus on the kind of deep breathing they use for vocal support during this exercise.

Appendix 2: Box Breathing Meditation



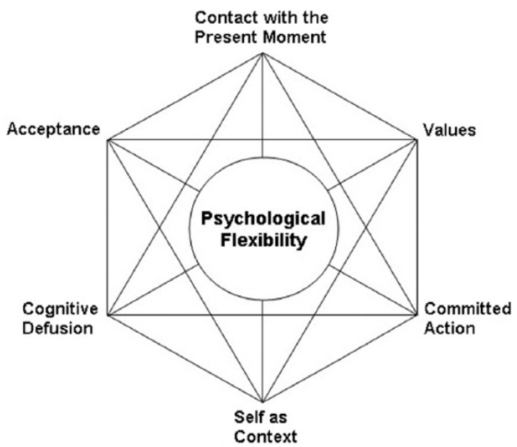
- If severe tension is an issue, singers can use a moving meditation such as a walking meditation, shaking meditation, or yoga poses and/or flow with purposeful breathing continuing throughout the physical practice (Headspace, 2020; AXA, 2020; Lee, 2022; Vox Yoga, 2022).

This process can be done in any order and in part or cycling through all the various meditation methods.

Appendix 3: Yoga – Sun Salutation (sacredyogashop.com, 2020)

3) As a next step, the singer/teacher will familiarize themselves with the ACT process by participating in a course with an ACT for MPA emphasis such as the ones offered by Dr. David Juncos to identify negative self-talk and fears, and then use the ACT Hexaflex process (Hayes et al., 2011; Juncos et al., 2017, 2018) to reset their inner dialogue and promote a more self-compassionate view of their internal experience. Singers can move through all of the steps of the Hexaflex (Hayes et al., 2011; Juncos et al, 2017;2018), or do one step at a time, but ultimately, they will make a commitment to action to change their negative mindset to a positive one.

Appendix 4: ACT Hexaflex (Hayes et al., 2011)



4) After gaining self-awareness and self-compassion from ACT and mindfulness, singers can move to a final step in the strategy of bringing those skills into practice before, during, and after performance as they practice these exercises in the strategy (Irie et al., 2023; Cohen & Bodner, 2018):
    - Physical (vocal) practice to help the singer to prepare before performance by kinesthetically reviewing key components of the upcoming performance and allow muscle memory to occur and form in the brain (Lam, 2020).
    - Mental visualization of the ideal performance or situation to reprogram the brain toward positive thinking (Cohen & Bodner, 2018).
    - Performance simulation to practice exposing oneself to a realistic performing scenario and focusing on relaxation in the body as achieved in meditation (Irie et al. 2023; Cohen & Bodner, 2018).

Conclusion

From my research on MBSR and other meditation-based therapies (ACT, CMT, meditation, yoga intervention) for singers, I found significant evidence across the board of the effectiveness of meditative techniques to treat MPA in the scores for various assessments, qualitative, and semi-structured interviews with the participants. Researchers found even more successful results both quantitatively and from verbal feedback from singers and singing teachers when they combined physical, behavioral, and cognitive practices with meditative practices. Despite the difficulty in defining and pinpointing what constitutes music performance anxiety, the combined methods proved effective in supporting many of the manifestations of MPA. The skills of mindfulness, body scan, observation, acceptance, and self-compassion, as well as physical practice of performing skills, movement to release tension, conscious breathwork, and positive mental visualization provide a robust and all-encompassing set of techniques that can help singers to improve their ability to exhibit their full potential in stress-inducing situations.

Based upon the commonalities I found between various methods studied on singers with MPA, I compiled this four-step strategy to help singers work toward overcoming debilitating and performance undermining symptoms. By exercising the various steps in this strategy, singers and singing teachers can be equipped with accessible methods proven in combination to relieve and improve the symptoms of MPA.

Critical Reflection

The Voice Study Centre (VSC) assigned the Module 1 BMPF7047D paper to Cohort M in January of 2023. This was the second paper assigned in the program and having done only one music research paper before in my undergraduate time, one can conclude that I am a novice research paper writer. The task was to choose a topic of interest and expand upon this topic through research to gather data, writing a critical evaluation, strategy, critical reflection, and personal development plan (PDP). During my experience of researching and writing this paper, I observed several things about my preferences and strengths, the wealth and simultaneous lack of information available about my topic, as well as my knowledge and experience deficiencies.

To begin, I wanted to make sure I understood the task at hand, so I attended the tutorial sessions describing the Module 1 assignment and what kind of content and format the VSC were expecting. My first observation was about my own learning style. There was a plethora of information presented about the various sections of the assignment, examples of best practices, and guides of how to successfully write the paper. However, I became overwhelmed by receiving so much input on how to complete the assignment. With my own global learning style preference (Felder, R. M., and Silverman, L.K.,1988) I found myself seeking a systemic overview of the project in concise bullet points before investigating the details of what I needed to accomplish. I was having difficulty finding this amongst the online resources and feeling increasingly less confident about my ability to complete the assignment. I, therefore, reached out to my Cohort tutor: Claire Thomas, and she provided me with the very succinct outline for the task that I was seeking. I later learned that others in my cohort were also feeling overwhelmed because they also needed a systemic overview. Therefore, I was able to provide the outline to them as well on our Cohort M WhatsApp text thread, which was very warmly received.

The key learning in this experience is that it is important to recognize one's own learning style, what information one needs, and then make use of the wealth of resources that exist within the VSC to ask for this information. Having access to a tutor is a huge benefit for students, because she has so much wisdom to share from her own experiences writing papers. Having the group tutorials, slides, and recorded videos, as well as the group chat on WhatsApp are also very beneficial for mindshare and expanding resources.

My next step in the Module 1 process was also my next learning. I was in search of a research topic that would pique my interest and keep me engaged throughout the steps of

the assignment. I observed just how much reading is available about music performance anxiety on the UWTSD library website. Because this topic interests me so much, I greatly enjoyed the process of reading through various research papers and learning more about the topic. However, I found myself weeks later still reading and searching, yet feeling no closer to choosing a topic. While there were a great number of resources available online, there weren't very many studies specifically with singers as research subjects. There was also a lack of consensus among researchers about what exactly constituted MPA, whether it fit under the umbrella of anxiety disorder or whether it was its own condition, and how it should be treated. By attending the group tutorials and becoming aware of the impending deadline, I was eventually compelled to choose a topic and begin, despite my lack of confidence that my topic would engender a fruitful research paper.

The learning from this step of the process was that it is helpful to have online group sessions, regular contact with the tutor and my peers, because it made me aware of the deadlines approaching and gave me the impetus to conclude my reading phase and commit to a research topic. I turned out to have too much information for the maximum word count for the assignment, so I was glad I had enough time to restructure my topic to include more focused information. For future master's students, I would suggest creating personal deadlines for when specific milestones need to be accomplished (Shatz, 2024). This way, one does not spend too much time on one step and find oneself without enough time for later steps in the process.

Lastly, I discovered through the Module 1 process (and the formative assignment), that I am undereducated in how to efficiently reference my sources. I learned from the mindshare with my cohort in the formative assignment that a great way to stay organized with one's sources is to create a folder for each article and copy and paste the citation in Harvard style into the folder. This was a very efficient method to keep all the information in order and worked well for me. I was also able to copy and paste the references into the end of my paper easily and refer back to the articles as I was writing. However, through my Cohort M WhatsApp group chat, I learned that Word has a tab to help keep track of and insert references, in addition to the many other websites, such as Mendeley or MyBib, that organize and format citations. My method worked for me, but it is my goal to familiarize myself with these other methods and software to potentially improve my organization and efficiency in citing references.

From these learnings, I have revealed an improved and more efficient way to approach my next assignment, and one that could possibly be useful for other students. These include: 1) identifying and using VSC resources to gather information in the way that I need 2) setting

personal deadlines in order to avoid being overwhelmed by too many resources, and 3) educating myself further in software that can improve referencing efficiency (voicestudycentre.com, 2024; Shatz, 2024; mendeley.com, 2024; mybib.com, 2024).

Personal Development Plan (PDP)

Activity	Objective	Action	Timescale
Embed the MPA strategy plan from this module into my daily life	Test the effectiveness of the strategy	1. Scan body for tensions and discomfort. 2. Meditate daily. 3. Practice self-compassion and ACT. 4. Practice performing mentally or physically	Begin ASAP and continue
Explore and learn how to use Word citation, as well as Mendeley (Mendeley.com, 2024) or Mybib (mybib.com, 2024)	Become more educated in modern technologies surrounding citations	Read online and explore websites to learn how to use these resources	April 15, 2024
Review the slides available on the VSC website concerning Module 1	Ensure that I obtained the key learnings from the assignment	Go to Canvas courses and read thru and listen to the Module 1 Assignment slides and videos	ASAP
Attend drop-in tutorial sessions	Mindshare with tutor and colleagues; make sure I gather information to assist me in future assignments	Schedule future sessions in my icalendar and attend	Next scheduled dates
Take Dr. David Juncos' ACT for MPA course online at VSC (voicestudycentre.com, 2024)	To familiarize myself with ACT in order to use the method to help my students overcome MPA symptoms, and to gain	Attend the class and/or watch the videos from the course	June 3,10, and 17, 2024.

	expertise to support my thesis.		
Take the Mind Body Stress Reduction course at Duke Integrative Medicine (dukehealth.org, 2024)	To familiarize myself with MBSR to use the method in my teaching for students with MPA symptoms, and to gain expertise to support my thesis.	Attend the course online	July 9 – September 3, 2024
Study Qigong	Gain knowledge about this genre of energy medicine to use in my teaching students with MPA and to support my thesis.	Read books, articles, and practice qigong on online videos.	Starting April 17, 2024

References

American Psychological Association (2017). What is cognitive behavioral therapy? American Psychological Association. [online] Available at: https://www.apa.org/ptsd-guideline/patients-and-families/cognitive-behavioral. (Accessed: 6 April 2024).

Aura. (n.d.). *What is Samatha? Explained by Aura.* [online] Available at: https://www.aurahealth.io/blog/samatha-explained-by-aura (Accessed 8 Apr. 2024).

www.youtube.com. (n.d.). *10 Minute Mindful Meditation: Mindful Walking Meditation*. [online] Available at: https://youtu.be/kapvpqwcNLQ?si=8ukid_oDycFMt39X (Accessed 7 Apr. 2024).

Bassam, C. (2007). 'Interview with Catherine Fitzmaurice', *Acting Now*. http://cynthiabassam.com.

Blair, E. and van der Sluis, H. (2022) 'Music performance anxiety and higher education teaching: A systematic literature review', *Journal of University Teaching & Learning Practice*, 19(3), doi: https://doi.org/10.53761/1.19.3.05.

Brandfonbrener, A. (1999) 'Performance anxiety: Different strokes for different folks', *Medical Problems of Performing Artists, 14*(3), pp.101–102.

Brotons, M. (1994). ‘Effects of performing conditions on music performance anxiety and performance quality’, *Journal of Music Therapy*, *31*(1), pp.63–81.

Burin, A. B., and Osório, F. L. (2017). ‘Music performance anxiety: A critical review of etiological aspects, perceived causes, coping strategies and treatment’, *Arch. Clin. Psychiatry* 44, pp.127–133. doi: 10.1590/0101-60830000000136

Burin, A. B., Barbar, A. E. M., Nirenberg, I. S., Osório, F. D. L., Burin, A. B. Barbar, A. E. M., et al. (2019). ‘Music performance anxiety: perceived causes, coping strategies and clinical profiles of Brazilian musicians’, *Trends Psychiatry Psychother.* 41, 348–357. doi: 10.1590/2237-6089-2018-0104

Choi, S., Kim, J. and Kim, S. (2023) ‘Effects of Exposure in Computer-Assisted Virtual Environments on Vocalists’ Performance Anxiety: A Quasi-Experimental Study’, *Journal of Rational-Emotive and Cognitive-Behavior Therapy* [Preprint]. Doi: https://doi.org/10.1007/s10942-023-00533-y.

Cohen, S. and Bodner, E. (2019) ‘Music performance skills: A two-pronged approach – facilitating optimal music performance and reducing music performance anxiety’, *Psychology of Music*, 47(4), pp. 521–538. doi: https://doi.org/10.1177/0305735618765349.

Cox, M. J., Owen, M. T., Henderson, V. K., & Margand, N. A. (1992). ‘Prediction of infant–father and infant–mother attachment’, *Developmental Psychology*, *28*, pp. 474–83. doi: 10.1037/0012-1649.28.3.474

Dews, C. B., & Williams, M. S. (1989) ‘Student musicians’ personality styles, stresses, and coping patterns’, *Psychology of Music, 17, pp.*37–47. doi:10.1177/0305735689171004

www.dukehealth.org. (n.d.). Duke Health | Connect with your health care at Duke Health. [online] Available at: https://dukehealth.org. (Accessed: 16 April 2024).

Felder, R. M., and Silverman, L.K. (1988) ‘Learning and Teaching Styles in Engineering Education’, *Engineering Education*, 78(7), pp.674-681.

Flock, L. (2021) ‘Freedom of the Singing Voice: An Exploration of the Mind-Body Connection, Performance Anxiety and Confidence through Methods of Fitzmaurice Voicework, Organic Intelligence, and Ziva Meditation’, *Voice & Speech Review*, 15(1), pp. 64–75. doi: https://doi.org/10.1080/23268263.2020.1834702.

Gerena, C. (2015) *Positive Thinking in Dance: 'The Benefits of Positive Self-Talk Practice in Conjunction with Somatic Exercises for Collegiate Dancers*. Available at: https://escholarship.org/uc/item/1t39b6g3 (Accessed: 6 April 2024).

Gilbert, P. (2000). *Genes on the couch: Explorations in evolutionary psychotherapy*, pp. 118–150). Hove: Brunner-Routledge.

Gilbert, P., Clarke, M., Kempel, S., Miles, J.N.V., & Irons, C. (2004). 'Criticizing and reassuring oneself: An exploration of forms style and reasons in female students', *British Journal of Clinical Psychology*, *43*, pp.31–50.

Gilbert, P. and Procter, S. (2006) 'Compassionate mind training for people with high shame and self-criticism: overview and pilot study of a group therapy approach', *Clinical Psychology and Psychotherapy*, 13(6), pp. 353–379. doi: https://doi.org/10.1002/cpp.507.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). *Acceptance and Commitment Therapy: The process and practice of mindful change (2nd ed.).* New York, NY: Guilford Press.

Hatzigeorgiadis, A. *et al.* (2009) 'Mechanisms underlying the self-talk–performance relationship: The effects of motivational self-talk on self-confidence and anxiety', *Psychology of Sport and Exercise*, 10(1), pp. 186–192. doi: https://doi.org/10.1016/j.psychsport.2008.07.009.

Headspace (2020) youtube.com. available at: https://youtu.be/AwbRERIzt6c?si=ImNnRWSj-hStpV4S (Accessed: 6 April 2024).

www.youtube.com. (n.d.). Learn Breathing Technique Box Breathing: Practice Breathwork for Focus and Anxiety with Dora Kamau. [online] Available at: https://youtu.be/a7uQXDkxEtM?si=S5a4wK6fUr0md_Br (Accessed 21 Apr. 2024).

Huang, W.-L. and Song, B. (2021) 'How do college musicians self-manage musical performance anxiety: Strategies through time periods and types of performance', *International Journal of Music Education*, 39(2), pp. 95–118. doi: https://doi.org/10.1177/0255761421990800.

Irie, N., Morijiri, Y., Yoshie, M. (2023) 'Symptoms of and coping strategies for music performance anxiety through different time periods', *Frontiers in Psychology*, 14. doi: https://doi.org/10.3389/fpsyg.2023.1138922.

Jahn, A.F. (2009) 'Medical Management of the Professional Singer: An Overview', *Medical Problems of Performing Artists*, 24(1), pp. 3–9. doi: https://doi.org/10.21091/mppa.2009.1002.

Juncos, D.G. and Markman, E.J. (2016) ‘Acceptance and Commitment Therapy for the treatment of music performance anxiety: A single subject design with a university student’, *Psychology of Music*, 44(5), pp. 935–952. doi: https://doi.org/10.1177/0305735615596236.

Juncos, D. G., Heinrichs, G. A., Towle, P., Duffy, K., Grand, S. M., Morgan, M. C., & Kalkus, E. (2017) ‘Acceptance and commitment therapy for the treatment of music performance anxiety: A pilot study with student vocalists’, *Frontiers in Psychology*, 8. doi:10.3389/fpsyg.2017.00986

Juncos, D.G. and de Paiva e Pona Elvire (2018) ‘Acceptance and commitment therapy as a clinical anxiety treatment and performance enhancement program for musicians’, *Music & Science*, 1. Available at: https://doi.org/10.1177/2059204317748807.

Kahl, K. G., Winter, L., & Schweiger, U. (2012) ‘The third wave of cognitive behavioural therapies: What is new and what is effective?’, *Current Opinion in Psychiatry*, 25(6), pp.522–528. doi:10.1097/YCO/0b013e328358e531

Kendrick, M., Craig, K., Lawson, D., & Davidson, P. (1982) ‘Cognitive and behavioural therapy for music performance anxiety’, *Journal of Consulting and Clinical Psychology, 50, pp.*353–362. doi:10.1037/0022- 006X.50.3.353

Kenny, D.T., Davis, P. and Oates, J. (2004) ‘Music performance anxiety and occupational stress amongst opera chorus artists and their relationship with state and trait anxiety and perfectionism’, *Journal of Anxiety Disorders*, 18(6), pp. 757–777. doi: https://doi.org/10.1016/j.janxdis.2003.09.004.

Kenny, D. T., & Osborne, M. S. (2006) ‘Music performance anxiety: New insights from young musicians’, *Advances in Cognitive Psychology,* 2, pp.103–112. doi:10.2478/v10053-008-0049-5

Kenny, D.T. (2011) *The psychology of music performance anxiety*. Oxford: Oxford University Press.

www.youtube.com. (n.d.). SHAMATHA (SINGLE-POINTED) MEDITATION with Dr. Barry Kerzin. [online] Available at: https://youtu.be/s6PaWMDYMSc?si=8rsi5NBTBlV7vzaK (Accessed 7 Apr. 2024).

Khalsa SBS, Shorter SM, Cope S, et al. (2009) ‘Yoga ameliorates performance anxiety and mood disturbance in young professional musicians’, *Appi Psychophysiologi Biofeedback*, 34, pp.279-289. doi: 10.1007/s 10484-00991034.

Lam, M. (2020) ‘The Physicality of Music Production: Investigating the Roles of Mindful Practice and Kinesthetic Learning’, *Music Educators Journal*, 106(3), pp. 23–28. doi: https://doi.org/10.1177/0027432119895553.

Lecuona, O. *et al.* (2023) ‘Freeing the performer’s mind: A network analysis of music performance anxiety, negative affect, self-consciousness and mindfulness among music performers’, *Scandinavian Journal of Psychology*, 64(6), pp. 746–754. doi: https://doi.org/10.1111/sjop.12929.

Lehmann, A., Sloboda, J. A., & Woody, R. M. (2007). *Psychology for musicians. Understanding and acquiring the skills*. Oxford: Oxford University Press.

Linehan, M. (1993). *Cognitive behavioral treatment of borderline personality disorder*. New York: Guilford.

Lee, D. (2021) *Qigong for beginners: Shaking the body qigong*, *YouTube*. Available at: https://youtu.be/PacNJE1XOhc?si=aoawqMzE0AH9MOb0 (Accessed: 08 April 2024).

Mazzarolo, I., Burwell, K. and Schubert, E. (2023) ‘Teachers’ approaches to music performance anxiety management: a systematic review’, *Frontiers in Psychology*, 14. doi: https://doi.org/10.3389/fpsyg.2023.1205150.

McGlashan, J. *et al.* (2023) ‘A mixed-method feasibility study of the use of the Complete Vocal Technique (CVT), a pedagogic method to improve the voice and vocal function in singers and actors, in the treatment of patients with muscle tension dysphonia: a study protocol’, *Pilot and Feasibility Studies*, 9(1), pp. 88–88. doi: https://doi.org/10.1186/s40814-023-01317-y.

Mendely.com (2024) (Accessed: 16 April 2024).

Mybib.com (2024) (Accessed: 16 April 2024).

Nash, J. D., Newberg, A., & Awasthi, B. (2013) ‘Toward a unifying taxonomy and definition for meditation’, *Frontiers in Psychology*, *4*, Article 806. doi: https://doi.org/10.3389/fpsyg.2013.00806

NIH National Center for Complementary and Integrative Health (2022) ‘Meditation and Mindfulness: What You Need to Know’, June. Available at: https://ww.nccih.nih.gov (Accessed April 6, 2024).

Neff, K.D. (2003). ‘Self-Compassion: An alternative conceptualization of a healthy attitude toward oneself’, *Self and Identity*, *2*, pp.85–102.

Osborne, M. S., & Kenny, D. (2008) 'The role of sensitizing experiences in music performance anxiety in adolescent musicians', *Psychology of Music,* 36, pp.447–462. doi:10.1177/0305735607086051

Salmon, P.G. (1990) 'A psychological perspective on musical performance anxiety: A review of the literature*', Medical Problems of Performing Artists*, 5(1), pp.2-11.

Simon, J. A., & Martens, R. (1979). 'Children's activity in sport and nonsport evaluative activities', *Journal of Sport Psychology*, *1*, pp.160–9.

Sandgren, M. (2019) 'Exploring personality and musical self-perceptions among vocalists and instrumentalists at music colleges', *Psychology of Music*, 47(4), pp. 465–482. doi: https://doi.org/10.1177/0305735618761572.

Sedlmeier, P., Eberth, J., Schwarz, M., Zimmermann, D., Haarig, F., Jaeger, S., & Kunze, S. (2012). 'The psychological effects of meditation: A meta-analysis', *Psychological Bulletin*, *138*(6), pp.1139–1171. doi: https://doi.org/10.1037/a0028168

Shatz, I. (2024) *Effectiviology.com*. Available at: https://effectiviology.com/deadlines/ (Accessed: April 16,2024).

Claudia Spahn, Franziska Krampe and Manfred Nusseck (2021) 'Classifying Different Types of Music Performance Anxiety', *Frontiers in Psychology*, 12. doi: https://doi.org/10.3389/fpsyg.2021.538535.

Steptoe, A., & Fidler, H. (1987). 'Stage fright in orchestral musicians: A study of cognitive and behavioural strategies in performance anxiety', *British Journal of Psychology,* 78, pp.241–249. doi:10.1111/j.2044-8295. 1987.tb02243.x

Steptoe, A. (2001). *Negative emotions in music making: the problem of performance anxiety" in Music and emotion: Theory and research (*pp.291–307) Oxford: Oxford University Press.

Stern, J., Khalsa, S.B.S. and Hofmann, S.G., (2012). "A Yoga Intervention for Music Performance Anxiety in Conservatory Students," *Medical Problems of Performing Artists,* 27(3), 123-128.

Tahirbegi, D. (2019). Higher music education students' experiences and management of performance anxiety: A qualitative study. *Psychol. Music* 50, 1184–1196. doi: 10.1177/03057356211034573

Tamborrino, R. A. (2001) ‘An examination of performance anxiety associated with solo performance of college-level music majors’, *Dissertation Abstracts International*, 62 (5A): pp.1636.

Vervainioti, A., and Alexopoulos, E. C. (2015). ‘Job-related stressors of classical instrumental musicians: A systematic qualitative review’, *Med. Probl. Perform. Art.* 30, pp.197–202. doi: 10.21091/mppa.2015.4037

VoiceStudyCentre.com (2024) (Accessed: 16 April 2024).

www.youtube.com. (n.d.). Yoga for Performance Anxiety | Move, Stretch and Breathe. For Singers, Performers, Actors 🧘🗣️💙. [online] Available at: https://youtu.be/C4W1wLmBPVM?si=TwKpNLb_WpsHgPzl (Accessed 21 Apr. 2024).

Wesner, R. B., Noyes, R., & Davis, T. L. (1990). ‘The occurrence of performance anxiety among musicians’, *Journal of Affective Disorders*, *18*(3), pp.177–85. doi:10.1016/0165-0327(90)90034-6

Whelton, W.J., & Greenberg, L.S. (2005). ‘Emotion in self- criticism’, *Personality and Individual Differences*, *38*, pp.1583–1595.

Wolfe, M. L. (1989). ‘Correlates of adaptive and maladaptive musical performance anxiety’, *Medical Problems of Performing Artists*, *4*(1), pp.49–56.

Wilson, G. D., & Roland, D. (2002). *The science and psychology of music performance* (pp. 47–61). Oxford: Oxford University Press. doi: 10.1093/acprof: oso/9780195138108.003.0004

Zuroff, D.C., Santor, D., & Mongrain, M. (2005). *Relatedness, self-definition, and mental representation. Essays in honour of Sidney J. Blatt*. (pp. 75–90). London: New York.