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# How can qigong, yoga, and mindfulness effectively supplement traditional Western bel canto vocal pedagogical techniques to alleviate MPA symptoms in singers?

Module 4 BMPF 7073D

Arisa Kusumi Sullivan
THE VOICE STUDY CENTRE/UWTSD
Student# 2320830, Cohort M

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## PROJECT PORTFOLIO

## PART 1 - INTRODUCTION

Singers are unique in that their entire body serves as their instrument (Stapleton, 2024). For my work as a singing teacher, mind-body work is a key component in teaching successful phonation and optimal voice production to singers. However, issues such as music performance anxiety (MPA), which often negatively affect musicians somatically, cognitively, and behaviorally (Kenny, 2011), can interfere with the mind-body functions needed for singers to perform at their best. In Western classical vocal pedagogy, mind-body work originates from the Italian-based *bel canto* (Stark, 2003), of which best practices include good breath support, blended registers, and developed activity of the larynx so that all manner of tone power and expression can be produced by the vocal organs without effort and fatigue (Marchesi, 1970). Optimal conditions for singing include a relaxed and effective communication between the body, mind, and behavior. This serves as a baseline from which to describe deviation and the impact of not being at our best. While bel canto (Stark, 2003) has played a significant role in shaping healthy singing practices in the Western Hemisphere, it seems that since we now have access to information on alternative, mind-body techniques from other cultures and periods, it would be worthwhile to explore alternative approaches in vocal pedagogy to expand voice teachers' capabilities in the studio and enhance the education that tertiary music students receive in their pre-professional training. For students suffering from MPA in particular, it becomes important for teachers, like myself, to be equipped with updated, holistic approaches for mind-body work that help students overcome obstacles in singing caused by their MPA.

## PART 2 – PLANNED PROGRAM OF STUDY

### Context

Western singing as we know it has its roots in the "golden age of bel canto" from Italy (Stark, 2003; Silva, 1922). Thanks to historical books that recorded the bel canto traditions (Tosi et al., 1995; Marchesi,1970), the techniques, such as *appoggio,* smooth transition between registers, and legato line has been passed down to form the fundamentals of contemporary Western vocal technique. Breath and bodywork have evolved through history (Stark, 2003), but the bel canto technique alone does not address the physical and mental struggles singers can experience from the pressures of performing and training. In the early to mid-twentieth century, attention to somatic education, emphasizing the mind-body connection, began to appear as enhancements to voice training with methods such as the Alexander Technique (Phelan, 2021) and the Feldenkrais Method (Paparo, 2022). But it wasn't until the 1970s that Eastern mind-body techniques, such as the practices of qigong (Cohen,

2018) and mindfulness yogic practices from India (Jayakumar et al., 2022) gained a following in the West.

In the 1990s, Kenny began her seminal research on Music Performance Anxiety (MPA)," the experience of marked and persistent anxious apprehension related to musical performance," (Kenny, 2011, p.433 ) which can have detrimental effects on musicians' cognitive, behavioral, and somatic states during performance (Kenny, 2011). In more recent literature, a staggering 60-80% of professional musicians reported experiencing debilitating MPA (Gómez-López, B. and Sánchez-Cabrero, 2023; Cirujeda, 2014). Given the alarming prevalence of MPA, very little research has been conducted to find effective methods to relieve MPA.

Evidence-based medicine (EBM) integrated with individual clinical expertise is the accepted standard for efficacy and safety in Western healthcare (Fung et al., 2015). This culture has often been at odds with the over 4,000-year-old, empirical knowledge (Chen et al., 2019) of the Eastern concept of health. While gradually gaining recognition as a treatment for wellness and MPA in musicians, Eastern mind-body practices (EM-BP) have been slow to gain acceptance by the scientific community in Western cultures (Blyskal, 2022; Khalsa, 2013; Fung et al., 2015). However, the few studies that do exist for EM-BP for MPA and anxiety have been overwhelmingly positive and should be explored further as a potential treatment for MPA in singers (Paese and Egerman, 2024; Blysakal, 2022; Czajkowski et al., 2021; Wang et al., 2017; Lin et al., 2007).

**Aims**

This study aims to:

- Explore the potential of holistic and as of yet, under-researched methods of EM-BP (e.g. qigong, mindfulness) for use in vocal pedagogy and higher education in Western Music as an enhancement to traditional bel canto-based Western voice technique by identifying specific methods that can be used in the voice studio or integrated into the educational curriculum for tertiary voice students who suffer from MPA symptoms.
- Identify and evaluate which specific mind-body methods could be most effective in treating singers with MPA by reading relevant articles, studies, books, and philosophies about potential holistic MPA treatments for musicians (or those who suffer anxiety, due to the lack of literature available on studies involving singers).

## Objectives

I have outlined the following **SMART** goals as objectives, referencing *Bloom's Taxonomy* as a guide (Anderson and Krathwohl, 2001), to design a robust method for students suffering from MPA:

- **S**pecific –1) Find and analyse data from studies on my topics to support the research question. 2) Identify which specific EM-BPs are effective in alleviating MPA.
- **M**easurable – 1) Stay within the range of the 7500-word count of the assignment. 2) Find quantitative data with distinctly improved scores in MPA relief after mind-body exercises.
- **A**chievable – 1) Conduct a narrative, representative, critical review. 2) Gain an understanding of the hermeneutical approach to research.
- **R**elevant - Applicable in my voice studio for my students suffering from MPA, as well as for other voice educators.
- **T**ime-bound – Rough draft by June 16th and final draft by July 1, 2025.

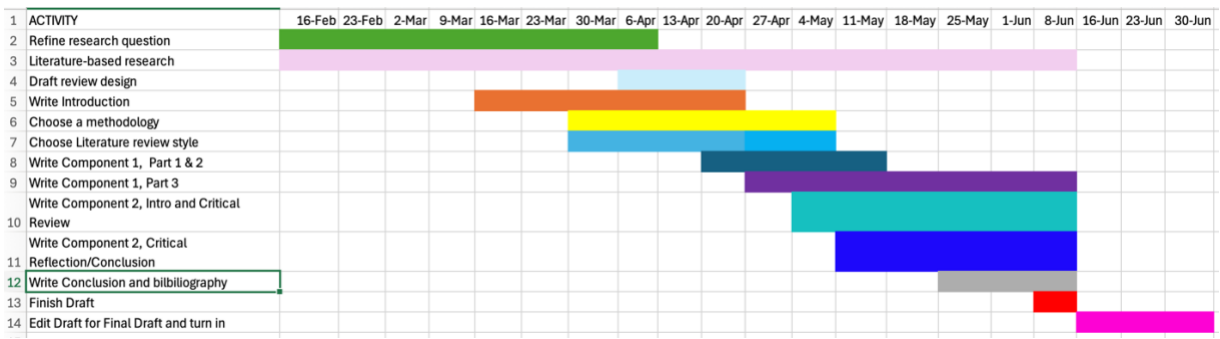
## Expected Learning Outcomes

- Gain in-depth knowledge of:
    - Yoga/Mindfulness
    - Qigong

and how they relate to singers suffering from MPA or at least anxiety in general.

- Learn how to write a hermeneutical narrative representative critical review
- Prepare to design my own MPA treatment methods for singers

***Time Scale*** *Figure 1: Module 4 GANTT Chart Timeline*



## PART 3 METHODOLOGY

My positionality as a master's student, voice teacher, and insider researcher (Savin-Bader and Major 2013), working individually rather than as part of a team, and within short time parameters (three months) (Higgins and Green, 2019) has led me to choose a *narrative, representative, literature review employing hermeneutical methodology* for this study of EM-BP (Boell and Cecez-Kecmanovic, 2010; Grant and Booth, 2009). While I may incorporate elements of the non-biased *systematic review* style (Higgins and Green, 2019) or scoping review (Colquhoun et al., 2014), an actual systematic or scoping review would be impossible, because of the minimum required time of 12-18 months for such review styles (Higgins and Green, 2019). Additionally, since conducting the literature review is an important step in coming to a deeper understanding of the topic, and I am, as of yet, unable to formulate precise questions before starting the review process, a *systematic review* is not the best choice for addressing research in this context (Boell and Cecez-Kecmanovic, 2010; Kirchenham & Charters, 2007). A *narrative, representative review* provides a user-friendly style for student writers to take a deep dive into the subject matter, despite the brief time frame, making it an appropriate choice for me (Wood, 2011). As a voice teacher who has been researching MPA, I will be entering the process of conducting a literature review with a pre-existing understanding of the concepts being reviewed. Furthermore, by expanding my research into EM-BP and exploring various approaches to MPA treatment, I will be able to enter into an iterative process (Boell and Cecez-Kecmanovic, 2010) of considering new factors that can influence MPA treatment, and thus expand my understanding as a whole of theories, vocabulary, and variables (Randolph, 2009) needed to categorize these learnings in a systematic thematic analysis (Naeem and Ouzem, 2022, Braun and Clarke,2019 ) using the following steps and construct effective methods to relieve MPA in voice students:

- Familiarization and transcription of data
- Identifying keywords
- Selecting codes
- Theme development
- Conceptualization by interpreting keywords, codes, and themes
- Development of the conceptual model (See Figure 4)
  (Naeem and Ouzem, 2022)

In seeking representative literature with content surrounding EM-BP, (Blyskal, 2022), I hope to gain a deeper understanding of EM-BP as treatment for MPA by examining how specific exercises versus a whole course affects levels of MPA in subjects, thereby furthering my interpretation of the subject matter through the *hermeneutic* circle (Boell and Cecez-

Kecmanovic, 2010). Though the investigation can never be wholly “unbiased, complete and reproducible,” (Boell and Cecez-Kecmanovic, 2010,p.130), a hermeneutical process makes it clear that although a final understanding of the relevant literature cannot be achieved, the process of my constant re-interpretation will lead to my deeper understanding of the literature while acknowledging my biases carried into the study (Boell and Cecez-Kecmanovic, 2010).

*Search Method and Data Collection*

The use of databases and library resources is essential for finding literature on my topic (Randolph, 2009). In this study, the following systematic search strategies will be employed by using key search words (e.g. “qigong and music performance anxiety,” “mindfulness for singers,” “flow for musicians”) in the following databases: A) the UWTSD library website search and its *Research Assistant* AI functions to identify relevant literature. B) embedded AI assistive technologies not appearing on the UWTSD site but meeting the criteria of being peer-reviewed literature from established publications. (e.g. ChatGPT.com, 2025). C) public internet sources and Kindle (amazon.com, 2025) for published books and articles (e.g., openbookpublishers.com, 2025).

*Inclusion criteria*

A) Published scholarly work in journals, B) Peer-reviewed articles present in bibliographic databases of recognized quality (e.g., EBSCOhost, Directory of Open Access Journals), C) studies published between 2005-2025 A.D.; articles and books can be older. D) studies that review or investigate treatment methods of MPA or anxiety in musicians and/or people suffering from anxiety, including both sexes and without age limit despite studies centering on potential MPA relieving methods for tertiary voice students (due to the dearth of studies) E) articles and studies in English F) articles containing the full study G) literature reviews H) experimental studies. I) published books, dissertations, and/or websites/blogs after I have exhausted white literature resources but need more robust information, as is the case for some EM-BP for which published evidence is sorely lacking (Adams et al., 2017; Ohio State University, 2016).

*Exclusion criteria*

The following types of literature were used as criteria for exclusion from this study: A) articles in languages other than English, B) studies on test subjects with other underlying health problems unrelated to anxiety, depression, or MPA.

## PROJECT REPORT

## INTRODUCTION

Much of the practice of vocal pedagogy until now has been based on historical traditions and contexts, focusing solely on the body rather than the whole singer. In order to update and improve upon pedagogical techniques moving forward, it could be beneficial to conduct an ontological reset by exploring the most current and well-rounded holistic and scientific information available to us today and update vocal pedagogical practices in music training to address the mental, emotional, and physical well-being of the singer. Singing is inherently an art form that requires exercising mind and bodily capabilities equally. Now that we have an increasing amount of evidence supporting the power of mind-body work as beneficial for musicians, it seems organic to supplement music training with effective mind-body practices. Yet, there are still very few conservatories that offer mind-body courses in their core curriculum, despite an increasing number of studies showing significant evidence that these practices are beneficial for musical practice and performance (Blyskal, 2022). Additionally, in cases of music performance anxiety (MPA) (Kenny, 2011), singers are often plagued with physical and mental obstacles that make it difficult for them to sing optimally using purely physical techniques alone during performance, and musicians are far more likely to turn to their private teachers for help than to seek psychotherapy (Mazzarolo et al. 2023; Mahony et al., 2022; Wesner et al. 1990). In this desktop study, Eastern breathwork practices, such as yoga (Jayakumar et al., 2022), qigong (Yeung et al., 2013), and mindfulness/ Mind Body Stress Reduction (MBSR) (Kabat-Zinn, 2023; Paese & Egerman, 2024) were evaluated to identify the most effective EM-BP concepts and methods that voice teachers can use to supplement traditional bel canto mind-body work techniques to alleviate symptoms in singers with music performance anxiety (MPA).

## CRITICAL REVIEW

### Eastern Mind-Body Practices

Mindfulness and Yoga

The terms *mindfulness* and *meditation* are often used interchangeably, but mindfulness can be defined as “paying attention in a particular way, on purpose, in the present moment and non-judgmentally.”(Blyskal, 2022 citing Kabat-Zinn,2023 p, 4) ). Whereas meditation, originating in Tibetan Buddhism, is the regular practice of mindfulness by cultivating one's familiarity with one's mental landscape (Vago, 2014). Kabat-Zinn, a molecular biologist, is widely recognized for popularizing mindfulness in Western culture by secularizing Buddhist meditation practices through the more evidence-based *Mind Body Stress Reduction* (MBSR)

approach (Czajkowski, 2015). MBSR, an eight-week course with breath awareness at its core, was originally designed to help patients with chronic pain and stress-related disorders (Blyskal, 2022) and was likely more readily accepted in the Western culture due to the evidence of its benefits in research studies following its inception in 1979 (Czajkowski, 2015), but it has since helped people worldwide with a significant range of issues, including to help singers with MPA (Blyskal, 2022; Czajkowski et al., 2021; Czajkowski & Greasley, 2016). The theory behind MBSR is that by simply recognizing your thoughts as thoughts, you can free yourself from the distorted reality that thoughts often create (Blyskal, 2022 citing Kabat-Zinn, 1990). The state of mindfulness can be entered most commonly through the practices of breath awareness and body scan to enter into a state of purposeful attention to one's experience in the present moment (Kabat-Zinn, 2023). The practice of MBSR adapted two principles from the religious practice of meditation: *samatha, meaning* calm meditation, which encourages focused meditation and brings awareness to the breath, and *vipassana*, meaning insight or determination meditation, which awakens the awareness of bodily sensations of worldly stimuli and is the basis of a body scan practice (Czajkowski and Greasley, 2016; Kabat-Zinn, 2023). Body scan, according to Kabat-Zinn, is a conscious focus on each part of the body and reconnects the mind to the body by "reclaiming the vibrancy of the body as it is from the cloud of unawareness that stems from its being taken for granted, so familiar is it to us…and when some sort of healing is longed for and remains a possibility, however remote it might seem, a willingness to reclaim the body from the oblivion of taken-for-grantedness or from narcissistic self-obsession is paramount." (Kabat-Zinn, 2018, p. 1980).

*Czajkowski and Greasley*

Preceded by groundbreaking studies on yoga's effect on MPA by Khalsa and Cope, and Stern (Khalsa and Cope, 2006; Khalsa, 2013; Stern et al., 2012), Czajkowski and Greasley brought the practice of MBSR to the attention of the singing world in 2015. In this mixed methods study, eight university students completed a Mindfulness for Singers (MfS) intervention with scores from a pre-and post-intervention Five Facet Mindfulness Questionnaire (FFMQ) supporting qualitative results gathered from both students and teachers in one-on-one interviews (Czajkowski and Greasley, 2016). Their study aimed to develop a mindfulness course for singers for the first time and study its effects on experiences of learning vocal technique. The method used in the intervention was an abbreviated form of MBSR (Kabat-Zinn,1990) and Mind-Body Cognitive Therapy (MBCT) (Segal et al., 2002), covering the main areas of the MBSR course over eight weeks, such as breath awareness, body scan, mindful movement, mindful yoga, mindful eating, mindful walking, but excluding kindly awareness exercises to avoid religious conflicts (See

Appendix) (Czajkowski and Greasley, 2015; Czajkowski et al., 2021). Designed specifically for singers, the MfS course included breath awareness with the suggestion to incorporate this into singing breath; mindful movement with an emphasis on yoga moves useful for singers' posture and breathing; the concept of suffering was introduced in reference to criticism and judgment from others and oneself; and body scans were taught with attention to those areas used in singing (e.g. the abdomen, the back, and facial/neck areas) (Czajkowski and Greasley, 2016). This study provides the groundwork for possible inclusion in singer-specific pedagogical interventions for singers with MPA, as it tailors the concepts of MBSR to be specifically relevant for singers. Numerous studies on secular mindfulness conducted in the clinical domain have revealed its promising effects through meta-analytical techniques in relieving various conditions (Czajkowski and Greasley, 2015), including pain, heart disease, cancer (Grossman et al., 2004), and anxiety, depression, and psychiatric disorders (Hofmann et al., 2010). From studying these meta-analyses, as well as utilizing their own insider backgrounds as voice pedagogues and music psychology experts, the researchers hypothesized that the intervention would positively affect experiences of learning voice technique by increasing the level of concentration and attentiveness in lessons and promoting present-moment awareness of the physical experience of the singers, as well as additional effects of practice and performance. The MfS course had a positive impact on participants in the categories of 1) learning new techniques 2) singing lessons and teacher relationships 3) mindfulness in singing practice and 4) even in a blind control study where teachers had to pick out which students they thought had taken part in the intervention and the teachers correctly identified six out of the eight participants. In the interviews, the singers revealed that they had experienced improved focus in lessons and practice, improved memory of physical muscle memory, and a greater ability to learn new technical skills due to the increased self-awareness the participants gained both physically and aurally in the present moment. They also became more aware of their bad singing habits, and as a result of learning the mindfulness exercises, they were in a better mindset to make improvements in lessons and practice.

*Czajkowski et al.*

A very similar study was conducted by Czajkowski et al. in 2021 with 25 participants, also with resoundingly positive benefits in increased mindfulness in singers similar to the 2015 study, but with the addition of other types of musicians and additional statistical tests to analyse the quantitative data from the FFMQ. Post-intervention FFMQ mean scores were higher on all 6 facets of mindfulness. Interviews were once again conducted, but the addition of a detailed inquiry into the benefits of mindfulness for MPA makes this study even more relevant to this review because of its findings that mindfulness can be beneficial for MPA

sufferers (Czajkowski et al., 2021). The 2021 Mindfulness for Musicians (MfM) course, consisting of in-person, one-hour meetings per week, plus 10-minute per day mindfulness practice at home, is an important model when considering how to implement mindfulness in an institutional voice education setting. The results of the study suggest once again that learning mindfulness can be highly beneficial for singers personally, educationally, and for performance development, as well as for treating MPA (Czajkowski et al, 2021).

*Paese and Egerman*

In 2023, Paese and Egerman conducted a study using meditation and yoga as a tool specifically to counteract MPA. Sixteen experts who teach meditation were selected for their relevant roles in the music field - coaches, musicians, teachers, psychologists, and authors, working at tertiary music programs (Paese and Egerman, 2024). Interviews were conducted in virtual meetings, and a 6-step thematic analysis was carried out (Braun and Clarke, 2006) to understand the experiences and thoughts of the participants. Three key themes surfaced from their research: 1) conceptualizing MPA, 2) influencing factors for effective meditation, and 3) which meditative techniques were used to reduce MPA (Paese and Egerman, 2024). Under category one, the researchers discovered that MPA was not about the music, but about their lives: critical self-perception, fear of failure, and perfectionism. One participant concluded that their perception of MPA stemmed from a *disconnection of the mind and body*, where the mind is no longer present. For the second category, influencing factors were evaluated for the effectiveness of meditation, and valuable takeaways for potential use in vocal education included *sharing thoughts* with a meditation group and *regular practice* of meditation. Negative factors from the study to consider when planning best practices for educational purposes were addictions, trauma (sometimes undiagnosed), and specific terminology stemming from Eastern cultures that alienated participants. For the third thematic category, Paese and Egerman collected data from the experts about the types of meditation most frequently used to treat MPA in students, and these form the basis of recommended practices in *Figure 4.*

The meditations most recommended as a result of their study were: A) body scan and Shamata., a breath-nose meditation that provides awareness of the breath and body connection. B) meditation with movement (Osho meditation): yoga, walking meditation, five senses meditation (becoming aware of one's internal senses), shaking, and yogic practice of breathing (pranayama) (Paese and Egerman's 2024). The experts found that meditation with movement may be more suitable than static meditation for younger people. C) For physiological and pain-related MPA, the researchers found that affect-centered meditation: Metta (loving-kindness)*, and* Karuna (compassion meditation) were most effective. An

important takeaway from the study is that students found that once there is *compassion toward themselves*, and even toward the audience, it is no longer an adversary to themselves, helping to alleviate MPA. D) For cognitive and affective symptoms, the experts recommended mantra meditation (repeating syllables and words), and for attention regulation, Visual Concentration (concentrating on an object) (Paese and Egerman, 2024).

*Figure 2: Summary of Meditations Used by Experts and Main Effects on MPA Symptoms* (*Paese and Egerman, 2024)*

| MPA symptom category | MPA symptom | Meditation type | Effects |
|---|---|---|---|
| Physiological | Tachycardia, tunnel vision, muscle tension, hyperventilation, uncontrollable shakiness in the muscles, dry mouth, gastrointestinal problems, disconnection from the body and mind, high-tension backstage, excess adrenaline | Body-centered meditations: body-scan, grounding, posture, alignment of the spine, breath nose (*Shamata*) | Increased body awareness counteracting all physiological symptoms |
| | | Meditation with movement: Osho meditations, shaking, walking meditation, five senses, yoga, manipulating the breath (*Pranayama*) | Released excess energy, increased body awareness, stabilized mind, reassured body, and mind |
| | | Mindful observation: sitting in silence (*Vipassana*) | Increased awareness, ability to observe without acting |
| Cognitive | Rumination, negative thoughts, lack of attention, difficulty in concentration, memory lapses, narrowed attention onto perceived threats | Affect-centered meditation: loving-kindness (*Metta*), compassion meditation (*Karuna*) | Reduced rumination and negative thoughts |
| | | Mantra meditation: repeating encouraging words, transcendental meditation | Counteracted rumination keeping the mind engaged, calmed breath |
| | | Body-centered meditations: breath nose (*Shamata*) | Stabilized mind |
| | | Visual concentration: concentrating on an object, candle meditation (*Trataka*), picture frame meditation | Self-regulation of attention, refocused attention, counteracted distraction |
| Affective | Self-criticism, loss of confidence, anxious apprehension for performance and audience, perfectionism, judgmental narrative | Affect-centered meditation: loving-kindness (*Metta*), compassion meditation (*Karuna*) | Reduced self-criticism, increased confidence, improved social skills, decreased apprehension |
| | | Mindful observation: sitting in silence (*Vipassana*) | Increased awareness, ability to observe without acting, remodeled inner dialogue |
| | | Mantra meditation: repeating encouraging words | Counteracted self-criticism and judgmental narrative |
| Behavioral | Overt and covert avoidance behavior, muscle stiffness, technical and notational inaccuracy | Affect-centered meditation: loving-kindness (*Metta*), compassion meditation (*Karuna*) | Increased self-compassion, change of judgmental and competitive narrative |
| | | Body-centered meditations: body-scan, grounding, posture, alignment of the spine | Increased body awareness |

*Note.* MPA: music performance anxiety.

From the findings of the various studies of yoga and meditation's effects on the alleviation of MPA symptoms, each study seemed to add to the growing evidence that yoga and meditation are effective and statistically supported treatments for MPA. Studies from Khalsa et al., 2009 and Khalsa and Cope, 2006 were also reviewed, but due to time constraints and the age of the studies, they are taken into consideration but not reviewed in detail here. The Khalsa studies also show statistical evidence that MPA symptoms were reduced after a 6-week Kripalu yoga and meditation course for young adult musicians with MPA, supporting

the argument that mindfulness is beneficial for relieving MPA symptoms (Khalsa et al., 2009; Khalsa and Cope, 2006). The higher the person's MPA levels, the more they seemed to benefit from mindfulness training (Czajkowski et al., 2021). Rather than being a question of whether these methods were effective for alleviating MPA symptoms in musicians, the studies instigated discussion for future investigations into which *specific types* of yoga and/or meditation are most effective for specific issues in cognitive, behavioral, or somatic manifestations of MPA.

Evaluation of the Yoga/Mindfulness Studies

Both the Czajkowski studies (Czajkowski and Greasley, 2016; Czajkowski et al., 2021) focused predominantly on an *MBSR* method specifically for singers that resulted in a variety of benefits from the course and home exercises on all aspects of the vocal study: lessons, individual and group practices, and performance. See *Figure 3* for details on types of improvement in MPA symptoms.

By relying on experts in music and yoga/mindfulness to report findings from their sessions with musicians, Paese and Egerman were able to test a *broader range of yoga and meditation practices* on musicians with MPA and found them to be effective on different facets and types of MPA. The sample sizes of all studies have been small, as well as the number of studies, but seeing evidence of statistical significance, further investigation is warranted.

*Figure 3: Thematic overview of the effects of mindfulness on MPA and general performance (Czajkowski et al., 2021*

| Overview of effects on performing | Themes | Participants |
|---|---|---|
| MPA prevalence | Lower levels of self-reported MPA | 8 |
| | Higher levels of self-reported MPA | 30 |
| Effects on music performance anxiety | Improvement of symptoms | 20 |
| | More aware and focused | 18 |
| | Calmer and more comfortable on stage | 15 |
| | More confident and control | 13 |
| | Enhanced audience perception | 14 |
| | More acceptance | 7 |
| Effects in performance | | |
| Changes in mental perception | Performing in the present moment | 37 |
| | Time perception changes | 29 |
| | Better able to deal with the unexpected | 11 |
| | Improved performance memory retention | 17 |
| | Increased performance enjoyment | 18 |
| Effects on performance elements | Using more musical elements (e.g. dynamics) | 17 |
| | Improved characterization | 11 |
| | More expressive | 12 |
| | Enhanced emotion portrayal | 6 |

**Qigong**

The origins of *Qigong* can be traced back to 2146 B.C. as the dynamic portion of an overarching, ancient mind-body exercise method called *Dao Yin which* incorporates breathing, stretching, twisting arms and legs, and mental focus to restore energy flow, health, and harmony in the body and mind (Chen et al., 2019). "Qi" meaning vital energy flowing through all living things and "Gong" meaning cultivation or exercise (Chen et al., 2019) is a means to create harmony between humans and the Qi energy in the environment, and it also has a significant role in traditional Chinese medicine, wellness, and culture (Hung et al., 2021). After having made its way to the West in the 1970s and 80s (Cohen, 2018), qigong has been used to benefit a myriad of medical and psychological issues in the Western world since then, and more recently has begun to be studied as a method to relieve MPA symptoms in musicians.

*Hung et al.*

Qigong remains to be fully accepted and legitimized as a medical enhancement in the Western world, due to the lack of studies on qigong and the Western bias for EBM (Fung et al., 2015). It has also yet to be fully explored as a means to treat MPA. However, researchers are beginning to investigate the full range of benefits of qigong (Blyskal, 2022), and most recently, a study was conducted by Hung et al. in 2021 on whether the "Qi" experience was related to the "flow" experience. The "Qi" experience is defined as the state of perceiving the Qi experience in the body-mind-spirit while practicing Qigong (Hung et al., 2021 p.5). As one practices qigong, one experiences a relaxation of the body and mind, and a calming down that enables one to feel a warm or tingling sensation of Qi energy floating in the blood called a "qigong state" (Hung et al., 2021, p.2).

The "flow" experience is a Western concept defined by Csikszentmihalyi as a state of smooth flow while one engages in and concentrates on an activity because one is in a state of task-absorption, cognitive efficiency, and intrinsic enjoyment in doing the task (Hung et al., 2021; Csikszentmihalyi, M.,1990). The researchers aimed to understand the subjective experience of the relationship between the "qi" experience and the "flow" experience, because they recognized a similarity between the EM-BP of the "qi" experience and the Western concept of "flow", as well as evidence that both show promising signs of decreasing depression and anxiety and increasing positive emotions and well-being. The concept of "flow" is discussed in numerous methods attempting to relieve MPA, e.g. Acceptance and Commitment Training (Juncos and de Paiva e Pona, 2022) and Peak Performance Training (PPT) (Greene, 2002), Therefore, while Hung et al.'s study may not have a direct correlation with MPA in singers, for purposes of this critical review, it may be worthwhile to gain a

deeper understanding of the relationship between EM-BP and achieving “flow”, since “flow” has been a popular part of peak performance training therapy for MPA in Western culture (Greene, 2002).

Hung et al. conducted a mixed methods study from late spring to early fall with 13 university student participants who were chosen for having previously practiced primary qigong and experienced a “qi” state before, even if mildly. They collected data through A) an open-ended questionnaire format for qualitative data and B) a Multi-Trait-Multi-Matrix (MTMM) method for validating the data quantitatively.

Participants were asked to practice qigong at the most conducive time for achieving “qi” experience (7:00-11:00 am and in spring) in three locations and then answer questionnaires after practicing in the three different environments 1) indoors 2) in a built environment with natural surroundings and 3) outdoors in nature to collect data about whether the participants experienced a similar feeling when experiencing qi versus when experiencing a flow state. Hung et al. found that the completely natural environment lent itself to the most effective results of the “qi” experience, but for this review, to identify the most effective methods that can be translated into a treatment for MPA in a vocal pedagogy context, the different external environments are not necessarily relevant or possible, rather, the most relevant results are that the study confirmed the researchers’ hypothesis that the experience participants reported having in both “qi” and “flow” were very similar. The researchers recommended that in future studies, the external factors and variables, such as microclimate and the physical indices be more carefully controlled.

This study did not include a comparison of the identifying traits and tools of the “qi” and “flow” experience which limits the possibility of attaining transferrable knowledge and would have been helpful for this study. The specific details of tools and traits should probably be investigated in future studies. However, the researchers strongly believe that “qi” experience and “flow” experience share similar characteristics. From *Table 1* in Hung et al.’s research paper, the overlap in positive and beneficial experiences of “qi” and “flow” are shared in the following ways (Hung et al. 2021): A) the feeling of a “different time flow than usual,” (Hung et al. 2021, p.4) B) Focus on balancing “qi” in the body and mind leads to the experience of “qi “energy, similar to the concept of challenge-skill balance which leads to a sense of “flow”, aka autotelic experience and paradox of control in flow terminology (Hung et al. 2021; Csikszentmihalyi, 1990) C) Qi participants unambiguously gave feedback that they feel the “qi” state floating in the body and gain refreshment and recovery in their physical, mental, and spiritual states which can lead to a “flow” experience, according to the study

(Hung et al., 2021). D) Ability to achieve concentration on the task at hand, leading to autotelic experience, potentially leading to peak performance and fluent breathing and movements. E) The optimal state in a “qi” experience is a relaxed awareness that evokes spiritual feelings, while the “flow” experience is also about loss of self-consciousness, losing oneself, and merging with one's surroundings without concern of presentation, which are both similar feelings (Hung et al. 2021; Csikszentmihalyi, 1990).

*Sousa et al.*

In 2012, Sousa et al. conducted a study with eight, flute student, school children with a mean age of 11.7 (plus eight, waitlist control group children), gave them qigong lessons of the "White Ball" exercise over seven weeks, twice a week, for 30 min, and directions to do the same exercises at home every day. Randomisation was not possible due to the small group size of volunteer participants. The researchers aimed to investigate both physiological reactions (e.g. heart rate, blood pressure, salivary cortisol, and reaction time on surface electromyography (sEMG) on the trapezius muscle of subjects), but also psychological reactions using the Portuguese version of the Depression Anxiety Stress Scales (EADS-C) (Sousa et al., 2012).

Of the various physiological measurements taken, the heart rate measurement was the only data in the study that proved statistically significant ($p < 0.05$), showing a decrease in the qigong group (mean = −11 ± 7 bpm) and an increase in the control group. This decrease in heart rate from qigong could be an important factor in MPA treatment when considering that in a study by Wesner et al., symptoms such as poor concentration, rapid heart rate, trembling, dry mouth, sweating, and shortness of breath were all identified as the most debilitating of MPA symptoms in participants ( Wesner et al.,1990) Other tests showed a reduction in performance related symptoms but were not statistically significant(Sousa et al., 2012). The level of salivary cortisol decreased in both groups, with nearly twice the reduction in the qigong group **(**−0.265 ± 0.165) compared to the control group (−0.135 ± 0.306), but the difference did not result in statistical significance ($p = 0.282$).

The greatest difference and reduction in performance-related anxiety was seen in the EADS-C, which was reduced in the qigong group by 80%. The evaluation of the effect size also indicates that the EADS-C may be a reliable tool to use in future studies of MPA treatments. Sousa et al. felt that this study fulfilled their objective to confirm that qigong-related effects with these psychological scores and physiological parameters can be objectified for the study of performance-related anxiety (Sousa et al., 2012). Attention to the development of

randomized controls, adequate placebos, and double-blinding designs were recommended for future studies.

*Other studies*

Psychological studies on the effects of qigong on subjects suffering from anxiety and depression have been conducted by other researchers. such as Wang et al. in 2017 and Sun et al. in 2022. Wang et al. reviewed 15 different qigong studies ranging in duration from 70 minutes to four months with subjects suffering from illnesses, such as cancer, diabetes, anxiety, and depression. They concluded that qigong may have positive psychological effects for individuals with symptoms of depression and/or anxiety. However, they acknowledged that the studies reviewed had certain methodological limitations, and future research designs needed to follow rigorous research standards to establish the efficacy of qigong in improving psychological well-being and other chronic conditions (Wang et al., 2017).

Sun et al. conducted a study on 37 subjects in 2022 on the effects of a 12-week qigong intervention on heart rate variability and respiration in anxious college students. The researchers found clinical relevance in the effect of two qigong styles, which improved their heart rate variability, increased their abdominal breathing, and significantly reduced anxiety (particularly mental anxiety) in sedentary and anxious university students. They recommended follow-up studies to explore the mechanisms behind the improvements and compare the differences between traditional qigong and other exercise modalities for anxiety relief (Sun et al., 2022).

*Evaluation of the Qigong Studies*

From the findings of the 2012 Sousa study, a common theme emerges that was also voiced in the other studies - that finding enough volunteers for studies of this nature can present challenges, but larger samples in different situations would be desired in future studies to more accurately test for statistical significance and compare the effect of qigong on participants in more detail. Another common theme in qigong research for psychological intervention was choosing adequate and randomised controls (Hung et al., 2021; Sousa et al. 2012). There have not been any validated psychological or physiological measurement tools specifically designed for qigong, nor does there exist any type of control or placebo qigong, and for this reason, the criteria used to select candidates for the study avoided the placebo effect altogether in the Hung study; the data supported the central idea nonetheless. The Sousa study shows promise for the measurement tools that were used, and these issues are important considerations for further research in this field (Sousa et al., 2012).

External factors, such as environment and climate seemed to factor into the Hung study, but not necessarily in the Sousa study. The environment may be more challenging to control in an institutional or voice study environment. However, considering those types of variables and the potential challenges, as well as the burgeoning popularity of the virtual classroom environment and the holistic nature of authentic qigong practice, it may be worthwhile to consider choosing an environment conducive to effective qigong practice whenever possible.

While the studies acknowledged that there are still too few studies on the benefits of qigong on anxiety sufferers to make any conclusions, they did show that qigong practice resulted in a significant reduction in anxiety and possible benefits for psychological well-being for their subjects (Sun et al., 2022; Hung et al., 2021; Sousa et al., 2012; et al., 2012).
These studies indicate that qigong may be an effective treatment for MPA in singers and contribute to the argument for including qigong in vocal education (Sun et al., 2022; Hung et al., 2021; Sousa et al., 2012; Wang et al., 2017).

**Application of EM-BP to Voice Study Context for Students with MPA**

The mind-body practices of yoga/mindfulness and qigong analysed in this representative review show the potential for multiple, transferable methods to alleviate MPA symptoms in voice students. Several themes on the benefits of EM-BP surfaced in this study: 1) easing of physiological/somatic symptoms, e.g. reduction of heart rate and decreased salivary cortisol (Hung et al., 2021), increased body awareness, released excess energy, and stabilization of body, breath, and mind (Paese and Egerman, 2024; Czajkowski et al., 2021) 2) Cognitive improvements: the ability to be in the present moment, change in time perception (Hung et al., 2021; Czajkowski et al., 2021; Sousa et al., 2012), as well as increased memory retention, better ability to focus on expressivity and musicality (Paese and Egerman, 2024; Czajkowski et al., 2021) 3) Behavioral improvements: reduced MPA and in some cases reduced depression (Paese and Egerman, 2024; Hung et al., 2021; Czajkowksi et al., 2021; Sousa et al., 2012), and increased self-compassion and acceptance (Paese and Egerman, 2024; Czajkowski et al., 2021). In the case of identifying tools that can be reliably used for future studies related to EM-BP such as the EADS-C or the FFMQ, the studies were fruitful. Additionally, qigong and mindfulness/yoga yielded such positive results in the studies reviewed that further research on the topics is warranted and recommended. Participants in all the studies had multiple and multi-faceted benefits from both qigong and mindfulness/yoga. Due to the limited number of EM-BP studies in the overall literature,

particularly for musicians practicing qigong for MPA, a definitive, scientific conclusion from the Western perspective cannot be made about whether qigong is beneficial for MPA. At this point, the number of studies and statistically significant data is more plentiful in the realm of yoga and mindfulness, and therefore, a more evidence-based approach to MPA treatment in singers. However, as the number of studies on qigong increases with the uptake of this practice for MPA relief, the practice of qigong should gain popularity amongst singers as an effective treatment for MPA. From the positive results, both anecdotally and statistically seen across the board in the studies that currently exist, there is value in considering EM-BP as a complementary enhancement to traditional vocal and conservatory education. Based on the results of the studies reviewed, the recommendations and analysis of which specific exercises could be beneficial in voice lessons, or a conservatory environment, are outlined in the table below. As with the "white ball" exercise in qigong (Sousa et al., 2012), extracting individual and effective qigong exercises could be time-efficient and beneficial for singers with MPA when time is limited, such as in a voice lesson. However, it would be interesting to compare the difference between the benefits of an eight-week course versus regular exercise of just a few beneficial qigong exercises in future studies. The criterion for recommendations of exercises below to relieve MPA in singers has been made based on a) suitability and accessibility of the exercises in the music lesson or conservatory environment, b) feasibility of the methods being conducted by a voice teacher or hired EM-BP professional, and c) realistic time considerations, based on my own experience working with voice students with MPA.

*Figure 4: Coding Chart for Thematic Analysis (Braun and Clarke, 2019) - with recommended EM-BP methods for tertiary students based on this critical review (Paese and Egerman, 2024; Czajkowski et al., 2021; Hung et al., 2021; Czajkowski and Greasley, 2016; Sousa et al., 2012)*

| Type of EM-BP | Sub-category/Practice | Benefits for Alleviating MPA Symptoms | Limitations / Considerations | Key Citations |
|---|---|---|---|---|
| MINDFULNESS | MBSR / MfS (8-week course) | Effective in university or conservatory group settings<br>Enhances emotional regulation and focus<br>Promotes acceptance of anxiety symptoms | Time-intensive<br>Not ideal for private lessons<br>Needs external facilitator or trained voice teacher | Czajkowski and Greasley, 2016; Czajkowski et al., 2021 |
| YOGA (Mindfulness) | Affect-Centered Meditation (Metta, Karuna) | Benefits cognitive, affective, and behavioral symptoms<br>Easily implemented | May be emotionally triggering for trauma-affected students | – |
| YOGA (Mindfulness) | Mantra Meditation | Cognitive and affective calming | – | – |

| | | | | |
|---|---|---|---|---|
| | | Simple implementation without training | | |
| YOGA (Mindfulness) | Visual Concentration (Object focus) | Enhances cognitive control<br>Reduces distraction | – | – |
| YOGA (Movement Meditations) | Body-Centered Meditation (e.g., Shamata) | Regulates breath and awareness<br>Supports physiological and cognitive balance | Requires quiet, focused time<br>Not always feasible in short lessons | Paese and Egerman, 2024 |
| YOGA (Movement Meditations) | Osho Movement Meditation (Yoga, Walking, 5 Senses, Shaking, Pranayama) | Appeals to younger participants<br>Reduces physiological symptoms<br>Easy to teach with minimal training | Needs space, props (mats), and time<br>Limited applicability in small studios | Paese and Egerman, 2024 |
| QIGONG | "White Ball" & beginner solo exercises (e.g., "Shake the Tree") | Rapid stress reduction (EADS-C, heart rate)<br>Voice-lesson friendly<br>Promotes body-mind integration | Requires basic teacher instruction.<br>Evidence mainly from feasibility studies | Sousa et al., 2012 |
| QIGONG | 8-week Qigong course (group/home) | Enhances both psychological and physiological states<br>Induces flow-like performance readiness | Time-intensive<br>Best delivered in structured programs, not individual lessons and by a trained professional. | Sun et al., 2022; Hung et al., 2021; Wang et al., 2017 |
| CROSS-CUTTING THEMES | Emotional regulation, breath control, body awareness, cognitive reframing, stress physiology regulation | Techniques vary in ease-of-use implementation in a voice training context or scalability in an institution. | Institutional or cultural acceptance may vary.<br>Trauma support may be needed. | Braun & Clarke, 2019; Naeem & Ozuem, 2022 |

While my position, as a voice teacher and singer who has benefitted from EM-BP for my own MPA, inherently affects my perspective on the studies reviewed as an insider and positively biased researcher, the experience I have of teaching and performance coaching for nearly twenty years and my experience practicing both qigong and yoga/meditation also enables me to make educated assessments of which parts of the methods used could be beneficial for singers with MPA. The hermeneutical approach used in reviewing the literature also took my position into account as an insider researcher and was particularly suitable for the relatively underexplored subject matter.

**CRITICAL REFLECTION** - employing Gibbs' Reflective Cycle (Gibbs and Andrew, 2001)

*Description*

From February to June of 2025, I executed an independent desktop study as part of a Master's of Vocal Pedagogy coursework with the Voice Study Centre and UWTSD on the extant and current knowledge of Eastern mind-body practices as potential treatments for MPA in singers. Qigong, yoga, and mindfulness have already garnered attention in the music world as anecdotally effective practices for musicians, especially with MPA, but the topics are still sorely underrepresented in the published vocal pedagogy research literature and therefore still not fully regarded universally as legitimate methods to treat MPA. Therefore, my study drew upon sources that dealt directly with musicians and MPA but also relied upon related sources from psychology and social science literature to support the argument for recommending EM-BP for MPA in singers. For purposes of helping singers with MPA, I mainly focused on studies in yoga/mindfulness by Czajkowski and Greasley (2016), Czajkowski et al. ( 2021), and Paese and Egerman (2024), because they represented important subtopics of MBSR, various types of yoga and meditation, and MPA in musicians. For qigong, the selection of studies was more limited, and I decided upon studies that most closely related to anxiety and flow experiences through doing exercises that were translatable into exercises for singers. These studies included Hung et al.(2021) and Sousa et al. (2012).

*Feelings and Thoughts About the Experience*

I began this study with bias, as a professional singer with positive experiences practicing yoga, MBSR, and qigong to relieve my multi-year struggle with MPA. Upon my first struggles with MPA, I asked for recommendations from my voice teacher and other colleagues on how to treat MPA and received helpful advice to try yoga, meditation, and other EM-BP which had been successful for helping them. However, in contrast to my own experience of MPA relief from practicing EM-BP and finding more stability and ease performing by thinking more holistically about my mind and body, I witnessed a general disrespect and skepticism in some colleagues regarding EM-BP as a kind of unscientific, inferior, or "hippie" practice that would not be considered a science-based, legitimate therapy for MPA. This skepticism toward Eastern therapies may stem from the notion of EBM in Western science and medicine, defining legitimate therapies as therapies that have been thoroughly researched and evidence-based, in contrast to Eastern Traditional Medicine (Fung et al., 2015). It is perhaps the influence of seeing my father's (a medical doctor and acupuncturist) experience as the first person to practice acupuncture in North Carolina, USA in the early 1970s, and seeing his acupuncture practice evolve from initially being interpreted as Eastern charlatanry

to being fully recognized and recommended for integration into conventional medicine by the National Institutes of Health in 1997 (NIH, 1997) that inspired me to study EM-BP to contribute to research on the benefits of qigong, yoga, and mindfulness for MPA.

In addition, I first discovered EM-BP during my initial struggles with MPA at the start of my 27-year opera career. In order to gain a deeper understanding of why I benefited from the practices of EM-BP and how to transfer this knowledge to my voice students, I embarked upon this study of EM-BP and how to equip myself and others with tools to alleviate MPA in singers. Over a span of 20 years, I participated in courses for yoga, MBSR, qigong, and other EM-BPs to alleviate my MPA symptoms. Having personal experience of what worked and didn't work for me colored my investigation and also increased my curiosity for why some practices were more effective than others.

I had some trepidation about beginning this study, due to an expected lack of white literature on the topics. I had concerns that I would not find enough literature to support my study, and this created some delay in my starting the study, as I wavered on which topics to narrow my research focus. Please see the Analysis below for more on this subject.

*Evaluation of the Experience, Both Good and Bad*

I initially struggled to narrow down my focus on this study, because I was interested in investigating Linklater (2007) and Rodenburg's methods (Rodenburg, 2007) for freeing the voice, qigong, yoga, meditation, MBSR, and peak performance training. However, after the initial reading phase, I began to see that Linklater and Rodenburg were influenced by EM-BPs, so I decided to narrow my focus to just PPT, qigong, and yoga/MBSR.

Analysis to Make Sense of the Situation

Once I began the research phase of my study, I was pleasantly surprised to find that there had been more studies and published articles (white literature) than I realized for yoga and mindfulness to benefit MPA or anxiety. For qigong, it was more difficult to find relevant sources to support my study. However, even if limited in number, the studies that do exist on both qigong and mindfulness/yoga do show statistical significance in favor of EM-BP. This supported my study and enabled me not to rely heavily on grey literature.

Due to the parameters and word count of the assignment, I had to omit the study's investigation of peak performance training (PPT). Reading the PPT literature was useful in terms of evaluating and understanding Hung et al.'s study comparing the "qi" experience and

the “flow” experience, but I hope to return to the subject of analysing PPT as another possible treatment for MPA.

One of my issues in writing this study is my limited knowledge of statistics. For the quantitative portions of mixed-methods studies, it is difficult for me to fully interpret and understand how the metrics were calculated. However, from my rudimentary knowledge of statistics, I could see that most studies showed statistical significance in several of the test results. For future, in-depth studies, I can collaborate with a statistician to enhance a mixed-methods study with reliable quantitative data while adding my experienced perspective on qualitative data. Moreover, for a review of applicability to the voice studio in this study, the actual quantitative data is not as important as seeing evidence of improvement from the tried methods overall.

*Conclusion of Critical Reflection*

From this experience, I learned that it is better to start with fewer research topics and begin reading and writing earlier, rather than being delayed by choosing between too many topics. I also learned how to write a literature review in the narrative, critical, and representative style using a hermeneutical approach. This was a successful choice and suited the study well.

*Action Plan:*

After completing this study, I will further improve my abilities by:

- Participating in the Introduction to Postgraduate Academic Skills workshop by VSC.
- Continuing my studies of qigong
- Learning more about research statistics through online study.

**CONCLUSION**

This study was a critical exploration of EM-BP, specifically qigong and yoga/mindfulness, as a potential enhancement to traditional, bel canto-based vocal pedagogy for singers with MPA. The findings from this representative review indicate that while traditional, Western vocal technique addresses the foundational concepts needed for optimal phonation, it is incomplete in addressing the more holistic needs of singers suffering from MPA. Through reviewing relevant and current literature, e.g., mixed-methods studies by Czajkowski and Greasley, Czajkowski et al., Paese and Egerman, Hung et al., and Sousa et al., there is evidence that EM-BPs can significantly reduce MPA symptoms, improve focus, enhance

body awareness, and ease mental and physical hindrances caused by the disorder. The practices identified in this study seem especially promising due to their appropriateness in a voice education context and/or ease of integration into the voice studio. However, qigong as a therapy for MPA is still lacking research compared to mindfulness and yoga. Future studies should continue to investigate and test both types of EM-BP specifically to determine which exercises are most helpful for singers with MPA. This review has expanded my knowledge of the mind-body subject area, as well as my ability to conduct a study in the critical, narrative, representative review style from a hermeneutical approach. As a practitioner and researcher, I have gained insight on how to meaningfully impact the current, seemingly outdated voice pedagogy field, as well as my practice, by offering a more holistic approach to provide support for singers suffering from MPA, one of the most pressing issues in the music world today.

## APPENDIX

*Figure 5: MBSR Mindfulness for Singers Course Outline (Czajkowski and Greasley, 2015)*

**Appendix. Mindfulness for Singers. Weekly session detail**

| | Discussion | Mindful Techniques | Weekly Practice |
|---|---|---|---|
| Week 1 | Autopilot<br>Habit awareness | Discovering the Breath<br>3 Minute Breathing Space | Mindful Movement<br>Task: One Habit awareness |
| Week 2 | Stress<br>Body awareness<br>Habit awareness<br>Expectation and Reality<br>Being and Doing mode | Body Scan<br>Mindful Breathing | Singer's Body Scan<br>Task: One Habit awareness |
| Week 3 | Mindfulness and Illness<br>Repetition<br>Performance nerves<br>Primary and Secondary Suffering<br>Awareness of the pleasant | Mindful Yoga<br>Mindful Breathing Counting<br>Mindful Breathing Journey | Mindful Breathing<br>Task: Awareness of the pleasant |
| Week 4 | Being judgemental<br>ABC model of emotions<br>Dealing with criticism<br>'Cataloguing' | Body Scan<br>Mindful Food Exercise<br>Mindful Sounds practice | Mindful Movement<br>Task: Mindful listening |
| Week 5 | Awareness when walking<br>Pre-performance nerves<br>Present moment performance creativity | Sitting Body Scan<br>Mindful walk on campus | Singer's Body Scan<br>Task: Mindful Walking exercise<br>Prepare 5 min song |
| Weeks 6+7 | Performance Week<br>Performance nerves strategies<br>Creativity in performance – breathing<br>Taking Criticism after – breathing | Mindful Breathing<br>Mindful Movement | Mindful Breathing<br>Task: Mindful Eating exercise |
| Week 8 | Conclusion | Mindful Breathing<br>Full Body Scan<br>Mindful Yoga | |

*Visual 1: Qigong "White Ball" Exercise used by Sousa et al.'s 2012 study (photo from Matos et al., 2021)*

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