

**INDEPENDENT STUDY
MODULE 6 - BMPF 7010**

**The Efficacy of Somatic Micro-Practices on
Psychophysical Tension and Performance
Anxiety in Jakarta Choral Singers:
A Practice-as-Research Study**

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MODULE 6 BMPF 7010 PROPOSAL

The Efficacy of Somatic Micro-Practices on Psychophysical Tension and Performance Anxiety in Jakarta Choral Singers: A Practice-as-Research Study

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I. Context

This research will be done in one of the Catholic church choirs residing in East Jakarta, Indonesia. The researcher has been one of their choir trainers, providing choral training, especially since the choir will prepare for a national choir competition in September 2026. Within this local choral community, the researcher observed that singers constantly face overlapping layers of physical and mental strain, especially during one-on-one singing checks or when vocal technique concerns arise. This may be the result of performance anxiety stemming from the individual's singing technique check or worrying about making mistakes (Dobos, Piko and Kenny, 2019), and, more generally, from preparing for the competition itself. In addition, the researcher also noticed that the singers may carry residual tension from their daily professional lives, such as office fatigue and poor posture. As a voice teacher with more than 10 years of experience, the researcher notices this as a classic problem he often has to deal with in his private studio and in the bi-annual, six-month musical theatre training program where he taught as a vocal instructor. He is always curious about how to deal with the visible tension, such as stiff necks, tight jaws, protruding chins, etc., which is not beneficial for singing (Willis et al., 2019), and often related to explicit monitoring (Graham et al., 2024) and the psychological stress of performance anxiety (Henshaw and Collyer, 2022; Casanova et al., 2025).

Currently, traditional vocal warm-ups in this region rely heavily on standard sports stretching followed by mechanical vocal exercises. This standard approach treats the body and voice as separate things. It misses the underlying autonomic nervous system triggers that cause performance anxiety and muscle tightness. There is a clear lack of physical and mental conditioning in regular choral rehearsals. In this regard, the researcher will further explore

alternative exercises that can address the body, breath and mind together before complex singing begins.

II. Justification

This project will be the practical next step from the researcher's previous work in Module 5 and Module 4. In these previous studies, the researcher explored five established somatic methods to apply them to singing rehearsals. These five methods are the Alexander Technique, the Feldenkrais Method, Fitzmaurice Voicework, the Linklater Voice Method and Lessac Kinesensics. In Module 4, the researcher studied them theoretically and learnt that the somatic approach can reduce tension (Paparo, 2022; Sentianin, 2018; Meadath, 2016) and that a blended approach combining them can be effective (Sielska-Badurek et al., 2017). Then in Module 5, the researcher developed an artefact, which was a set of somatic micro-practices designed for 15-minutes slot as part of the warming-up session to replace the sport-style physical stretching commonly used prior to vocalisation. This module 6 is when this artefact will be tested for its efficacy on physical tensions and performance anxiety.

The original practices of each of these five methods usually involve 60-140-minute sessions (Meadath, 2016). This amount of time is impossible to fit into a standard fast-paced choir or group rehearsal. In this regard, the researcher works to establish condensed, 15-minute routines synthesised from these five methods. To increase practicality for use in choir rehearsal, the researcher will narrow the exercise category into standing-only routines. This project will ask whether this shrinking of deep practices can achieve the deep nervous system release and better posture without floor work or long-term commitments (Fitzmaurice, 2015; Monti and Bianchi, 2025), offering practical conditioning tools for healthy singers.

III. Intended Impact

The main goal of this project is to reduce physical tension and performance anxiety among the singers. This approach aims to shift the singer's focus from overthinking the technical rules to feeling their bodies more (Sentianin, 2018). With this focus, the exercise aims to create more vocal freedom, resonance and honest expression (non-performative) during rehearsal and performance (Matei and Ginsborg, 2017).

On a broader scale, this project hopes to contribute in bringing the global best practice into the Jakarta choral scene, proving that somatic methods will fit into a standard 30-minute warm-up before song rehearsals, thus providing an alternative approach to Indonesian singing teachers and choral conductors when preparing their singers.

This project will also give the researcher a personal learning environment on the somatic topic, improving his teaching toolkits, which help him to refine his future musical theatre and choral training programs while offering a realistic model for other teachers.

IV. Outlined Intention

In this project, a research question is formulated as follows: *To what extent does a 15-minute, standing-only somatic micro-practice intervention reduce self-reported physical tension and performance anxiety among Jakarta choral singers during a rehearsal period?*

Proposed Methods

This study will use a Practice-as-Research framework (Nelson, 2022) under the Pragmatic paradigm, where the researcher will treat his own teaching practice as the main focus. In order to assess how well the exercises work, the study will use a Convergent Parallel Mixed Methods design, collecting both quantitative and qualitative data at the same time to get a full picture of what the participants experience.

The intervention will involve the researcher leading the 15-minute somatic warm-up at the start of choir rehearsals over an 8 to 10-week period. Quantitative data will be gathered through pre-participation and post-participation digital surveys (Google Forms) to establish baseline and outcome metrics of performance anxiety and physical tension. In addition, participants will be asked to complete a session-by-session pre- and post-session digital survey as their self-regulation logs. This is to record the immediate, session-by-session changes in tensions.

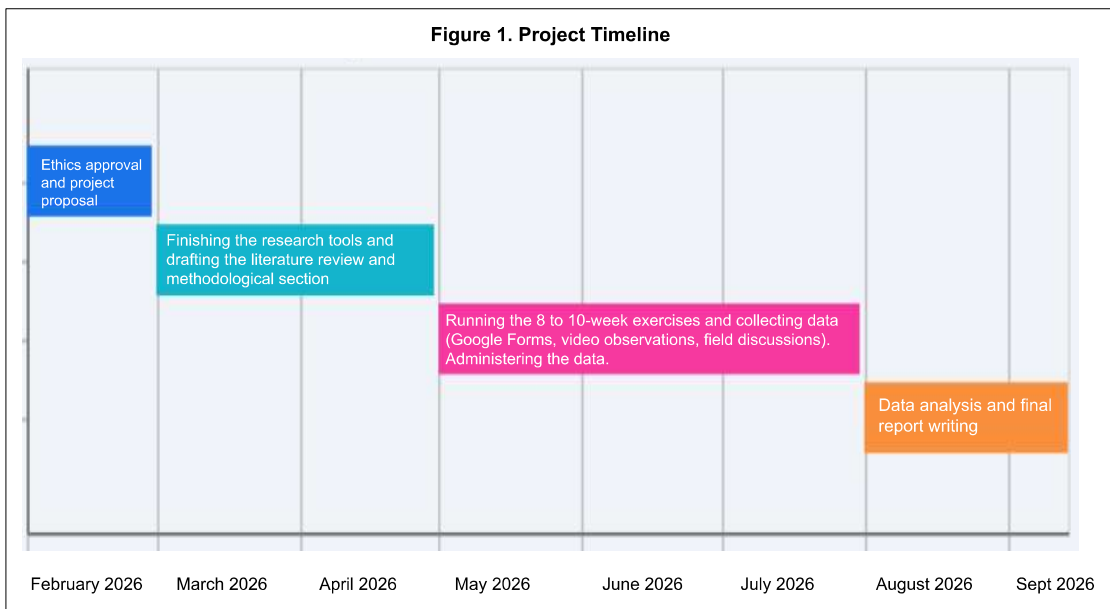
Qualitative data will be collected concurrently through several methods. The aforementioned digital survey will include open-ended text boxes for participants to describe their subjective experiences. In addition to the survey, after every session, there will be a 5-10-minute spontaneous “field discussion” which will be video-recorded for later observational analysis. The researcher will also keep a reflective field journal to document real-time teaching

adjustments, spontaneous feedback, and his own experiences throughout the process. Qualitative analysis may involve coding and thematic analysis as needed (Thomas and Harden, 2008).

Financing

This project will require no money, making it highly achievable. The digital data collection and video storage will be managed using the researcher’s existing 5TB Google Workspace subscription, and the administrative support will be provided voluntarily by the choir committee.

Expected Timeline



This project scheduled to span from February to September 2026, as indicated in the Gantt chart above, and is explained as follows:

February 2026	Ethics approval and project proposal
March-April 2026	Establish all research tools and writing the literature review and methodological section.
May-July 2026	Running the 8 to 10-week exercises and collecting data (Google Forms, video observations, field discussions),

administering data collections, preparing all collected data ready for analysis (including transcriptions and coding qualitative data when needed).

August-September 2026 Data analysis (comparing the survey numbers and finding themes in the discussions) and final report writing, bringing the findings together and submitting the first draft of the project by 14 September 2026.

V. Ethics and Insider Research Considerations

As the researcher is also one of the leading coaches of the choir, this study will involve insider research. This situation will create some ethical challenges regarding power dynamics and the risk of participants feeling pressured. In order to prevent this, an informed consent process will be conducted and will clearly state that participation in this research is completely voluntary, and that opting out will not affect a singer's role or standing in the choir.

In order to ensure strict privacy and prevent any bias, an independent gatekeeper (Ms Venty, a choir committee member) will help to assign and manage confidential participant numbers. The researcher will not know which names match the Google Form submissions, allowing participants to give honest feedback without worrying about how the researcher might react.

Video recordings will only be used for the sake of the study, to review the 15-minute somatic warm-up and the brief discussions that follow. The cameras will be turned off during the main rehearsal to avoid making anyone uncomfortable. All digital data will be stored securely on a password-protected cloud drive following UK GDPR standards and will be destroyed when the degree has been completed. Finally, in order to manage the researcher's anxieties and objectives, he will use a reflective journal to consistently check for personal biases and evaluate how his dual role is impacting the project.

VI. Expected Learning Outcomes

This project provides for the researchers an environment to study and thus achieving following outcomes:

- a. To successfully design and run a mixed methods Practice-as-Research study within the strict time limits of a real choral workplace
- b. To critically evaluate how well short, standing-only exercises actually help singers reduce physical tension and performance anxiety, using both survey numbers and personal stories
- c. To carefully navigate and reflect on the personal biases, dual roles, dynamics and vulnerabilities that come with doing research in his own professional workspace.

(word count: 1,491 words)

MODULE 6 BMPF 7010 PROJECT REPORT

The Efficacy of Somatic Micro-Practices on Psychophysical Tension and Performance Anxiety in Jakarta Choral Singers: A Practice-as-Research Study

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I. Introduction

Indonesia is one of the Asian countries whose choir cultures have been growing rapidly for the past few years. This can be seen from the fact that there have been many Indonesian choirs that have actively participated in and won international choir competitions in Europe and other parts of the world. As one of Indonesia's choir enthusiasts, I experienced this myself: singing, traveling, and winning international choir competitions. The European choir competition culture has since been adopted by many Indonesian organizations, as we can see many International choir competitions now being held annually or biannually in Indonesia for the past few years.

I have been serving as a vocal trainer and 'choir coach' for a community Catholic church choir based in East Jakarta, Indonesia. The members of this choir love to grow their skills with this choir for their joy, their own personal development, and their spiritual dedication to the church. I have helped them prepare for choir competitions between church choirs in Jakarta, and several times recently, they have won these competitions. As per my advice, they then applied for a more competitive competition outside the church ecosystem, which was the bi-annual 7th Penabur International Choir Festival (PICF), in Jakarta, which was held from 7-12 September 2026.

This was their first encounter competing outside of the church environment, in front of an internationally renowned panel of judges. Due to the upgraded level of competition compared to their usual, I gave them some songs that were also more demanding than usual. Through some of the first rehearsals, I observed how their physical and mental strain became more vivid. I realized that this could come from many possible factors: the more

challenging song materials, the anxieties of more advanced upcoming competitions, or simply just from that day's occupational fatigue.

As a community choir, all members of this choir have day activities. Some of them are students, office workers, some others are housewives, field workers, teachers, etc. As the location of this church is at the suburban/residential area, members come to the choir rehearsals straight from work, with all the occupational stress and baggage they carry, added with Jakarta's well-known terrible after-hours traffic towards the suburbs. Because of this, I can observe vividly that some members often have tensions accumulated and trapped in their necks, shoulders which affect the sound coming out from them. I have been trying to find some methods and routines that may help amateur singers, and anyone who comes to rehearsal straight from their day activities, to prepare their body and mind for the rehearsals that I lead.

As a student of work-based learning, in my last module toward an MA in Professional Practice Voice Pedagogy, I have been developing my interest in somatic exercises. This has been going on since the previous two modules, Module 4, where I explored five somatic methods: the Alexander Technique, the Feldenkrais Method, Fitzmaurice Voicework, the Linklater Voice Method, and Lessac Kinesensics. I learned that classes for those methods usually require around 60-90 minutes, and often involve floor work. I have been interested in condensing these practices into a short, standing-only routine that can seamlessly fit into a standard 30-minute warm-up and conditioning slot, which I intend to use whenever I am having group classes, be it for the musical theatre group classes, workshops, or choir rehearsals I lead. I also learned that Fitzmaurice Voice work requires extended floor work and more time for getting the autonomic tremors. I see this as impractical for a regular choir warm-up setting. Being pragmatic, I was then re-curating the exercises I will be using and was just using the four methods and excluding the Fitzmaurice method.

After Module 4, in Module 5, I curated exercises from those methods and tried my first attempt to create 14 sets of somatic micro-exercises that last about 15 minutes per each set. This artifact was only 'theoretically' constructed, and was aimed to be tested to live participants in this current module, Module 6.

This Module 6 project report documents the real live-testing of that artifact. The research question is: *To what extent does a 15-minute, standing-only somatic micro-practice*

intervention reduce self-reported physical tension and performance anxiety among Jakarta choral singers during a rehearsal period?

To answer this question, I employ a Practice-as-Research (PaR) framework under a pragmatic paradigm. As both the choirmaster and the researcher, my own teaching practice sits at the core of the investigation. Over a ten-session period, I led the somatic exercises and recorded the outcomes using a mixed-methods approach. The data was collected concurrently through a session-by-session digital survey, tracking self-reported numerical tension scores, the open-ended qualitative feedback, and my personal notes/reflective journal.

The objective of this project is more than just helping the choir win a competition. This study aim to help the singers to prepare themselves holistically for rehearsal, so that they can achieve maximum possible improvements from every rehearsal. On the broader scale, this project hopes to prove that global somatic best practices can be practically adapted for choirs. It offers a realistic, time-efficient model for Indonesian singing teachers and choral conductors to properly condition their singers' body and mind before complex singing begins.

II. Literature Review

II. 1. Vocal Tension Anatomy

In order to understand vocal tension, we must look at the biological mechanics of the voice. The vocal instrument is not just about the larynx and its surroundings but involves coordinated activities among many other systems and parts of the body (Dimon, 2018). The basics of the sound-making process include three main parts: the lungs and respiratory system as the power source; the vocal folds as the source, which are part of the laryngeal system; and the vocal tract, including the jaw, tongue, and pharynx, as the resonators (Hrelec and Zhang, 2022; Dimon, 2018). The intrinsic muscles inside the larynx are controlled by the recurrent laryngeal nerve, which gives the vocal mechanism a direct connection with the brain (Simone *et al.*, 2026). This makes sound production in humans not only a physical but also a neurological event.

As the entire voice system sits in the body and is connected to a network of muscles and ligaments, how we hold our body becomes significant (Dimon, 2018). Solid postural support

from the entire trunk of the body is required to create proper voice function (Cardoso *et al.*, 2021). Poor alignment, such as forward head position, will misalign the larynx, which causes tightening of the muscles around the throat and leads to vocal strain (Cardoso *et al.*, 2021).

Other physical stress, such as fatigue from a day job, can also increase muscular tension in the body, including the neck, shoulders, and chest, which then affects the respiratory mechanics and laryngeal posture, thus increasing phonation effort and reducing vocal efficiency (Colado-Tello *et al.*, 2026).

Because of this physical reality, voice training should not focus only on the neck, throat, and surrounding areas. Kilpatrick (2020) highlights that when singers use whole-body physical coordination, their internal muscle mapping improves, thus achieving better vocal results. In this regard, including movements in voice training helps to free the voice, as they prevent the body from being tense and rigid.

In order to mitigate vocal tension, understanding and visualizing voice anatomy would need to be supplemented with practical, physical awareness. Recent studies by Hersh *et al.* (2026) show that voice students need to connect seeing, hearing, and feeling the voice mechanism to fully understand how their voice works so that they can move beyond theoretical knowledge and be able to control their voice safely in real-world rehearsals.

II. 2. Not just physiological but also psychological

In many high-demand voice users, including community choir singers who train regularly for an upcoming competition, physical tightness in the throat is related to their environment, busy lifestyle, and emotions. A study by de Magalhães *et al.* (2025) and Liović *et al.* (2026) shows that occupational factors such as long working hours, work exhaustion, daily burnout, and vocal fatigue have a strong connection with vocal disorders. Such mechanical stress, over time, can lead to physical tissue damage, resulting in organic lesions such as vocal nodules (Falanga *et al.*, 2023).

Meanwhile, ongoing psychological stress and anxieties can also trigger tightness in the neck and throat muscles, which will impact the voice quality (Bingaman, Mauger and Cantor-Cutiva, 2026). These studies align with Thomas (2025), who studied Muscle Tension Dysphonia (MTD) in the singing voice and discussed factors that develop MTD, which come

not only from physiological factors such as vocal overuse and poor posture, but also from psychological factors such as stress and performance anxiety. Stress and anxiety are known to usually be accompanied by muscle hypertonus or increased muscle tension (Falanga et al., 2023)

Furthermore, Monti & Bianchi (2025) explain that when a singer feels anxious, their autonomic nervous system triggers a “fight or flight” response, which tightens the muscles around the throat and restricts their breathing capacity.

This physical distress could also then lead to psychological distress and anxiety, thus creating a vicious circle that worsens the situation (Falanga *et al.*, 2023). This intertwined connection shows how the body and mind are closely linked and that integrated interventions to calm both mind and body can be useful in reducing tension and vocal distress (Seetharaman, Avhad and Rane, 2024).

A choir that is preparing for an international choir competition is in a high-stakes situation and is prone to higher physical and mental pressures. This is due to anxiety about whether they will win the judges' favor, increasingly demanding song difficulties, and the greater number of additional rehearsals that tire their bodies. Previous studies show that ‘embodied’ intervention strategies that target mind-body integration alongside traditional vocal technique were able to mitigate these issues (Wang *et al.*, 2025; Fritz, Porcaro and Gollery, 2026; Gu *et al.*, 2026)

II.3 Somatic Pedagogy

While the common somatic intervention may involve a longer time (Wang et al., 2025), previous studies support the application of this type of exercise in a regular, shorter time. Mikhailova (2025) suggests the reduction of psychosomatic exercises in a modular 15-20-minute adaptation for effective use in her research. Another study by Chacón *et al.*, (2023) also supports the use of routine micro-practices to get the benefit during busy times. In addition, somatic education prioritizes habituation over length, which justifies the use of regular micro-practices. (Dick, 2013)

The intervention in this project involved 10 sessions of about 30 minutes of body-mind-voice exercises, with the initial 15 minutes dedicated to movement and breath coordination

inspired by four foundational somatic methods: the Alexander Technique, Feldenkrais Method, Linklater Voice, and Lessac Kinesensics. Initially, the curriculum was planned to also include exercises from Fitzmaurice Voiceworks. However, since this method involves a lot of floor work to stimulate the autonomic tremors (Hague, 2016), I excluded this method from this project for the practicality of the choir rehearsal. Below is some background information about the somatic methods used in this research.

Alexander Technique.

This method primarily focuses on the conscious inhibition of habitual, inefficient muscular patterns (Capalbo, 2024). For Choral Singers, the main critical concept taken from this method is the relationship between head, neck, and back. This connection is known by this technique as the “primary control” (Sethson, 2021; Weiss, 2005). When the neck muscles are free then the head can naturally release forward and up. This would allow the spine to lengthen and the back to widen (Sentianin, 2018). Including the Alexander Technique in the micro-practice sets will help the singers to map their spinal alignment and remove unnatural muscular pull on the larynx before the phonation begins (Capalbo, 2024).

Feldenkrais Method

This method focuses on reorganization of the body through gentle and mindful movement (Ziya, Saki and Arjipour, 2026). Feldenkrais “Awareness Through Movement” uses small, exploratory motions to train the nervous system how to move with minimal effort (Paparo, 2022). One of the movements in this method is the torso twist, which would help the community singers sense their skeletal structure rather than muscle strain to improve the biomechanics of respiration (Paparo, 2016).

Linklater Voice Method.

This method focuses on freeing the natural voice. Linklater believes that the natural voice is already perfect but blocked by physical and psychological tension (Linklater, 2006). Her exercises are designed to systematically free the vocal channel by releasing the spine, allowing the breath to drop deep into the body and vibrating the sound freely (Weir Ouston, 2021). One of Linklater’s most well-known exercises is the spinal roll-down/standing forward bend roll. This exercise actively decompresses the vertebrae, creating the physical space needed for a deep, diaphragmatic breath (Knipple, 2018).

Lessac Kinesensic

This method focuses on the sensory experience of voice and speech, using what the author, Arthur Lessac, called “kinesensic” awareness (Lessac, 1997). Lessac training teaches you to feel the physical vibrations of the sound. He categorizes vocal resonance into different types of Vocal Energies, focusing on the forward placement of the sound in the facial mask (Gama et al., 2024)

These somatic micro-exercises were then followed and integrated with semi-occluded vocal tract exercises (SOVTs) and progressive vocalization to synthesize physical release with phonatory execution. Previous research on applying time-limited somatic training during a one-day workshop by Fritz, Porcaro, and Gollery (2026) showed that even a single short intervention of somatic training, specifically Linklater Voice, gives significant results in the improvement of vocal quality based on self-reported respondents. Similarly, Gu *et al.* (2026) found an improvement in voice quality after applying Lessac’s somatic exercises for 4 days to 8 weeks.

III. Methodology

III.1. Research Philosophy and Paradigm

This study is conducted under the Pragmatic research paradigm. In social research, a paradigm is the basic set of beliefs that guides how a researcher views the world and solves problems (Turin, Raihan and Chowdhury, 2024). Pragmatism is one of the major paradigms. A pragmatist focuses more on real-world actions and chooses whatever tools or methods work best to solve a specific problem and achieve a desired result (Kaushik and Walsh, 2019). In contrast to the other paradigm that leans towards one direction of strict objective/quantitative approach (positivism), or the other direction of a subjective or qualitative approach (interpretivism), pragmatism uses both approaches flexibly, tailored based on the complexity of the problem (Kaushik and Walsh, 2019). This point of view matches my natural pedagogical and personal approach that sees the world, makes decisions, and finds answers to questions based on multiple overlapping variables.

In my role as a vocal teacher and choirmaster, when I notice a singer showing physical tension in her singing, my immediate approach is to question what factors might be influencing her tense body at that specific moment. I would try to investigate if this tension

was purely caused by incorrect singing technique or perhaps involved other baggage such as daily office fatigue or performance anxieties, as they may be related to each other (Bremmer and Nijs, 2022). This mindset affects my approach to conducting my research. From my perspective, a strict scientific approach that relies on a single rigid method would fail to capture the whole picture of the problem. Pragmatism allows me to look at a complex problem from multiple angles and gives flexibility in using tools that work best to find a practical solution (Allemang, Sitter and Dimitropoulos, 2022; Kaushik and Walsh, 2019). The mixed-methods approach associated with this paradigm would encourage a researcher to split the populations based on hidden variables, rather than forcing a single, simplified answer (Schoonenboom, 2023).

The pragmatic paradigm has its critics. Hampson and McKinley (2023) argue that pragmatism can sometimes act as a “paradigm of convenience” for researchers who want to easily justify mixing methods without following clear rules. They warned that focusing purely on what works best could lead to a project that has no strict methodological guidance. While I acknowledge these concerns, I also need to point out that the reality of a live choir rehearsal is highly unpredictable. The flexibility of pragmatism is not an excuse for me to avoid academic rigor, but rather a necessary strategy to genuinely capture the complex multi-layered reality of the singers’ physical and mental states.

To better understand the necessity of this pragmatic approach, one must look at the specific complexity of a community choir rehearsal. The choir being studied is not a uniform group of professional musicians. It consists of church members who have a wide variety of backgrounds. Some are office workers, some manage households, and others may have physically demanding field jobs. When they gather for Friday evening rehearsals after work, they carry the accumulated physical and mental baggage of their entire week, which is different from one person to another. In the other rehearsal on Sunday, their mental baggage may be different from when they come on Friday. Each singer walks into the room with different personal situations and varying levels of bodily tension and stress. Moreover, as an amateur choral group, their musical skills in tackling the competition repertoires are significantly different from one person to another. The pressure of preparing for an international competition adds more complexity, as this introduces various levels of performance anxieties. These unpredictable and fluctuating situations directly affect how the musical material is rehearsed on any given night (Bremmer and Nijs, 2022). Because the reality of the rehearsal room is constantly shifting, relying purely on quantitative or qualitative

methods alone would be insufficient. A mixed methods design is essential to capture both the measurable tension levels and the personal stories behind them.

III.2 Practice as Research (PaR) and Researcher Positionality

Being a pragmatist, I needed a research framework that allowed my active role as a choirmaster to directly shape the study. In this regard, the Practice as Research (PaR) methods became suitable to cater my situation as a practitioner-researcher conducting multi-modal inquiries (Nelson, 2022). In traditional academic studies, research is often separated from real life, and the researcher is expected to be an observer who is neutral. However, PaR is built on the idea that the 'praxis', or the practical work itself, is the main way to discover new knowledge (Nelson, 2022). For this research project, the teaching of somatic exercises to the choir is not just an experiment I am watching from afar. The teaching practice itself is the main part of the research.

Nelson (2022) describes the PaR approach as a continuous cycle of "being-doing-thinking". As the choir director preparing a choir for an international competition, I am actively involved in the physical process of leading the exercises (being and doing), while simultaneously adjusting my methods based on what the choir needs (thinking) given how good or bad they are at that moment in mastering the repertoire. In PaR, this step-by-step process of teaching is just as important as the final outcome. This is why my personal field notes and spontaneous adjustments of the planned exercises during rehearsals are considered primary evidence.

From an outside perspective, a PaR session might look exactly like a normal choir warm-up, having me as the choirmaster leading our regular rehearsal. Nelson compares this to the famous "duck-rabbit" optical illusion, shown in Figure 1, where the same picture can be seen in two different ways (as an image of a duck or as an image of a rabbit) depending on how you look at it. The physical exercises that we do during our Friday and Sunday rehearsals look like standard choir activities. However, because, as a researcher, I am carefully tracking the tension levels, documenting the singers' feedback, and reflecting on the outcomes, these regular activities become a formal academic inquiry.

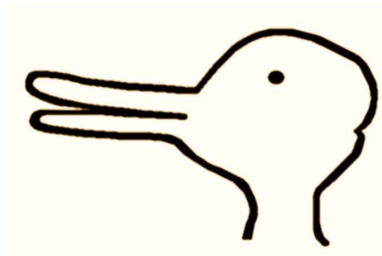


Figure 1a. The “duck-rabbit” illusion (source: Nelson, 2022)

As a practitioner-researcher, having an insider position as both the researcher and the choirmaster of the choir makes me prone to the risk of researcher bias and power dynamics. Participants may feel pressured to participate, or their responses might be adjusted to please the musical director. However, conducting insider research in a choral setting is a recognized practice, such as being done by Paparo (2016), who studied, researched, and taught Feldenkrais methods within his own choir. Moreover, Bremer and Nijs (2022) argue that in embodied music pedagogy, the music teacher’s own body acts as an active instrument and crucial tool for multisensory assessment, which allows the conductor to physically feel and read the group’s musical development in real-time.

To safeguard the data integrity, I designed this research as such:

1. I ensure everyone understands that participation is on a voluntary basis; they do not have to participate or fill in any forms/questionnaires if they don’t want to.
2. I have asked the choir committee to manage the confidential participant ID tracking system so that I don’t know which response belongs to which person, as they will only appear to me as numbers, and I would not know which person is behind that ID number.

III.3 Research Methods & Data Collection

In order to capture the reality of the rehearsal room, this study used a mixed-methods design. As discussed in the previous section, each singer’s situation was too complex to be measured by a single tool. In this regard, the data collection required both quantitative and qualitative elements. The quantitative data is to see the trends in perceived physical tension, while the qualitative data is to understand the personal experiences behind those trends.

The primary tools being used to collect the data were digital surveys created with Google Forms. These surveys were used to measure the initial baseline, each session's pre-rehearsal and post-rehearsal, and the final survey after the whole program. I chose digital forms because they are practical, familiar and highly efficient. Working with Google Sheets formulas, pivot tables, charts, etc is also something that I am used to and comfortable with. The singers could easily complete these forms using their smartphones immediately before and after the somatic micro-practices. This was a crucial practical decision to make sure that the research did not take valuable rehearsal time while the choir was in the middle of preparing for an important upcoming competition.

The Google Forms were designed to take both quantitative and qualitative data simultaneously. For the quantitative data, the form used a simple 1 to 10 scale for the singers to rate their perceived current level of tension and mental stress. This provided clear numerical trends to see whether the somatic exercises were effectively lowering the tension from session to session.

For the qualitative data, the form also includes open-ended questions. Singers were asked to briefly describe their current mental state and specify the exact location of their bodily tension. Collecting this textual data allowed me to split the population during the analysis phase to see how different hidden variables, such as specific office fatigue or performance anxiety, responded to the exercises.

Alongside the data collected from the singers, I also added my own observations and considered them as one of the vital tools. I maintained a reflective field journal throughout the 10 sessions of the study. After each rehearsal, I recorded my personal observations regarding the choir's focus, the adjustments I had to make to the planned somatic exercises, the additional vocal exercises I added, and my own internal decision-making process as a choirmaster. This journal acts as the primary qualitative evidence for how the research was actively managed and adapted in the real world.

I have been avoiding using complex equipment to measure the singers' tension in order to maintain the practical efficiency of the research in a live rehearsal setting. I understand that such perceptive measurements are common, such as the work by McGlashan *et al.* (2025), who also use self-reported measures to evaluate muscle tension dysphonia outcomes. I understand that self-perceived measurement may not be the most reliable, as data

generated by instrumental measures such as surface electromyography (sEMG) or spectrograms (Amorim *et al.*, 2018), but recent research indicates that such equipment is not always reliable in field settings and that adding self-report measures is still valid and needed (Nudelman *et al.*, 2026; McGlashan *et al.*, 2025)

III.4 The Research Procedure: What, When, Where, and With Whom

With Whom

There are 42 participants in this study as per the consent form registrations, and all of them are adult members of a community church choir in East Jakarta. Their age range varies from 16 to 62 years old. The data were collected from the end of July 2026 to the end of August 2026, as they were preparing for an international competition in Jakarta in early September 2026. They have won at least two local choir competitions among church choirs in Jakarta in 2024 and 2025. Their participation in the September 2026 competition was their first experience in a general, non-church-related choir competition, which may have different standards and competitive pressure than local competitions. This competition was an out-of-their-comfort-zone moment for the choir, and the ego to win or the fear of evaluation makes them prone to performance anxieties (Casanova *et al.*, 2025). They were challenged with harder material than they were used to, as well as a newly enforced homework system where they were asked to regularly submit independent study videos or audio.

Their occupations range from students, taking care of households, office worker/desk jobs, field work, etc. Attendance naturally fluctuated between 30 and 35 people per session. Rather than treating this fluctuation as a flaw, this study embraces it as a normal reality of community arts organizations. The diverse backgrounds of the singers ensure a wide range of physical and mental variables to observe.

Where and When

The research was conducted at the regular rehearsal space in one of the meeting rooms in the church in East Jakarta over 10 consecutive sessions within a one-and-a-half-month period of July and August 2026. The data collection occurred during the choir's previously established rehearsal schedule, which falls on Friday evenings and Sunday evenings. This schedule has created a unique temporal dynamic for the research. The gap between Sunday and Friday is five days, meaning singers typically arrived at Friday rehearsals carrying the accumulated fatigue of a full work week. Meanwhile, the gap between Friday and Sunday is

only two days, falling over the weekend when singers' stress levels and physical conditions might be different. This uneven schedule provided an opportunity to observe how the somatic micro-practices function within different types of daily fatigue.

What Was Done

Prior to the data collection, I discussed my intention to work on this study with the choir's committee, which is Ms Venty and Ms Ita. I shared my research proposal with them, and I asked for official written permission from the choir, as it was needed for my ethics form submission to the University. I also discussed with them their role in helping me manage participants' ID numbers, ensuring that I would not know who is behind those ID numbers, to manage my bias, and for the comfort of the participants when submitting their responses.

When all set and ready, I briefly posted in our WhatsApp group my intention to ask the team members to be my research participants. At the end of the rehearsal following that announcement, I explained the plan and mechanisms verbally to them, including the mechanism for getting the participant ID number secretly from Ms Venty/Ms Ita, the mandatory consent form to be filled in, as well as the pre-study form to capture their tension and stress level baseline.

When the data collection started, a step-by-step procedure was set at the beginning of each rehearsal to ensure the effectiveness of the data collection and that this research would not take too much time from the choir's competition preparation. The steps are as follows:

1. On each day of the rehearsal, around 30 minutes before the rehearsal time, the session's Google Form link was posted in the competition team's WhatsApp group.
2. When the singers arrived, slightly before the start of rehearsal time, I would ask them to open the link for today's session Google Form, which they can find most recently distributed on the WhatsApp group.
3. Each session's form has two parts. The first one (pre-log) is to be filled before the warm-up session. This part captures their tension and mental state level on that day (1 to 10), the location of tension, and a brief note for open-ended elaboration. Such an approach was similar to the Vocal Tract Discomfort scale in the research of Tahmtan et al. (2023)

4. When they hit “next”, there will be a space where they need to stop filling in and do the 30-minute warm-up session with me (where the 15-minute somatic micro-exercise is included).
5. Then, after the warm-up session, I ask them to hit “next” and continue with the rest of the form (post-log), which was meant to be filled after the warm-up session, to record their post-exercise tensions and mental state as well as their favoritism and some general notes or open-ended questions about their exercise experience,
6. Rehearsal reflection. The choir then proceeded with repertoire practice. After the rehearsal, I recorded my own observations for that day in my Reflective Field journal to document anything that was not covered in the Google Forms that I should take note of, such as any pedagogical adjustments I made during the session.

III. 5. The Somatic Micro-Practice Syllabus (The Intervention Artifact)

The micro-exercises being used in this study were constructed from the previous study (Module 4 and Module 5) with a more selective process. I eliminated exercises that involved floor work to ensure it can practically be executed in a standard, crowded choir rehearsal room without requiring floor mats and having everyone change their outfit. The micro-practice artifact was structured into three progressive phases:

Phase 1: Spinal Decompression and Suspensory Release

The warm-up consistently began with some gross-motor movements targeting to refine postural singing position, undoing the damage caused by the seated workweek. Some of the exercises include:

- **Nose Circles (Atlanto-Occipital Release).** This exercise was drawn from the principles of the Alexander Technique and Feldenkrais Method. In this exercise, singers were asked to draw micro circles with the tip of their nose. This subtle movement unlocks the atlanto-occipital joint at the base of the skull. This would release deep suspensory tension in the upper neck gently.
- **The Forward Bend Roll.** This exercise was drawn from the Linklater Voice Method, where singers were instructed to slowly drop their heads forward, letting the heavy weight of the skull pull the spine down vertebra by vertebra until the upper body hung completely loose toward the floor.
- **Torso Twist (The “Ondel-Ondel”).** Using Feldenkrais principles, singers let their arms hang completely dead at their sides while rotating their core. This movement

allows the arms to swing loosely and slap against the body. This movement aimed to release rotational tension in the ribs and shoulders.

Phase 2: Breath Regulation

- **The Full Body Shake.** Inspired by the Linklater Voice Method, singers actively shook their hands, arms, legs, and eventually their entire bodies. This intentional, rapid physical disruption aimed to burn off nervous energy, physically interrupting the fight or flight anxiety response, awaken resonance channels and free the natural voice.
- **Belly drop.** Based on the Linklater Voice Method, this exercise asks the singers to sigh their air out until the lungs feel empty. Then they will need to consciously relax and drop the lower abdominal muscles. This action would create the vacuum effect and cause the outside air to automatically be sucked in without the body need to work on it.
- **Yawn-Sigh:** In this exercise, singers executed deep silent yawns with the aim to lift their soft palate and drop the larynx to stimulate the open throat. This exercise was followed by a heavy, audible sigh.
- **See-Saw Breathing Awareness.** This exercise is aimed at reinforcing the lower diaphragmatic breath. Singers were asked to place their hand flat on their upper chest while the other on their lower belly. They were guided to be aware or monitor their breath intake, ensuring a more lower breath activated than the clavicular.



Figure 1b. The choir performing See-Saw Breathing Awareness

(Source: Documentation of Session #2)

Phase 3: Kinesensic Vocal Integration

The final phase becomes the bridge between the physical and mind relaxation and the actual choral phonation. Exercises in this area were mostly taken from Arthur Lessac's principles and Kristin Linklater. Some of these include

- **TMJ/Jaw Massage with Pharyngeal-Placed Vowels.** The jaw massage exercise was inspired from Linklater Voice Method. In this exercise, singers were guided to find their TMJ and massage the surrounding muscles, as well as losing their jaw. While doing so, they are asked to vocalize in eee--eeehhh-aaaah vowels, with keeping their cheek muscles from contracting. This aimed to let these vowel placements go to the pharyngeal area, creating a more resonant and easier-to-blend choral sound.
- **Tongue-Out Postures.** This exercise was also taken from the Linklater principles, where singers were asked to rest their tongues completely outside of their mouth, over the bottom lips, while vocalizing in pure vowels. This exercise aimed to release the tensions often built up at the root of the tongue.
- **The "V" and "Z" Buzz.** This exercise was taken from Lessac Kinesics, where singers were asked to sustain buzzing "V" sounds or " Z " consonants. They were asked to focus on the physical vibrating sensation at their lips, roof of their mouth, and pharyngeal area. This exercise was aimed at securing a forward, resonant placement without inducing throat tension.

IV. Findings

Building upon the data collection procedures explained in the previous chapter, this section presents the outcomes of the ten-session somatic intervention during the period of July-August 2026. In this Practice-as-Research study, there are 41 participants, based on completed participation registrations. Not all of them completed all 10 sessions, due to the reality of choir rehearsals where attendance can be fluctuate. These participants are a mix of male and female singers of a community church choir preparing for an international choir competition in Jakarta in September 2026. According to the pre-study survey, their ages range from 16 to 62 years old, with various occupational day activities, which include studying, doing office desk work, office field work, teaching, taking care of the household, enjoying retirement, etc.

From those who came to rehearsals and chose to participate/fill in the Google Form across all 10 sessions, there are a total of 336 data/responses, with quantitative and qualitative nature. In addition, I also took notes during the exercise or after reviewing the video recording/documentation.

IV.1 Triangulation Approach

As a pragmatic Practice-as-Research study, the objective of this section is not just to present an isolated statistical data analysis, but instead, it aims to understand how these somatic exercises function within the living reality of the choir's rehearsal. In order to capture this reality, the analysis triangulates three main sources of data:

- a. Numerical tensions and stress scales recorded through Google Forms;
- b. Singers' qualitative text regarding their physical and mental experiences;
- c. My own real-time pedagogical observations recorded in the reflective field journal.

This triangulation portrays the being-doing-thinking, which is the heart of Practice-as-Research methods (Nelson, 2022). It connects the statistical numbers and the singers' words, explaining what lies behind those numbers. As both the researcher and the choirmaster, I use my reflective journal and pedagogical adjustments to contextualize the data, highlighting the real-time challenges and solutions of the rehearsal process.

IV.2. Occupational Fatigue

Before analyzing the impact of the somatic micro-exercises, it is important to understand the respondents' pre-study situation. As the choir rehearsal is scheduled on Friday and Sunday evenings, and the study is related to physical tensions and anxieties, or mental stress, looking at their daily activities prior to coming to rehearsal becomes significant. The pre-study survey includes the question field of 'type of work (day job)'. The respondents' answers were then categorized based on the physical demands of their daily routines.

As illustrated in the chart in Figure 2, the majority of participants are mostly sitting down during the day. This category includes office administration work, students spending hours studying, etc. Although a smaller portion engaged in active work, such as field jobs and

managing the household, the choir's dominant culture is that members come to rehearsal from desk-bound day activities.

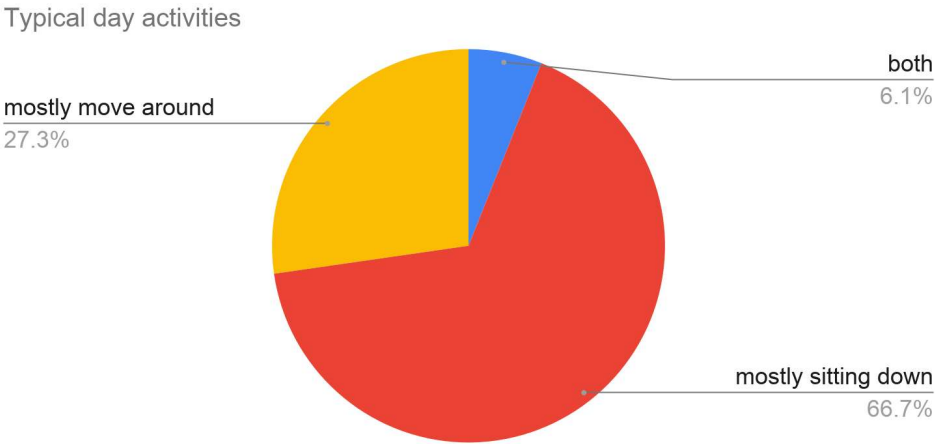


Figure 2. Participants' typical day activities

This lifestyle influences the physical baggage the singers carry into their rehearsals. The pre-study survey asks them to identify the specific locations of their body tensions that commonly tense up every time they come to rehearsal, as shown in Table 1a.

Common tensions based on pre-study survey	Number of occurrence mentioned by respondents
Neck	25 times
Shoulders	21 times
Back	11 times
Jaw	11 times
Chest	6 times
Legs	4 times
Diaphragm	1 times

Table 1a. Common perceived tension locations based on pre-study survey

The data show that the majority of the tensions they bring into the rehearsal from their prior activities during the day are tensions in the Back, Neck, jaw, and Shoulders. In the context of singing, these locations are highly significant. In vocal anatomy, the neck make up the

suspensory system of the larynx (Dimon, 2018). As discussed in the literature review, the larynx behaves as a floating instrument, sits within a network of muscles and ligaments, and has no direct bone-to-bone anchor to the skeletal frame (Dimon, 2018), which makes its function sensitive to bodily alignment. Because of this nature, any tightness in the neck and shoulders may pull the vocal mechanism out of its natural alignment, which may lead to phonation effort and vocal strain (Colado-Tello et al., 2026)

Location of Tensions Pre-Session 1-10	Number of occurrence mentioned by respondents
Shoulders	190 times
Neck	187 times
Back	131 times
Legs	63 times
No Tension	30 times
Jaw	25 times
Chest	23 times
Head	8 times
Arm	3 times

**Table 1b. Perceived tension locations
based on pre-session survey from session 1 to 10**

To make sure that the initial pre-study claims were accurate to the choir's reality during the day-to-day rehearsal, at every session, they were asked again for their pre-session tension locations. Table 1.b. Presents the aggregate of the pre-rehearsal survey across all ten sessions. The findings align with the pre-study survey, with tensions in the shoulders (190 occurrences), neck (187 occurrences), and back (131 occurrences) dominating the singers' physical state upon arriving at rehearsal. This result mirrors the demographic of participants who are "mostly sitting down" during the day, as mentioned earlier. This finding proves that the singers do not arrive at rehearsal as a blank slate; in fact, they have a physical deficit every they come to rehearsal due to the concentration of tension in their suspensory system. Asking them to immediately sing or vocalize without first releasing this occupational fatigue may put them at high risk of singing with a tightened, restricted throat. Therefore, these data confirm that a somatic intervention is not merely an abstract concept for this choir, but a physiological necessity to prepare their bodies for healthy voice production.

Performance Anxiety

Apart from occupational fatigue, the pre-study survey also asked whether the singers often experience performance anxiety whenever preparing for upcoming big events or competitions. The singers' responses mirror the "fight or flight" response outlined by Monti & Bianchi (2025). Participants reported involuntary physiological reactions to stress, including:

"*tangan berkeringat*" (sweaty hands), Participant #3

"*trembling hands*" and "*cold sweat*", Participant #31

"*keram di perut*" (stomach cramps), Participant #41

"My anxiety feels like my heart is beating fast and feels like there is something empty in my chest and about to stab me", Participant #38

These autonomic body response often sabotaged their cognitive function and vocal execution. Singers reported that such anxiety often made them "*tiba tiba lupa*" (suddenly forget) their repertoire or vocal technique (Participant #26). This psychological distress then manifested as vocal strain, with singers mentioning that their voice "*tidak keluar secara maksimal*" (did not come out as prime as maximal as it usually), experiencing "voice cracks" or feeling "*serak*" (hoarse) due to shallow breathing.

This qualitative data establishes a solid baseline that strengthened the claim that the choir entered this study with not only physical fatigue but also psychological anxiety. Therefore, a psychophysical somatic intervention is required, as strictly technical vocal warm-up would not be sufficient for effective choral singing.

IV.3. The Overall Impact of Micro-Practices

Understanding that the choir members arrive at rehearsals with occupational fatigue and anxieties, the next step is to evaluate whether the somatic micro-exercises were able to mitigate the issues. During the ten sessions of the study, participants were asked to record their perceived physical tension and mental stress on a scale of 1 to 10 immediately before and after the warm-up session. The aggregated average data are shown in Table 2a below.

Session	AVERAGE of Pre-exercise Physical Tension	AVERAGE of Post-exercise Physical Tension	AVERAGE of Pre to Post Tension	AVERAGE of Pre-exercise Mental Stress	AVERAGE of Post-exercise Mental Stress	AVERAGE of Pre to Post Mental Stress
01 (Sun 19/7)	5.68	3.26	-2.42	5.24	3.42	-1.82
02 (Fri 24/7)	4.71	3.24	-1.47	4.26	2.97	-1.29
03 (Sun 26/7)	4.83	2.72	-2.11	4.56	2.50	-2.06
04 (Fri 31/7)	5.43	2.89	-2.54	4.75	2.89	-1.86
05 (Fri 7/8)	5.16	2.89	-2.26	4.87	3.08	-1.79
06 (Sun 9/8)	4.08	2.50	-1.58	3.84	2.63	-1.21
07 (Fri 14/8)	5.69	3.35	-2.35	5.38	3.35	-2.04
08 (Sun 16/8)	4.28	2.44	-1.84	4.03	2.69	-1.34
09 (Sun 23/8)	5.06	2.79	-2.27	5.12	3.06	-2.06
10 (Sun 30/8)	4.58	2.73	-1.85	4.48	3.00	-1.48
Grand Total	4.93	2.87	-2.06	4.64	2.95	-1.68

Table 2a. Aggregate Average Data from Session 1 to 10

The average pre-exercise tensions are compared to the post-exercise tensions and found the balance pre to post to see whether reduction of tension. The same goes to the mental state. As demonstrated in Table 2a, the somatic micro-exercises intervention has lowered the choir's physical tension by total average of 2.06 points in each rehearsal. This indicates that the exercises were able to reset the singers' bodies into a healthy and manageable baseline, which help them to handle the demanding vocal technique required for their competition repertoires without straining their larynxes. Reduction in physical tension also visually noticeable when presented in a barline chart as shown in Figure 3a below.

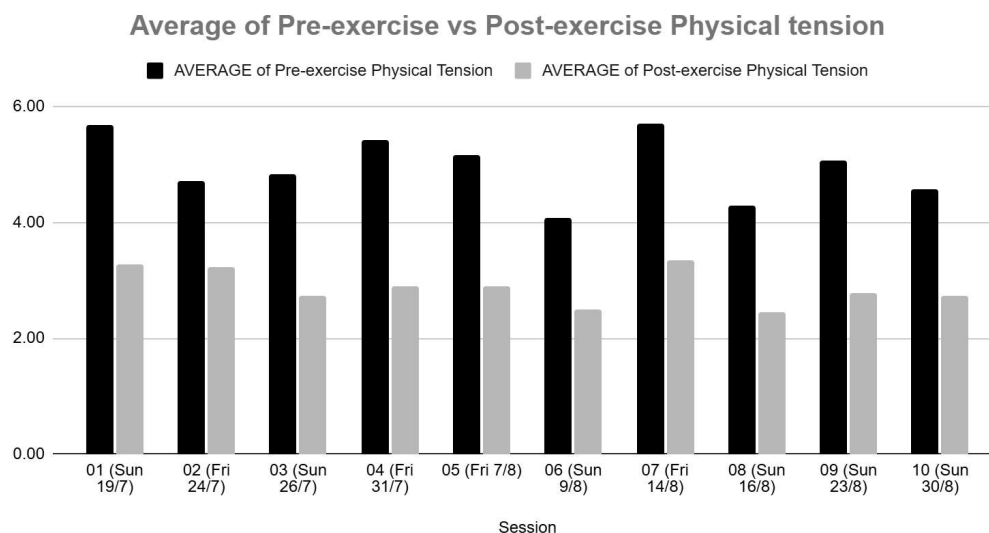


Figure 3a. Comparison of perceived tension level between pre- vs post-session

Aside from the physiological benefits, the somatic micro exercises also impacted psychologically. As recorded previously in the pre-study survey, the singers often experience performance anxiety as well as cognitive overload, which disrupted their focus and eventually may affect their singing performance.

Table 2a above also shows a reduction of mental stress at average of 1.68 points per rehearsal. These findings show that the micro-somatic exercises used in this project have an influence on the singers’ psychological state. These findings validates the mind-body connection discussed in the literature review. By giving the singers a focused, physical task to perform, it helped pull them out of their anxious “fight or flight” response, lowered their affective filter, and prepared them to concentrate more on the music.

Reduction in mental stress level can be seen visually from Figure 3b below.

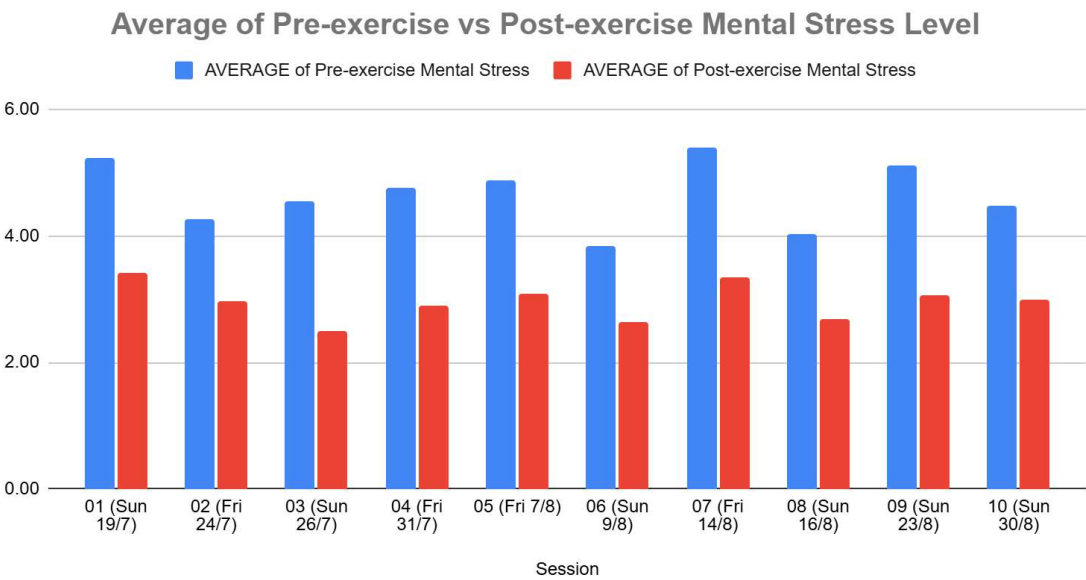


Figure 3b. Comparison of perceived mental stress level pre- vs post-session

Overall, this aggregate data validates the main pragmatic goal of this Practice-as-Research study. It shows that the inclusion of micro somatic exercises blended into the warm-up process is effective. Rather than taking valuable time away from repertoire practice for a dedicated day to work specifically on these ‘non-music’ factors, the micro-practices use in

this project are reliable enough as a tool to neutralize both physical fatigue of the workweek and mental pressure of competition preparation.

IV. 4 Mitigating Different Pre-Rehearsal Baggage on Different Rehearsal Days

The rehearsal schedule of Friday and Sunday gives an opportunity to observe how different levels of fatigue may affect the singers and their rehearsal. While the gap between rehearsals is uneven, the nature of daily fatigue experienced by singers prior to coming to rehearsal is also different. The five days between Sunday and Friday would mean that the singers arrive at Friday's rehearsal with accumulated physical and mental stress of a full work week. Meanwhile, the only two days between Friday and Sunday may have lighter physical and mental stress compared to the other five days.

Session	AVERAGE of Pre-exercise Physical Tension	AVERAGE of Post-exercise Physical Tension	AVERAGE of Pre to Post Tension	AVERAGE of Pre-exercise Mental Stress	AVERAGE of Post-exercise Mental Stress	AVERAGE of Pre to Post Mental Stress
02 (Fri 24/7)	4.71	3.24	-1.47	4.26	2.97	-1.29
04 (Fri 31/7)	5.43	2.89	-2.54	4.75	2.89	-1.86
05 (Fri 7/8)	5.16	2.89	-2.26	4.87	3.08	-1.79
07 (Fri 14/8)	5.69	3.35	-2.35	5.38	3.35	-2.04
Grand Total	5.21	3.08	-2.13	4.79	3.06	-1.72

Table 2b. Quantitative data for Fridays only

Session	AVERAGE of Pre-exercise Physical Tension	AVERAGE of Post-exercise Physical Tension	AVERAGE of Pre to Post Tension	AVERAGE of Pre-exercise Mental Stress	AVERAGE of Post-exercise Mental Stress	AVERAGE of Pre to Post Mental Stress
01 (Sun 19/7)	5.68	3.26	-2.42	5.24	3.42	-1.82
03 (Sun 26/7)	4.83	2.72	-2.11	4.56	2.50	-2.06
06 (Sun 9/8)	4.08	2.50	-1.58	3.84	2.63	-1.21
08 (Sun 16/8)	4.28	2.44	-1.84	4.03	2.69	-1.34
09 (Sun 23/8)	5.06	2.79	-2.27	5.12	3.06	-2.06
10 (Sun 30/8)	4.58	2.73	-1.85	4.48	3.00	-1.48
Grand Total	4.76	2.75	-2.01	4.55	2.89	-1.66

Table 2c. Quantitative data for Sundays only

When the quantitative data is grouped/separated between the days of the week compared to the ones on the weekend, the difference in the singers' physical starting conditions becomes clear.

Comparing Table 2b and 2c, based on this quantitative data, it was confirmed that on Friday the choir arrives with heavier tension, with an average pre-session tension level of 5.21 compared to 4.76 of Sundays. The somatic intervention resulted in an average physical tension drop on Fridays at -2.13 points; while on Sundays, at -2.01 points. This almost similar number means that there was still a big difference in post exercise tension between Fridays and Sundays, where post exercise tension was 3.08 on Fridays and 2.75 on Sundays.

Meanwhile, on the stress level, there was only a slight difference between pre-exercise mental stress level for Fridays at 4.79 and Sundays at 4.55. Drops also almost similar between Fridays at average 1.72 per rehearsal and Sundays drop at 1.66 per rehearsal.

To get better understanding of these number, we need to check on the qualitative feedback from participants. On each session's survey, the singers were provided with the option to briefly elaborate on their perceived tension level. On Friday's survey, many mentioned something similar:

"Lelah karena seharian di luar kantor" (tired due to field work all day),

Participant #9 (31/7)

"My back is really sore, and my chest muscles feel tense from lifting weights", Participant #41 (31/7)

"Just not a good day", Participant #2 (7/8)

"Banyak pekerjaan banyak masalah kantor" (there's a lot of work and problems at the office), Participant #14 (7/8)

"From the work", Participant #27 (14/8)

Meanwhile, on Sundays, most of the qualitative part would be something like this:

"Ngga ada. Karena weekend, jadi lebih santai" (Nothing, because of the weekend, so things are more relaxed), Participant #3 (26/7)

"Ga ada si, overall good, abis tidur siang dan nyuci piring" (Nothing, overall good, just had a nap and washed the dishes), Participant #38 (16/8)

This explains the difference in pre-exercises tension levels between Fridays and Sundays, as the qualitative feedback confirms the numerical data. However, although most people

experience lighter days on Sundays, there are still more participants who reported having hard days on Sundays for various reasons.

“Feels more tension. Not in a fit condition today. Sore throat”, Participant #22
(26/7)

“I lost my beloved cousin yesterday. Died of a heart attack. We’re very close.
My heart’s broken :(“, participant #31 (23/8)

“Just had a long motorbike ride plus an argument in the street with another
motorist because he was driving against the street direction”,
participant #41 (23/8)

“Lots of activities this weekend”, participant #5 (9/8)

“I’m a little tired right now..because I’m preparing our training location..but it’s
still safe”, participant #32 (9/8)

When analyzing the post-exercise data, the result shows a reality regarding how these somatic exercises function. Initially, one might hope that these exercises would serve as a dynamic equalizer to bring singers back to their neutral state. However, the data proves otherwise. Because the routine brings a relatively fixed drop of about 2 points, there was still a big gap in the post-exercise tension between Fridays and Sundays.

This finding suggests that the choirmaster cannot use a rigid one-size-fits-all approach to warm-up sessions. The warm-up routine that prepares a choir for a Sunday afternoon is simply not enough for a Friday night. To achieve a bigger drop in tension level on Fridays, the choirmaster must actively differentiate the rehearsal plan. As a choirmaster, I have had to instinctively try to differentiate the exercise, as shown in my Reflective Field Notes where I keep adding and modifying exercises, adding more relaxation physical movements targeting neck, shoulders, and back, as well as general full-body shaking. However, these additions apparently were still not enough. Additional timing or a more rigorous gross motor release exercise may still be needed to fully clear Friday fatigue.

IV. 5. Practice-as-Research in Action: Pedagogical Agility

The essence of a Practice-as-Research study is the cycle of “being-doing-thinking” (Nelson, 2022). A practitioner who employs this study in a live choir environment cannot simply act as a passive observer executing a rigid plan. As a choirmaster, I need to lead the exercise,

observe the choir's physical and vocal reaction in real time, and immediately adjust my exercise plan to try to mitigate the problem I see.

Although this study was built upon the creation of the somatic exercise as an artifact of my previous study in Module 4 and Module 5, I re-curated my syllabus and exercise plan for this study. As a pragmatist, I intentionally did not finalize the syllabus for all ten sessions prior to the study. Instead, I initially designed the exercises only up to Session V. I intended to adjust the syllabus dynamically using the data gathered from Google Form feedback and my real-time observation recorded in my reflective field journal. Looking back at my field journal, I notice that the pedagogical agility centered around these two main topics:

Accommodating Physical and Mental needs

The community choir I am working with has a variety of backgrounds in age, physical conditions (or training), different skills or knowledge in physical, mental & vocal self-care, etc. In this case, as the choirmaster, I had to ensure that the somatic movements I was using for this study were safe and accessible to them, given whatever their condition. My field journal shows several instances where the planned exercises had been modified on the spot to accommodate specific physical limitations



Figure 4a. Documentation of the choir performing Linklater's forward bend roll exercise
(source: Documentation of Session #9)

During session 3, my initial lesson plan included the Linklater “Standing Forward Bend Roll” where everyone is guided to bend forward while standing up and let the upper body hang relaxed as shown in Figure 4. However, I observed that one of the new members apparently had his leg still recovering from a recent motorbike accident and not able to stand for too long. Realizing that, I then offered everyone the alternate version of the exercise, which is similar exercise but in a seated position. This spontaneous adjustment allowed the injured singer to participate fully and not feel excluded from the group activity.

Another similar situation happened during Session 9. The choir was scheduled to do the Alexander Technique’s “Monkey Position”. This exercise requires participants to bend their knees and hinge their upper body forward to naturally widen the back. One of the members alerted me that one of our female members just realized that she’s pregnant, in the first trimester, and asked me to have her sit down. Same thing; I was then taught and modified the exercise for the seated position.



Figure 4b. Modified seated-version of the Linklater’s forward bend roll
(Source: Documentation Session #3)

Apart from physical accommodations, I also had to adjust the syllabus to address the choir's mental needs. This often happened during the Friday evenings when singers arrived with occupational fatigue. Although my journal reflects my own worry that I was not providing enough technical voice building, I realized that pushing highly technical vocal mechanics to mentally exhausted singers may create more tension. To mitigate this, I adjusted my method by often adding gross motor movements, like the Linklater full-body shake, and lots of breathing and sighs, even though they are not in the plan for that day, to help them physically release their nervous energy. By accommodating their mental fatigue first, their bodies would naturally open up for better singing.

Accommodating Vocal and Repertoire needs

At the very end, the goal of the exercises is to support the singers in making music. These warm-up sessions had to serve a musical purpose. As the choir is preparing for a national competition, a demanding repertoire was involved. I could not afford to separate the physical warm-up from the vocal goal of the rehearsal. There were several sessions where I spontaneously modified the somatic routines to directly target the vocal mechanics needed for our specific songs.

One of the examples was finding the effective resonance placement. During session II, I made a note in my reflective journal that the singers were not accessing the higher vocal placement as much as I had expected. To correct this, I deviated from the standard breath exercises and spent additional time on building the resonance. I introduced the choir to the concept of 'pharyngeal vowels,' where I asked them to relax the muscles surrounding the cheeks and mouth when making vowels, making vowels "eee-eehh-aaah" while massaging their cheek and jaw muscles. This exercise promotes a relaxed jaw while guiding the sound into the mask. I also do this sensory approach again in Session VII. When I was asking the choir to do liptrill, I instructed them to focus on the "ticklish area" between their nose and their upper lip. I then asked them to sing pure vowels while aiming the sound to cut through that ticklish spot. The journal confirms this physical adjustment made their sound immediately more resonant.

While working on the singers' placement and resonance, I also take time to connect the exercise with the repertoire. Observing at several previous rehearsals, I noticed that the choir was struggling with activating their singing support and ended up with quite a bit of

'yelling' when singing Trotta's *Dies Irae*. In Session IV, I spent more time on the lower expansion exercise, such as Linklater's belly drop, dog panting, and then engaging the singing support while singing a vocalizing tune using the words "Dies Irae", then "Solvat Secum," and other words taken from the song. I also worked on connecting our resonance by going through from lip trill to the word "in favilla", focusing on tall "iiihh"

In the following rehearsal (Session V), I noticed that many singers may be experiencing some tongue tension. To mitigate this, I implemented an unplanned modification by adding some tongue work. I asked them to sing pure vowels of "i-e-i-a" while having the tongue stay completely out. I did this to release their tongue tension during the very beginning part of the song "Dies Irae dies Illa", where the tongue on "aah" is often, visually seen from where I stand, being retracted.



Figure 5. Documentation photo of 'Ondel-ondel' Torso Twist movement

(Source: Documentation of Session #7)

Adapting Local Culture

Another element of pedagogical agility recorded in my field journal includes the translation of the somatic language into a culturally relatable language. In Session VII, I introduced the Feldenkrais arm swing and torso twist to help the singers release lower back tension. Instead of introducing the formal name and describing the science behind this exercise, I renamed the exercise into something they are familiar with, which is "*Ondel-ondel*". I named

this movement after this traditional Indonesian Betawi giant doll, because the movement looks very similar to it. The choir can relate to this, and some put this exercise as their favorite/most helpful exercise of the day. This confirms that effective Practice-as-Research pedagogy may benefit from cultural translation, as adapting delivery of the exercise to match the local culture helps the somatic interventions to be both accessible and deeply effective to the choir.

IV. 6. Qualitative Evidence of Impact of the Exercise

While the quantitative data shows that the somatic micro-exercises successfully lowered physical tension and mental stress, it is essential to look at whether these relaxations actually improved choral performance. The objective of this study is not only to help singers to relax, but to prepare their bodies for a more demanding vocal technique and challenging competition materials. To evaluate this, one of the questions in each session's Google Form was "Immediate Changes," where participants could mention if there were indeed any immediate changes that they felt after the exercise.

The feedback was then classified into a few themes, resulting in these three dominant categories regarding how the somatic interventions translated into vocal execution: Physiological Relief, Mind Relief, and Improved Vocal Sensory and Quality, as shown in Appendix 3d and 3e.

Physiological Relief

The most frequent theme in the qualitative data was related to physiological relief. The feedback is mostly related to the release of suspensory muscles and the expansion of breath capacity. The qualitative feedback from the participants mentioned some specific areas, mostly around neck, shoulders and back. Below are some of the examples

"Nafas lebih panjang" (Breath is longer), Participant #18 (31/7)

"Lebih merasa lega, tension di bahu berkurang" (feel more relieved, there's tensions reduction in the shoulders), Participant #22 (23/8)

"Feel better around lower back", Participant #2 (16/8)

"Back n neck feel less tension", Participant #10 (30/8)

"Bagian pundak jadi lebih ringan" (the shoulders feels lighter), Participant #35 (7/8)

"Leher ga terlalu pegel lagi setelah exercise" (no more tight neck after the exercise) Participant #3 (24/7)

"Lebih bisa merasakan napas yang full sampai bawah" (Can better feel the full breath all the way down), Participant #21 (9/8)

This finding explains further the quantitative findings where the inclusion of micro-somatic exercises into the warm up routines has brought down the perceived pre-exercise tension level by about 2 points in every rehearsal. It elaborated where the tension reduction happened.

Mental Relief

The qualitative responses showed that the micro-practice also helped to reduce mental fatigue and mental stress due to various reasons outside the rehearsal. Several comments regarding this are as follows:

"Yess, it's quite helpful to release my stressed mind", Participant #31 (24/7)

"Feel more calm, and no stress", Participant #40 (24/7)

"The swinging arms reduce my physical tension and the sighs reduce mental tension, really :)", Participant #31 (31/7)

"There are particular changes. Kinda boost my mood :)", Participant #31 (23/8)

Improved Vocal Sensory and Quality

Based on the qualitative response, many were commenting on how the exercises impacted their voice, particularly their resonance. Participants described this sensory awakening clearly, as follows:

"Yes suara lebih empuk dan tidak kehabisan napas" (Yes, the voice is softer/richer and does not run out of breath), Participant #9 (31/7)

"Yes, my high notes felt less forced", Participant #16 (31/7)

"Lebih bisa merasakan resonansi di faring" (Better able to feel the resonance in the pharynx), Participant #4 (24/7)

"*Dengan mengisi napas full sampai perut bagian bawah terasa lebih stabil saat bernyanyi*" (By filling the breath fully to the lower stomach, it feels more stable when singing), Participant #15 (16/8)

"Focus and feels my voice is more... forward", Participant #18 (9/8)

"Yes, aware of the ringing spot. Where to stay", Participant #8 (25/8)

When the tension in the neck, shoulder, and jaw were removed, singers consistently reported finding a healthy vocal placement without strain. This indicates that their suspensory system was no longer pulling the larynx out of alignment, resulting in a higher quality of vocal tone.

Psychophysical overlap

Across the 10 sessions, one of the typical responses uses words such as "relax" or "lega" (relieved), which I found to be quite challenging when it comes to coding, as these words are rather 'holistic' and may involve both physiological and psychological connections. While highly specific statements, such as "*leher ga terlalu pegal*" (neck is not as sore), by Participant #3, could be neatly categorized under Psychological Relief, more generalized comments, such as "*Terasa lebih rileks*" (feel more relaxed), naturally blurred the boundaries between physical body and psychological state. More similar examples are listed below:

"*Sangat membantu menghilangkan tension pada tubuh dan suara..sehingga lebih bisa focus*" (It really helps to relieve tension in the body and voice...so you can focus better), Participant #32 (26/7)

Operating within a Pragmatic paradigm, this study uses simultaneous coding (co-occurrence) to capture the true psychophysical dynamics of the exercises. This means that when the singer noted that they felt "more relaxed," the response was cross-coded under both Psychological Relief and Mind Relief.

Thematic Grouping for "Immediate Changes" after blended somatic exercises & voice warm up	Frequency
Physiological Relief	189 times
Mind Relief	95 times
Improved Vocal Sensory and Quality	74 times
None	27 times

(Note: Total frequency exceeds the total number of physical participants due to simultaneous psychophysical coding of holistic responses)

Table 3a. Thematic grouping of qualitative feedback of “immediate changes”

This dual-coding approach is not a failure of thematic separation; instead, supporting the mind-body connection nature of the somatic exercises. The somatic micro-practices do not target the larynx or the autonomic nervous system in isolation; instead, as the physical body releases muscular ‘hypertonus’ or tension, the nervous system shifts out of its “fight or flight” competition mode, inducing cognitive calmness (Monti and Bianchi, 2025).

Most helpful or most favorite exercises

Another qualitative data point gathered during each session was asking about the participants’ most favorite or helpful exercise. The answers were coded and categorized and grouped together. Some of the participants were not using the formal somatic vocabulary. They frequently described exercises using informal words, such as describing Linklater forward bed roll as the “zombie” or the “Mr Bean” movement. The results of these thematic processes are presented in Table 3b.

The data show the big three most favored are Linklater's forward bend roll that appears 86 times; exercises targeting the breathing, sigh, and diaphragm that are mentioned for 64 times; and exercises related to vocalizing and pharyngeal, which are mentioned 53 times. The popularity of the Forward Bend Roll correlates with the occupational fatigue discussed earlier in this study. Since most of the choir spend their days doing desk work, they arrive at rehearsal with compressed lumbar spines. The spinal forward roll-down exercise

decompresses the spine and produces a relief sensation. The high favoritism for breathing exercises proves that the participants value exercises that bridge the gap between physical relaxation and the actual singing.

Category	Frequency
Forward Bend Roll	86
Breathing, Sigh, Diaphragm	64
Vocalising, Pharyngeal	53
Neck & Shoulders	33
Body Shake	33
Jaw Tongue & SOVT	30
Stretching	29
Lift or Belly Drop	9
Seated FBR	7
Arm Swing	5

(Note: Total frequency exceeds the total number of physical participants due to simultaneous coding)

Table 3b. Thematic grouping for “Exercise Favoritism”

Beyond the big three, the data show significant praise for exercises involving the neck and shoulders, the body shake, and exercises involving the tongue, jaw, and SOVTs. Although we were not using unintentional tremor in this study, the Linklater approach to shaking the body seems to be acceptable enough by participants for tension relief, as well as the neck and shoulder work applied in this study. Similarly, the exercises involving the tongue and jaw found to be helpful, as these mentions validate the perceived impact felt by the participants.

There was an unexpected anomaly in the data where participants mentioned “stretching” 29 times. This is a fascinating finding because traditional sports-style stretching was not utilized during this study. However, some postural alignment exercises may be mistakenly identified as “stretching”. This would include the Alexander Technique’s posture alignment check, the nose/neck rolls, or even the forward bend, which could all be generally identified as ‘the stretching session’. This discrepancy highlights the vocabulary gap within the amateur singers. The gap align with the data at the pre-study survey, where most of the participants answered “I don’t know any of them” to the question that asked about their familiarity with

somatic methods. They experience the physical release caused by the exercise but lack understanding of its somatic terminology, and default all to the more familiar word “stretching”

Based on this finding, we can also see the realistic hierarchy of physical needs. Although seated modification of forward bend roll as well as culturally adapted “ondel-ondel” arm swing was relatable and appreciated by them, they did not put them as their favorite. This does not mean that those exercises and pedagogical adaptations were not effective; it just that when given a choice, singers would prioritize a deeper, more intense spinal decompression over the other gentler somatic movements. This is more about the need-based favoritism, realizing how tired they were when they came to rehearsal after a long day at work and went through Jakarta’s challenging after-hours traffic.

IV. 7. Anomalies, Limitations and Choirmaster Positionality

In Practice-as-Research, evaluating the anomalies and limitations of the study is just as important as reporting its success. Acknowledging where the somatic exercises felt too short or caused discomfort, or any other limitations, will ensure the rigor and objectivity of the study. Although about 60 percent of the 336 submissions mentioned that they have no challenges in doing these exercises, there were also some challenges that they mentioned, which reveal some limitations regarding the application of somatic theory to amateur singers.

Participant Limitations and Physical Challenges.

Most of the challenges noted by participants are related to Linklater’s “Standing Forward Bend Roll”. This is quite ironic because this exercise, at the same time, was the most popularly mentioned as a favorite in this study, based on the post-study survey. Of 38 participants who filled in the post-study survey, 22 of them mentioned this exercise as their favorite exercise.

Meanwhile, those who reported having discomfort said that the problem is due to inversion of the head.

"Yg bagian menggantung kepala makin ke bawah, agak pusing" (The part where the head hangs further down makes me a bit dizzy), Participant #20 (19/7)

"Bowling down triggered migraine more", Participant #12 (19/7)

"Menunduk, waktu kembali tegak goyang, ga langsung stabil" (Bending down, when returning to standing upright, I sway and am not immediately stable), Participant #28 (14/8)

These concerns portray the distinct limitation when adapting conservatory-level training into a community choir environment. Unlike professional actors who condition their bodies daily, the amateur singers arriving to rehearsals after a long workday may be susceptible to other health conditions on top of occupational fatigue. The requirements that the somatic exercises be conducted entirely from standing position bring its own challenges. Participant #12 noted "cuman aku kalo kebanyakan berdiri sakit pinggang" (it's just that my back hurts if I stand too much). In addition, even standard movement could add extra pain to pre-existing occupational injuries. An example mentioned by Participant #40 saying that the back hurts when stretched due to prior soreness. My reflective journal recorded that some effort has been made to mitigate these concerns by teaching the seated version of the exercise and allowing them to use the seated version whenever they feel the need to, ensuring safety for all participants.

Other challenges related to the unpredictable nature of the human body and other external environment factors. As an example, one of the very popular exercises, "tongue-out," that was used to help mitigate tongue tension as well as boost the resonance, was commented by one of the participants as "useful, but I have a bad gag reflex", Participant #30 (31/7).

Furthermore, the data proves that somatic interventions cannot fully mitigate difficult external personal situations or basic human needs. Despite the structured warm-up, some tensions could not be mitigated; this includes some things that participants wrote:

"I don't feel like I can do the movements comfortably because of my mental state today", Participant #31 (23/8)

"Hungry, haven't had a meal before rehearsal", Participant #3 (23/8)

These anomalies show the boundary of the research. While somatic exercises are known to be powerful to regulate the nervous system and prepare vocal instruments, they can not cure deep psychological grief, pre-existing neck injury or replace a missed meal.

Cognitive Overload During Repertoire Learning

Apart from physical limitations, the data also revealed some psychological limitation regarding cognitive capacity of the singers. Although the somatic exercises were able to lower the physical tensions and mental stress level, maintaining them throughout the rest of the rehearsal may be challenging. As the choir going outside of their church environment comfort zone, the competition program chosen was more demanding than their usual. Participant #34 explicitly mentioned in the session 6 “It’s not easy to combine all things: Techniques and songs. This highlights the cognitive overloads of the amateur singers, where they have to read complex notation, while maintaining vocal pleasantness. This situation proves that the 15 minutes somatic exercise was only the first step. Choirmasters must continue to bridge the gap between physical conditioning and repertoire execution in order to prevent singers from reverting to their habitual tension.

IV. 8. Pragmatic Viability and Future Applications

To evaluate this Practice-as-Research study, participants completed a post-study survey assessing their overall experience and perceived impact of this study. The quantitative part shows positive results. When asked to rate the overall program on a scale of 1 to 10, the choir reported an average score of 8.55 on how the exercise helped to reduce physical tension, 8.13 for reducing mental stress, and 8.76 for improving singing quality (See Appendix 4b).

One of the questions asked during the post-study survey asked the choir's opinion regarding time allocations between the physical exercise and the vocal exercise. From the 38 participants who submitted the post-study survey, 27 of them stated that the time allocation for these exercises was “Just right”. This shows that somatic education does not require hours of dedicated floor work and can be successfully condensed into modular 15-minute micro-practices that fit seamlessly into choir rehearsals.

Although most participants were happy with the time allocation, there were 6 people who wished to have more vocal practice. It is understandable because the choir was preparing for an international competition, and some members may have felt insecure about their vocal technique and wished for more vocal building. There were only two people who asked to have more time for both the somatic part and the vocal part. *"The Somatics needs more time, at least 20 minutes, as does the vocals"*, Participant #9. Another participant suggested a possible extension: *"If needed, can be extended to 45 min, but ideally, it's sufficient if the exercise is completed in 30 minutes duration"*, Participant #3.

The post-study survey also asks for overall feedback from the choir. Most of the participants ask that the practice be institutionalized rather than just a temporary academic experiments. Participants explicitly requested that the exercise be kept as a permanent routine of the choir and become the culture of the choir.

"Yess, please keep the somatic exercise as permanent part of the rehearsals",
Participant #2

"We need to maintain this habit. Not only for us, but for all the choir we participated in. This exercise makes me aware of my body to sing together with the chords and the pitch. When I sing with the body, I can feel the full support to produce the optimum result. Thank you, Mas Dani!", Participant #3

"I believe somatic training is essential for continued practice, as it's proven to produce a strong, cohesive sound. It should be taught to various choir groups to achieve similar results, similar to those achieved by our choir",
Participant #5

"I feel like these exercises helped me "find my voice" again, even when I was tired or sick, I found placements and ways to sing without shredding my vocal chords. I think this should be a permanent routine", Participant #6

"This somatic training needs to be maintained and made a "culture" for all choirs because it is so beneficial. If necessary, special training should be provided to discuss and explore it, training coaches so they are confident and accustomed to it.", Participant #14

"These exercises really help with the tension in the body and with the guidance of Mr Dani helps us to be more mindful. These exercises are a great addition to our choir rehearsals", Participant #23

“This exercise is very good to apply in every choir practice.” Participant #32

Some of the members also gave feedback for improvement, such as Participant #15 who says, “Adjustments to standing or sitting positions need to be considered for participants who have physical limitations, are disabled, or are not fit”. In addition, Participant #42 ask for more exercise variety, by commenting, “More variety for the movements”.

Some members also apply these exercises for themselves in their own time, or whenever they are teaching other choirs.

“Perlu dipertahankan. Soalnya saya coba terapkan saat ngajar, sangat efektif.

Makasih” (It's worth maintaining. I've tried it in my teaching sessions, and it's very effective. Thanks), Participant #45

“I will continue to practice somatic exercises every time I train or go on assignments because they are truly beneficial”, Participant #13

This final piece of qualitative data is the big validation of this Practice-as-Research methodology. The somatic syllabus successfully provided psychological and cognitive relief, proved to be highly time-efficient, and was pragmatic enough to be immediately adopted by other practitioners in the field.

V. Conclusion

This study was set to discover how choirmasters can effectively prepare the bodies and minds of amateur singers, who often carry daytime occupational fatigue, for effective rehearsal. Through the Practice-as-Research approach, this study moved beyond working on theoretical vocal anatomy and instead tested a real-world, time-efficient somatic intervention. Participants are a community church choir in East Jakarta who are preparing for an upcoming international choir competition.

As explained at the beginning of this report, the singers in this community choir carried significant physical baggage into the rehearsal rooms. This was confirmed by the singers themselves through the digital survey used to collect data for this study. They confirmed that most of them sit during the day, be it office desk work, study, or other similar. The data also reveal that most of them come to rehearsal with tensions that are mostly around the Neck, shoulders, and back. In vocal anatomy, these areas serve as the suspensory system for the

larynx, which means that tensions in those areas affect singing. When occupational fatigue is added with the psychological stress of an upcoming international competition, this creates a severe barrier to healthy singing. It is clear that asking the singers to execute highly demanding repertoire without regulating their nervous system would lead only to vocal strain.

In order to mitigate this issue, a 15-minute modular somatic routine was infused into the total 30-minute warm-up session. The somatic exercises were taken or inspired by the Alexander Technique, Feldenkrais Method, Linklater Voice, and Lessac Kinesensics. The exercises were limited to those performed standing only, for practical reasons. Data were taken using a Google Form immediately before and after the warm-up session. The quantitative data proved that these micro-practices were able to lower physical tension and mental stress across all ten sessions.

The qualitative feedback from the singers confirmed that these somatic micro-practices have been improving their singing technique. They experienced sensory awakening and felt ease in singing. They were able to find a forward, ringing vocal placement without forcing their high notes. The breathing exercises help them to access their lower breath capacity and give stability and support for their singing.

The use of Practice-as-Research methodology provides room for pedagogical agility in this study. The lesson plan that I used for this study was not a static lesson plan, but adjustable based on my observation of the choir. Some real-time modifications were made in order to accommodate physical limitations, cognitive overloads, or specific repertoire needs. Some of the adjustments include the unplanned additional somatic exercise for tongue root tension and resonance at times when I saw the choir need them based on hearing their voice.

Ultimately, the goal of this somatic intervention was to prepare the choir for their participation at the 7th Penabur International Choir Festival (PICF) in September 2026. This was the choir's first experience competing outside the church environment. They were judged by an internationally renowned panel of judges, including Lorenzo Donati, Ambroz Copi, Mark Anthony Carpio, Nelson Kwei, and Susanna Saw. They performed William Byrd's *Haec Dies* and Hubert Parry's *My Soul, There is a Country*. The choir successfully earned Gold Award Level I with a total score of 81.50.

Looking forward, the post-study survey confirms that this approach is viable for future applications. The singers overwhelmingly agreed that the 15-minute somatic inclusion in the warm-up session was at the perfect balance of time. The participants felt the benefit from the exercises and strongly asked for the practice to become a permanent culture within the choir. They also recommended that this approach be shared with other choral groups, and those who also teach other choirs said that they want to implement this method in their choir.

(12,538 word)

References

- Alexander, F. M. (1932) *The Use of the Self: Its Conscious Direction in Relation to Disease and to the Inhibition of Misdirected Energy*. London: Methuen & Co
- Alexander Technique Bristol (2021) *10 steps to better walking with the Alexander Technique*. [Online] Available at:
<https://www.alexandertechniquebristol.co.uk/10-steps-to-better-walking-with-the-alexander-technique/> (Accessed: 30 September 2025)
- Allemang, B., Sitter, K. and Dimitropoulos, G. (2022) 'Pragmatism as a paradigm for patient-oriented research', *Health Expectations*, 25(1), pp. 38–47. Available at:
<https://doi.org/10.1111/hex.13384>.
- Amorim, G.O. de et al. (2018) 'Biofeedback in dysphonia --- progress and challenges', *Brazilian Journal of Otorhinolaryngology* [Preprint].
- Bingaman, H.M., Mauger, R.E. and Cantor-Cutiva, L.C. (2026) 'Relationship between Mental and Vocal Health in Occupational Voice Users: A Systematic Literature Review', *Journal of Voice*, p. S0892199726001578. Available at:
<https://doi.org/10.1016/j.jvoice.2026.03.039>.
- Bremmer, M. and Nijs, L. (2022) 'Embodied music pedagogy. A theoretical and practical account of the dynamic role of the body in music education', *Music is what people do*. HELBLING : Rum / Innsbruck, pp. 29–45. Available at:
<https://doi.org/10.25656/01:30466>.
- Briceland Studio (2016) *Free Your Breath With the Alexander Technique*. [Online] Available at:
<https://singalexander.wordpress.com/2016/09/26/free-your-breath-with-the-alexander-technique/> (Accessed: 30 September 2025)
- Cacciatore, T.W., Johnson, P.M. and Cohen, R.G. (2020) 'Potential Mechanisms of the Alexander Technique: Toward a Comprehensive Neurophysiological Model', *Kinesiology Review*, 9(3), pp. 199–213
- Capalbo, M. (2024) 'Whispered Vowels for Singers: A Discussion and Exploration', *The Alexander Journal*, (29), pp. 48–58. Available at:
<https://doi.org/10.15763/issn.2998-3509.2024.29.48-58>.
- Cardoso, R. et al. (2021) 'Associations between Teachers' Posture, Muscle Tension and Voice Complaints', *Journal of Voice*, 35(6), p. 933.e23-933.e31. Available at:
<https://doi.org/10.1016/j.jvoice.2020.02.011>.

- Carter, R.K. and White, J.T. (2019) 'An Integrative, Changing Practice: The Importance of Collaboration among Voice Professionals', *Voice and Speech Review*, 13(3), pp. 298–311. Available at: <https://doi.org/10.1080/23268263.2019.1579480>.
- Casanova, O. *et al.* (2025) 'The role of music performance anxiety in musical training: four personal histories', *Frontiers in Psychology*, 16, p. 1515970. Available at: <https://doi.org/10.3389/fpsyg.2025.1515970>.
- Chacón, M.T.R. *et al.* (2023) 'Evaluating a wellness intervention including micro-practices for healthcare professionals before and during COVID-19', *Horizonte sanitario* [Preprint].
- Colado-Tello, M.E. *et al.* (2026) 'Self-reported Vocal Fatigue in University Teaching Staff: Associations with Quality of Life, Mental Health, Burnout and Lifestyle Habits', *Journal of Voice*, p. S089219972600367X. Available at: <https://doi.org/10.1016/j.jvoice.2026.07.011>.
- Coleman, E.A. (2020) *Fitzmaurice Voicework: an application for musical theatre voice training*. [Long Beach, California]: California State University ([Master's thesis collection, Department of Theatre Arts]).
- Dick, A. (2013) *A case study investigating perceptions on process and outcomes in applying the Alexander Technique in vocal production*. Master Thesis. Eastern Washington University.
- Dimon, T. (2018) *Anatomy of the Voice: An Illustrated Guide for Singers, Vocal Coaches, and Speech Therapists*. Erscheinungsort nicht ermittelbar: North Atlantic Books.
- Dobos, B., Piko, B.F. and Kenny, D.T. (2019) 'Music performance anxiety and its relationship with social phobia and dimensions of perfectionism', *Research Studies in Music Education*, 41(3), pp. 310–326. Available at: <https://doi.org/10.1177/1321103X18804295>.
- Falanga, C. *et al.* (2023) 'Psychological Distress in a Sample of Adult Italian Patients Affected by Vocal Nodules and Muscle-Tension Dysphonia: Preliminary Results', *Journal of Voice*, 37(2), p. 300.e21-300.e29. Available at: <https://doi.org/10.1016/j.jvoice.2020.12.011>.
- Feldenkrais, M. (1972) *Awareness through movement: Health Exercises for Personal Growth*. New York: Harper & Row (Reprinted by Penguin Books Ltd, London, 1980). Available at: <https://erada.kenanaonline.com/files/0010/10946/Awareness%20Through%20Movement.pdf>.
- Fitzmaurice, C. (2015) 'Breathing matters', *Voice and Speech Review*, 9(1), pp. 61–70. Available at: <https://doi.org/10.1080/23268263.2015.1014191>.

- Fritz, R., Porcaro, C.K. and Gollery, T. (2026) 'Effectiveness of Vocal Training Techniques in School-Aged Drama Students', *Journal of Voice*, 40(3), p. 915.e9-915.e17. Available at: <https://doi.org/10.1016/j.jvoice.2023.11.012>.
- Graham, M. et al. (2024) 'The Effect of Self-Monitoring on Mental Effort and Problem-Solving Performance: A Mixed-Methods Study', *Education Sciences*, 14(11), p. 1167. Available at: <https://doi.org/10.3390/educsci14111167>.
- Grama, M. et al. (2024) 'Resonant Voice: Perceptual and Acoustic Analysis After an Intensive Lessac Kinesensic Training Workshop', *Journal of Voice*, 38(2), p. 541.e1-541.e12. Available at: <https://doi.org/10.1016/j.jvoice.2021.09.021>.
- Gu, Y. et al. (2026) 'Efficacy of Resonant Voice Therapy in Individuals With Voice Disorders: Systematic Review and Meta-Analysis', *Journal of Voice*, p. S0892199726000639. Available at: <https://doi.org/10.1016/j.jvoice.2026.02.009>.
- Hague, D. (2016) 'Evaluating stress reduction techniques and Fitzmaurice Voicework® as a template for addressing performance anxiety and enhancing focus in student actors', *Voice and Speech Review*, 10(1), pp. 24–35. Available at: <https://doi.org/10.1080/23268263.2016.1231513>.
- Hampson, T., McKinley, J., (2023) 'Problems posing as solutions: Criticising pragmatism as a paradigm for mixed research', *Research in Education*, 116, 124–138. <https://doi.org/10.1177/00345237231160085>
- Henshaw, A. and Collyer, S. (2022) 'Under Pressure: Reports of Performance Anxiety Across Multiple Singing Genres', *Journal of Singing*, 78(5), pp. 583–590. Available at: <https://doi.org/10.53830/JETA7812>.
- Hillmer, R. (2013) 'The Mysteries of Breath: What Do We Need and How Do We Teach It?', *VCU Theses and Dissertations* [Preprint]. Available at: <https://doi.org/10.25772/GBSJ-M778>
- Hrelec, C. and Zhang, E. (2022) 'Anatomy and Physiology of Phonation', *International Journal of Head and Neck Surgery*, 12(4), pp. 125–130. Available at: <https://doi.org/10.5005/jp-journals-10001-1511>.
- Hurt, M. (2014) *Arthur Lessac's Embodied Actor Training*. 0 edn. Routledge. Available at: <https://doi.org/10.4324/9781315851075>.
- IEDTA (n.d.) *Transcript of Feldenkrais Awareness Through Movement Lessons*. [Online] Available at: <https://iedta.net/wp-content/uploads/Transcript-of-Feldenkrais-Awareness-Through-Movement-Lessons.pdf> (Accessed: 30 September 2025)

- Johnson, J. (n.d.) *Linklater Warm Up*. [Online] DePaul University. Available at: <https://condor.depaul.edu/jjohnso7/bfa2/handouts/warmup.html> (Accessed: 29 September 2025).
- Kaushik, V. and Walsh, C.A. (2019) 'Pragmatism as a Research Paradigm and Its Implications for Social Work Research', *Social Sciences*, 8(9), p. 255. Available at: <https://doi.org/10.3390/socsci8090255>.
- Knipple, J. (2018) 'The Feldenkrais Method in the Voice and Speech Classroom: Intertwining Linklater Voice and the Feldenkrais Method', *Theses and Dissertations* [Preprint]. Available at: <https://doi.org/10.25772/QGGS-J563>.
- Kollwitz, M. (2016) 'Breath, tremoring, and performance anxiety: How can Fitzmaurice Voicework's Deconstructing address performance anxiety in undergraduate acting training?', *Voice and Speech Review*, 10(2–3), pp. 100–120. Available at: <https://doi.org/10.1080/23268263.2016.1349726>.
- LeBorgne, W. D., & Rosenberg, M., (2014) *The Vocal Athlete: Application and Technique for the Hybrid Singer*, 2nd., Plural Publishing
- Lessac, A. (1997) *The Use and Training of the Human Voice: A Bio-Dynamic Approach to Vocal Life*. 3rd ed. New York: McGraw-Hill. Available at: <https://www.scribd.com/document/539371446/Arthur-Lessac-The-Use-and-Training-of-the-Human-Voice-a-Bio-Dynamic-Approach-to-Vocal-Life-1996>
- Linklater, K. (2006) *Freeing the Natural Voice: Imagery and Art in the Practice of Voice and Language*. Drama Publishers.
- Linklater, K. (2016) 'The art and craft of voice (and speech) training', *Journal of Interdisciplinary Voice Studies*, 1(1), pp. 57-70. Available at: https://doi.org/10.1386/jivs.1.1.57_1
- de Magalhães, T.A. et al. (2025) 'Voice Disorders and Mental health of Basic Education Teachers in a Brazilian Municipality', *Journal of Voice*, 39(4), p. 1135.e21-1135.e29. Available at: <https://doi.org/10.1016/j.jvoice.2023.02.010>.
- Matei, R. and Ginsborg, J. (2017) 'Music performance anxiety in classical musicians – what we know about what works', *BJPsych. International*, 14(2), pp. 33–35. Available at: <https://doi.org/10.1192/S2056474000001744>.
- Meadath, B.I. (2016) *Effects of Fitzmaurice Voicework® on the voice of graduate student actors*. Master of Arts. University of Iowa. Available at: <https://doi.org/10.17077/etd.85a6o3u9>.
- McGlashan, J. et al. (2025) 'Feasibility and Acceptability of Complete Vocal Technique-Voice Therapy as a Treatment for Primary Muscle Tension Dysphonia: A Feasibility

- Trial', *Journal of Voice*, p. S089219972500308X. Available at: <https://doi.org/10.1016/j.jvoice.2025.07.044>.
- Mikhailova, T. (2025) 'Neuroyoga For Optimizing Responses To Academic Load And Preserving Children'S Psychophysiological Health', *Universum:Medicine & pharmacology*, 124(7). Available at: <https://doi.org/10.32743/UniMed.2025.124.7.20516>.
- Monti, E. and Bianchi, S. (2025) 'Performance Anxiety: Tools for the Singer', *Journal of Singing*, 81(3), pp. 339–344. Available at: <https://doi.org/10.53830/sing.00101>.
- Morgan, M. (2012) *Constructing the Holistic Actor: Fitzmaurice Voicework*. Santa Barbara, CA: Morgan Press.
- Nelson, R., (2022) *Practice as Research in the Arts (and Beyond): Principles, Processes, Contexts, Achievements*. Springer International Publishing, Cham. <https://doi.org/10.1007/978-3-030-90542-2>
- Nichols, E. (n.d.) Alexander Technique exercises. [Online video] YouTube. Available at: <https://youtu.be/7jybmoPHOKM?si=tHjhHhEfUItMVEUI>
- Nudelman, C.J. et al. (2026) 'Technical Parameters in Surface Electromyography for Voice and Muscle Tension Dysphonia: A Scoping Review', *Journal of Voice*, p. S0892199726003590. Available at: <https://doi.org/10.1016/j.jvoice.2026.07.007>.
- Paparo, S.A. (2016) 'Embodying singing in the choral classroom: A somatic approach to teaching and learning', *International Journal of Music Education*, 34(4), pp. 488–498. Available at: <https://doi.org/10.1177/0255761415569366>.
- Paparo, S.A. (2022) 'Singing with awareness: A phenomenology of singers' experience with the Feldenkrais Method', *Research Studies in Music Education*, 44(3), pp. 541–553. Available at: <https://doi.org/10.1177/1321103X211020642>.
- Pentikäinen, J. (2022) 'Developing Somatic Writing from the Perspective of the Feldenkrais Method', *Scriptum : Creative Writing Research Journal*, pp. 1–32. Available at: <https://doi.org/10.17011/scriptum/2022/2/2>.
- Phelan, L. (2021) 'Vocal Pedagogy and the Alexander Technique: a reflection', *Revista de Investigación e Innovación en Ciencias de la Salud*, 3(2), pp. 128–135. Available at: <https://doi.org/10.46634/riics.83>.
- Sentianin, P. (2018) *Natural Singing: A Guide for Using the Alexander Technique to Teach Voice*. Master's Thesis. University of Colorado.
- Seetharaman, R., Avhad, S. and Rane, J. (2024) 'Exploring the healing power of singing bowls: An overview of key findings and potential benefits', *EXPLORE*, 20(1), pp. 39–43. Available at: <https://doi.org/10.1016/j.explore.2023.07.007>.

- Sethson, M. (2021) *The Alexander Technique for a singing actor*. Available at: <https://urn.kb.se/resolve?urn=urn:nbn:se:ltu:diva-84849> (Accessed: 15 June 2025).
- Schoonenboom, J. (2023) 'A Performative Approach to Mixed Methods Research', in Y. Shan, *Philosophical Foundations of Mixed Methods Research*. 1st edn. London: Routledge, pp. 127–151. Available at: <https://doi.org/10.4324/9781003273288-8>.
- Sielska-Badurek, E.M. et al. (2018) 'Contemporary Commercial Music Singing Students—Voice Quality and Vocal Function at the Beginning of Singing Training', *Journal of Voice*, 32(6), pp. 668–672. Available at: <https://doi.org/10.1016/j.jvoice.2017.08.027>.
- Simone, C. et al. (2026) 'Unilateral vocal cord paralysis: A comprehensive guide for general radiologists', *European Journal of Radiology*, 203, p. 113053. Available at: <https://doi.org/10.1016/j.ejrad.2026.113053>.
- Singwell (2024) *Alexander Technique Singing Exercises*. [Online] Available at: <https://singwell.eu/alexander-technique-singing-exercises/> (Accessed: 30 September 2025)
- Suran, A. (2024) *Feldenkrais Mini Moves*. [Online] Available at: <https://www.healingbridge.com/lessons> (Accessed: 30 September 2025)
- The Adult Speech Therapy Workbook (n.d.) *The Yawn-Sigh Technique Made Easy*. [Online] Available at: <https://theadultspeechtherapyworkbook.com/yawn-sigh-technique/> (Accessed: 1 October 2025).
- The Therapy Grove (2025) *The Yawn-Sigh Technique for Voice Therapy*. [Online] Available at: <https://www.thetherapygroveinc.com/resources/the-yawn-sigh-technique-for-voice-therapy> (Accessed: 1 October 2025).
- Thomas, C. (2025) *Muscle tension dysphonia in the singing voice: The development of resources to connect therapeutic interventions with vocal use in performance*. Thesis for Professional Doctorate. University of Central Lancashire. Available at: https://knowledge.lancashire.ac.uk/id/eprint/59171/1/ThomasClaire_ProfDoc_Thesis_Final.pdf (Accessed: 7 August 2026).
- Thomas, J. and Harden, A. (2008) 'Methods for the thematic synthesis of qualitative research in systematic reviews', *BMC Medical Research Methodology*, 8(1), p. 45. Available at: <https://doi.org/10.1186/1471-2288-8-45>.
- Turin, T.C., Raihan, M. and Chowdhury, N. (2024) 'Paradigms of approaches to research', *Bangabandhu Sheikh Mujib Medical University Journal*, 17(2), p. e73973.

Available at: <https://doi.org/10.3329/bsmmuj.v17i2.73973>.

- Ward, A. (2020) *Alexander Technique Hove - Articles; Alternative Therapy with Adrian Ward* MSTAT. [Online] Available at: <https://www.useyourbodywell.co.uk/blogs-articles.html> (Accessed: 30 September 2025)
- Watson, L. and Nayak, S. (2014) 'Fitzmaurice Voicework: theory, practice, and related research', *Voice and Speech Review*, 8(2), pp. 149–156. Available at: <https://doi.org/10.1080/23268263.2014.906968>.
- Weiss, M.U. (2005) *The Alexander Technique & The Art of Teaching Voice*. Boston University College of Fine Arts.
- Weir Ouston, J. (2021) 'The Feeling Voice: A Linklater Approach to Freeing the Voice through Embodied Connection to Image', *Voice and Speech Review*, 15(2), pp. 221–234. Available at: <https://doi.org/10.1080/23268263.2021.1892960>.
- Willis, S.E. *et al.* (2019) *Taming The Tension: Addressing Upper Body Issues for the Singer*. DMA thesis. University of Alabama.
- Yurchak, P.M. (2019) 'Walking the Talk: Teachers as Practitioners of Fitzmaurice Voicework', *Voice and Speech Review*, 13(2), pp. 201–214. Available at: <https://doi.org/10.1080/23268263.2019.1560901>.
- Ziya, M., Saki, F. and Arjipour, M. (2026) 'Comparison of dynamic neuromuscular stabilization exercises with and without the Feldenkrais method on pain, balance, and hip muscle strength in elderly women with chronic non-specific low back pain', *Geriatric Nursing*, 69, p. 103804. Available at: <https://doi.org/10.1016/j.gerinurse.2026.103804>.