

**‘ IS THERE AN OPTIMAL VOCAL WARM UP
REGIME THAT HELPS FACILITATE VOCAL
PERFORMANCES IN FEMALE SINGERS?’.**

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JUSTIFICATION

- Vocal performance in professional settings
- Plethora of research supporting differing vocal warm up regimes (Elliot & Gramming, 1995; Fadel *et al.*, 2016; Nix.J, 2008)
- Always room for future research regarding this topic. Discovery, application, integration, and teaching.(Boyer, 1990)
- No one size fits all approach (Hixon.T 2006; Moorcroft.L 2012)

METHODOLOGY

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- Mixed methods approach
- VQOL Questionnaire with quantitative data
- Journals qualitative data - Inductive and deductive coding (Boyatzis, 1998; Walliman,2005; Saldaña, 2021) and Inductive Thematic Analysis (Braun & Clarke, 2021). Self reflection, personal experiences, observant as well as informant (Janesick,1999; Radcliffe, 2013; Bartlet & Milligan, 2015; Hyers,2018).
- Methodological triangulation - Literature review, Questionnaire & Journals/Diaries to enhance reliability, validity and comprehensiveness of findings (Gray, 2004)
- Pragmatic Paradigm (Creswell,2014) More comprehension with regard Physiological, emotional, and psychological phenomena regarding vocal performance (Dichter *et al.*, 2018; Herbst, 2016).

ETHICAL CONSIDERATIONS

- "inescapable ethical enterprise." Cohen et al. (2007, p. 189)
- VQOL (Voice Quality of Life Questionnaire) (Hogikyan, 1999)
- Wellbeing
- Recommendation for future - breathing complications, asthma

VOCAL WARM UP REGIMES

- Regime 1 –Vocalises (Gish *et al.*, 2012; Portillo *et al.*, 2018).
- Regime 2 – SOVTEs (Linklater, 1976; Nix, 2008).
- Regime 3 – Straw SOVTEs (Titze *et al.*, 2021; Boder, 2023)
- Regime 4 – Sirens (Dennis, 2008; Joscelyne-May *et al.*, 2016)
- Regime 5 –Vocalises & SOVTEs
- Regime 6 –Vocalises & Straw SOVTEs
- Regime 7 –Vocalises & Sirens

Participant Overview

- 29 - 40 Female
- Reliability
- Same voice type
- All professional singers
- Differing areas

FINDINGS

- **VQOL Questionnaire Findings**
- All participants were asked 10 questions which had a VQOL score attached to them.
- The scoring was based on 10, being the lowest score and the best vocal health to 50 being the highest and cause for real concern.
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Participant LM01	Participant SL03	Participant RL03
VQOL score - 10	VQOL score - 11	VQOL score - 10

FINDINGS

Intonation	Resonance	Hydration
Breath Control	Strength	Menstruation
	Flexibility	Vocal Fatigue
	Reduction in vocal fatigue	

Deductive coding was used with predetermined wording (Resonance, flexibility, Hydration, menstruation

Inductive coding for patterns observed between participants

FINDINGS

THEMATIC ANALYSIS

<i>Control</i>	<i>Ease of Phonation</i>	<i>External Factors</i>
Intonation	Resonance	Hydration
Breath Control	Strength	Menstruation
	Flexibility	Vocal Fatigue
	Reduction in vocal fatigue	Time of day

Perceived Benefits

- **Universal Benefits:**
- **Findings:** All vocal regimes tested provided some positive effects prior to performing challenging material. (Hoch & sandage, 2018; Kayes,2013)
- **Analysis:** This suggests a general efficacy of warm-up exercises in enhancing vocal performance, regardless of the specific method used. (Milbrath, & Solomon,2003).
- **Implications:** Implementing a vocal warm-up, even if varied, is essential for Optimal vocal perfoasmnce

PERCEIVED BENEFITS FROM VOCAL WARM UPS

- **Most positive feedback**
 - **Finding:** 3 out of 3 participants found the combination of Straw SOVTEs with Vocalises most beneficial.
 - **Analysis:** This combination may offer a balanced approach, enhancing breath support, control, and reducing vocal strain. (Cardoso *et al.*, 2021; Portillo *et al.*, 2018).
 - **Timing Independence:**
 - **Finding:** Benefits were observed regardless of the time of day.
 - **Analysis:** This regime's efficacy may be due to its adaptability to different vocal states (morning vs. evening).
 - **Implications:** It provides flexibility for performers who may need to warm up at varying times.
- LM01
 - “The exercise helped **strengthen** my breath support and control.....I also found that it helped with promoting a **smooth transition** between my chest and head voice while singing. I also found that it helped **reduce vocal strain** while my voice is **not yet as warm due to it being in the daytime**, it minimised the tension in my vocal muscles which is crucial for the power needed to sing both songs.” (Regime 5 - Straw SOVTE's and Vocalises)

PERCEIVED BENEFITS FROM VOCAL WARM UPS

- **Evidence:** Participants reported improvements in breath support, vocal control, and minimization of vocal strain.
- **Implications:** This regime could be recommended as a standard warm-up for singers needing consistent performance enhancement across different times of the day.

- **Best Standalone Results:**

Finding: Provided the best results among standalone regimes for reducing vocal tension and fatigue.

Analysis: Straw SOVTEs may offer a more focused approach to easing vocal strain and improving resonance (Titze, 2006; Nix, 2008; Roll, 2016 ; Dargin, 2015)

Evidence: Participants noted improvements in breath support, control, and vocal energy (Boder, 2023).

Implications: Could be recommended as a quick, effective warm-up for immediate vocal preparation, especially in the morning.

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- SL03

- “Agree- my voice felt **free and agile**.....I enjoyed today's regime and felt it offered just what I needed to get to my **optimum set up**. SOVTs being included really helped.” (Regime 5 - Straw SOVTE's and Vocalises)

SL03

“It definitely helped me to get my **vocal energy higher** and to an **optimum level** for performance.” (Regime 3 - Straw SOVTEs)

PERCEIVED BENEFITS FROM VOCAL WARM UPS

- **Finding:** 2 out of 3 participants noted reduced vocal fatigue with this regime. (Fujiki & Sivasankar,2021; Hijleh, & Pinto,2021)
 - **Analysis:** SOVTEs may alleviate vocal fatigue by facilitating laryngeal tissue mobilization and reducing inflammation.
 - **Evidence:** Recognized by participants as a great warm-up for tired voices.
 - **Implications:** Ideal for singers who experience vocal fatigue, potentially useful for recovery after extensive voice use.
 - Standalone
 - **Effective for Reducing Tension:**
 - **Finding:** Reduced tension and fatigue in 2 out of 3 participants.
 - **Analysis:** Lip buzzing and tongue trills might enhance vocal readiness by gradually awakening the voice (Nix,2008)
 - **Evidence:** Participants reported reduction in strain and improved breath support.
 - **Implications:** Useful for singers who need gentle warm-ups to reduce vocal strain without intense exertion.
- RL02
“it’s a great warm up for a tired voice.” (Regime 6 - SOVTEs and vocalises)
 - SL03
“I think this helped me to reach a good level of vocal energy today, particularly considering the lack of sleep I have had.” (Regime 2 - SOVTE’s)

Perceived drawbacks

- **Standalone Sirens:**
- **Insufficient Warming:** Participants found that standalone sirens did not adequately prepare their voices for challenging vocal material.
- **Lack of Efficacy in Resonance and Control:** Sirens alone were not effective in improving vocal resonance and control.
- **Morning Ineffectiveness:** Particularly in the morning, sirens did not provide enough variation or time to effectively warm up the voice.

LM01

“I found my vocals were struggling to manoeuvre the sirens to my normal capability. I sang the 2 songs but felt my voice was lacking in power and control and the quality of my voice was a little distorted due to lack of warmth and felt the sirens didn’t help with facilitating the two songs at this time today.”

RL02

“I think a siren exercise alone doesn’t provide enough variation to warm the voice up in the morning.”

Perceived Drawbacks

- **Standalone Vocalises:**
- **Inadequate Warm-Up:** Participants noted that vocalises alone did not sufficiently warm up their voices, particularly for demanding performances.
- **Persistent Tension:** Some participants felt that vocalises did not adequately release vocal tension, especially in the upper register.
- **Aggressiveness:** Vocalising in specified keys was described as too aggressive, particularly in the morning.

LM01

*"I felt I needed **more time** for my vocals to warm up before attempting the songs again later on."*

RL02

*"I generally think this is a great warm up to start off with, however; it wasn't enough to **release tension**. After this warm up I still felt quite **constricted** particularly in my upper register."*

SL03

"I feel as though this has not helped in any way that a normal warm up has at this time."

Future Recommendations

Overall Insights and Future Research

- **Effect of Timing and Vocal State:**
- **Finding:** Variations in the effectiveness of warm-ups based on the time of day and prior vocal use.
- **Analysis:** The success of specific warm-up regimes could be influenced by external factors such as vocal fatigue and time of day.
- **Implications:** Future research should explore how different warm-up exercises interact with various states of vocal readiness and external conditions.
- **Potential for Cool-Down Use:**
- **Finding:** Some regimes, like the sirens, could also serve as cool-down exercises.
- **Analysis:** This dual functionality could optimize vocal health by resetting the voice after extensive use.
- **Implications:** Exploring the use of warm-up exercises as cool-down routines could offer a more holistic approach to vocal care.

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