

**WHAT ARE THE PERCEIVED CHANGES IN TENSION
AND VOICE QUALITY IN ADULT, NON-PROFESSIONAL
VOICE STUDENTS AFTER USING ALEXANDER
TECHNIQUE INSTRUCTIONS AND POSES AS
DIRECTED BY THEIR VOICE TEACHER?**

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OVERVIEW

- **Introduction**
- **Theoretical Framework**
- **Methods**
- **Key Findings**
- **Implications**
- **Limitations & Future Research**
- **Conclusion**

INTRODUCTION

- **Context:** The Alexander Technique (AT) improves posture, reduces tension, and enhances voice quality (Bosanquet, 1987; Heirich, 2005; Little *et al.*, 2008).
- **Research Gap:** Limited access to certified AT instructors in Puerto Rico. Exploring its use by a non-certified, experienced teacher.
- **Objective:** Investigate the impact of AT-based exercises on perceived tension, breathing ease, and vocal quality in adult, non-professional singing students.

THEORETICAL FRAMEWORK

Methodological Approach:

- Constructivist paradigm (Lincoln and Guba, 1985)
-

Research Design and Framework:

- Alexander Technique principles
- Repeated measures design

METHODS - PARTICIPANTS

- **10 adult singing students (6 female, 4 male)**
- **Non-professional voice users**
- **Mean age: 45 (range 28-72 years)**
- **Weekly lessons over 4 weeks**

METHODS - INTERVENTION

Intervention:

- **Semi-supine position**

- Breathing exercises
- Whispered 'Ah'

(Alexander, 1932)

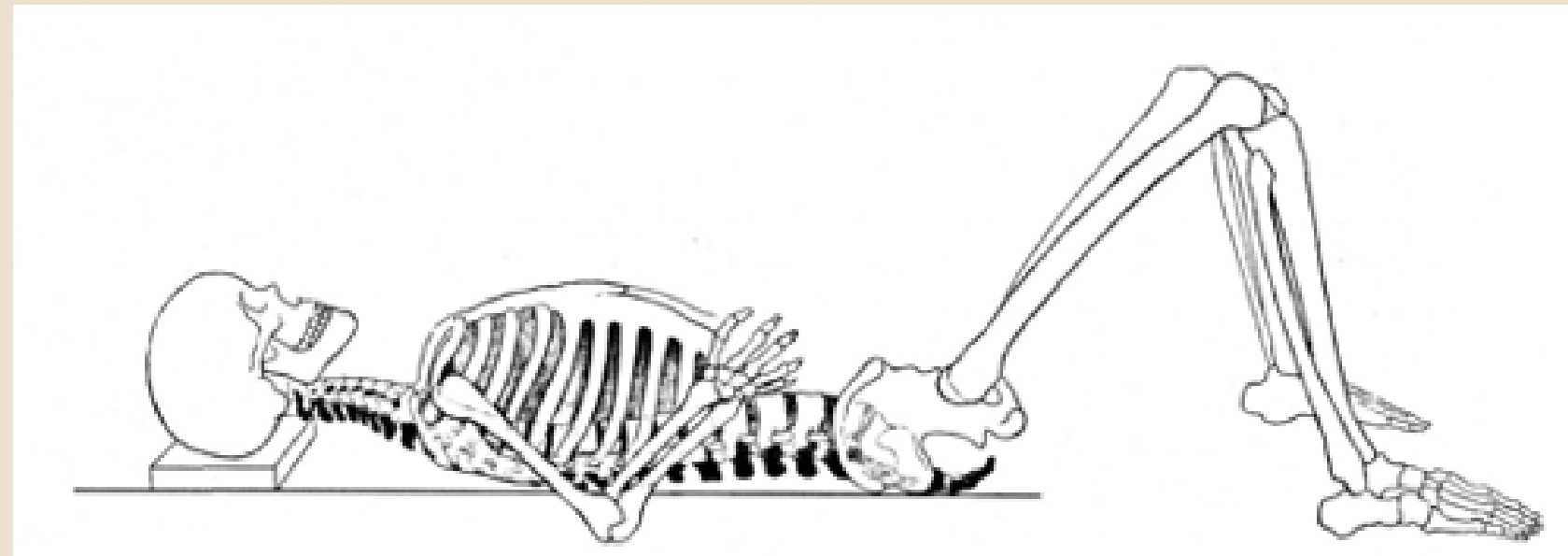


Figure 1. Semi-supine position (Heirich, 2005)

METHODS - INTERVENTION

Intervention:

- **Seated alignment work**
 - Alexander's directives
 - Breathing exercises
 - Whispered 'Ah'
- **"Monkey position"**
 - Vocalize in 'su' 12321



Figure 2. Student in the monkey position while singing. Superimposed is a drawing from Heirich (2005) showing the position.

METHODS - DATA COLLECTION

Mixed Methods:

Quantitative Method

Likert-based scale ratings
(1 = less tension/easier;
10 = more tension/difficult)

Qualitative Method

Thematic analysis of
qualitative feedback

KEY FINDINGS - TENSION REDUCTION

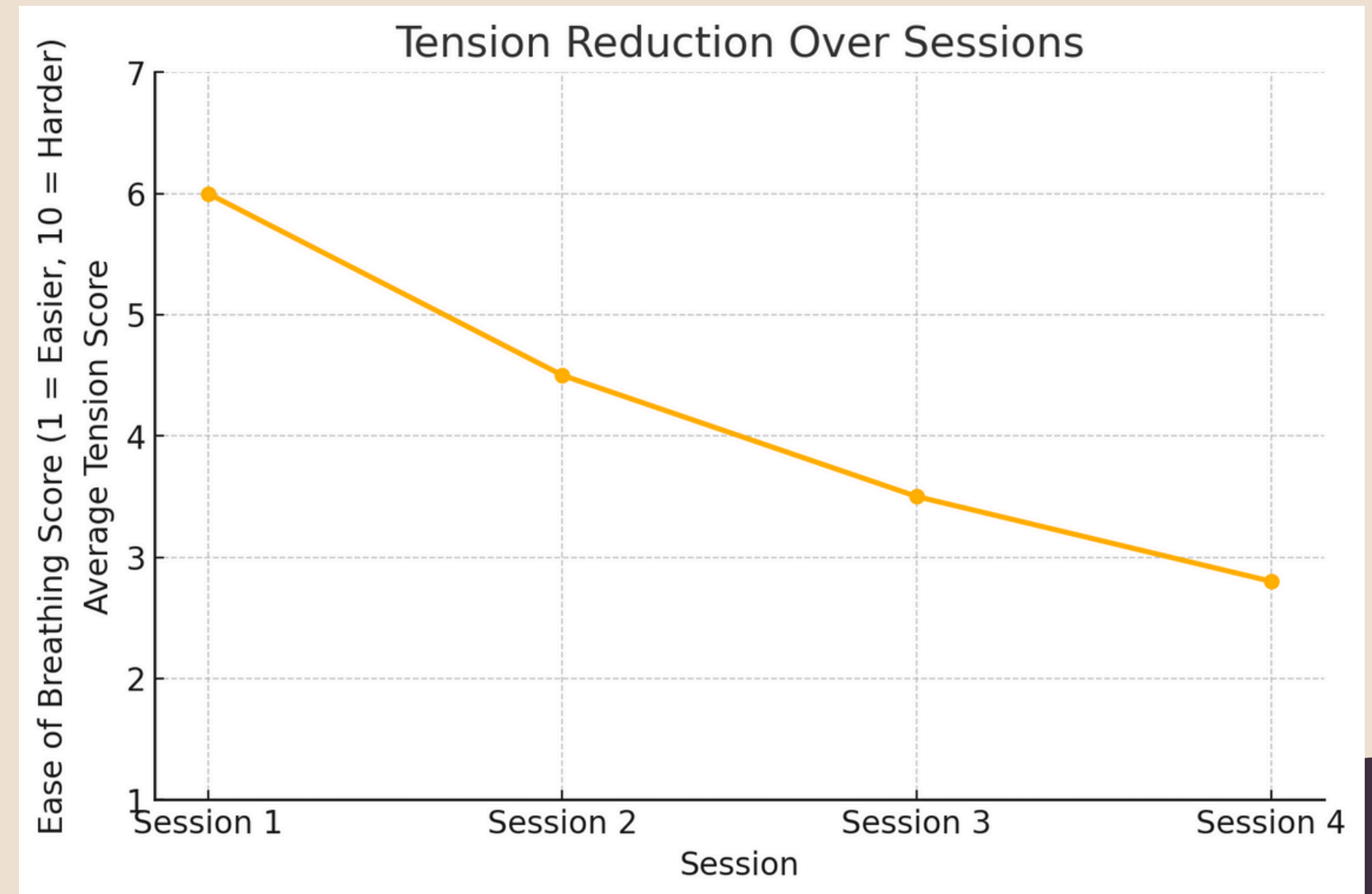
- **Statistically significant tension reduction after exercises.**
- **Session 1 Pre and Post (Wilcoxon test results)**

Table 1. Wilcoxon Signed-Rank Test Results comparing scores for tension, breathing, and sound production before and after the first session.

Variable	Test Statistic	p-value	Effect Size	Interpretation
Tension Score	308.5	<0.0001	Large	Significant reduction in tension
Ease of Breathing	0.0	<0.0001	Large	Significant improvement in breathing
Ease of Sound Production	420.0	0.0018	Moderate	Significant improvement in sound ease

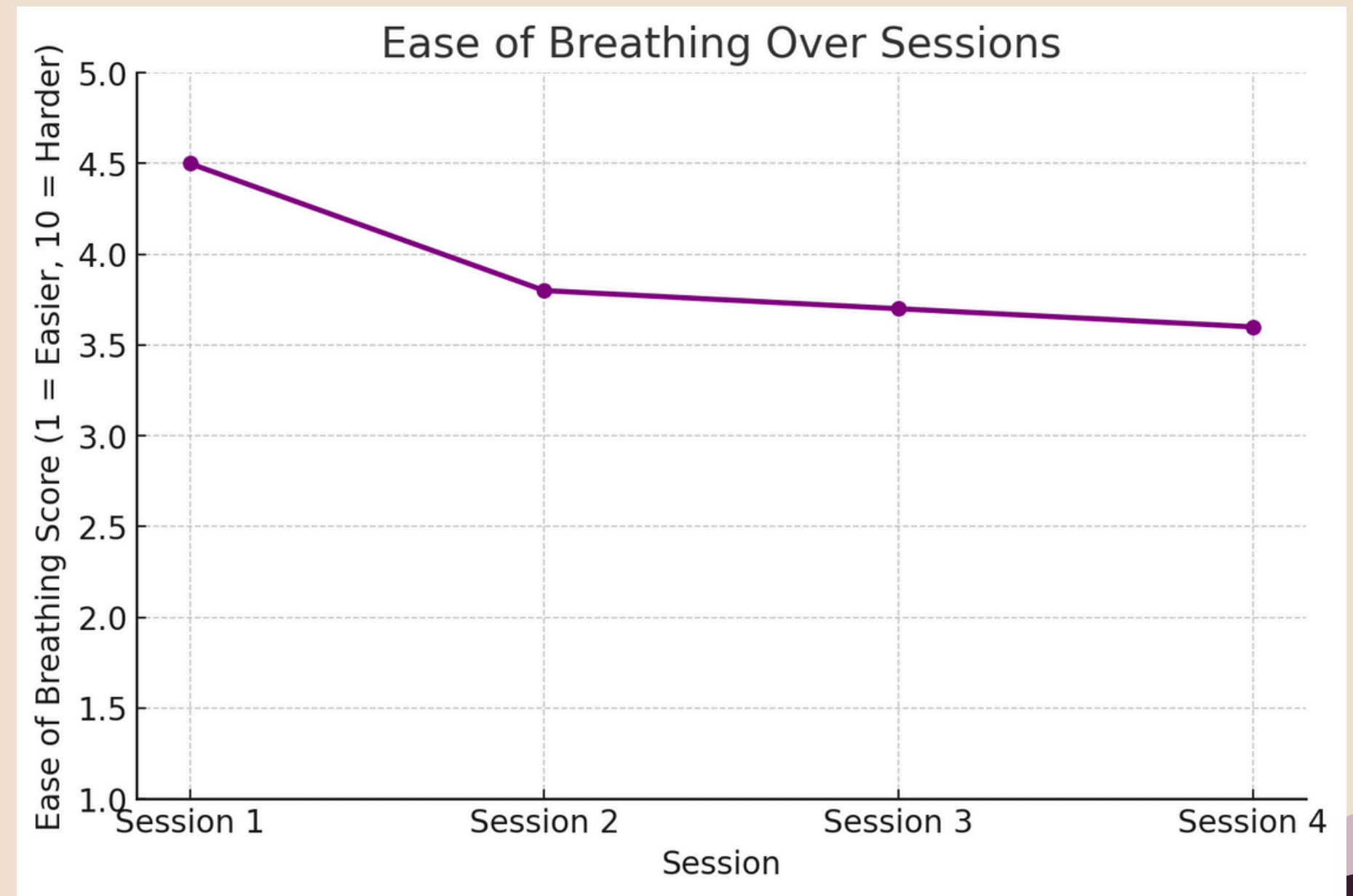
KEY FINDINGS - TENSION REDUCTION

- **Progressive tension reduction over four sessions**
- **$p = 0.021$ (Friedman test)**



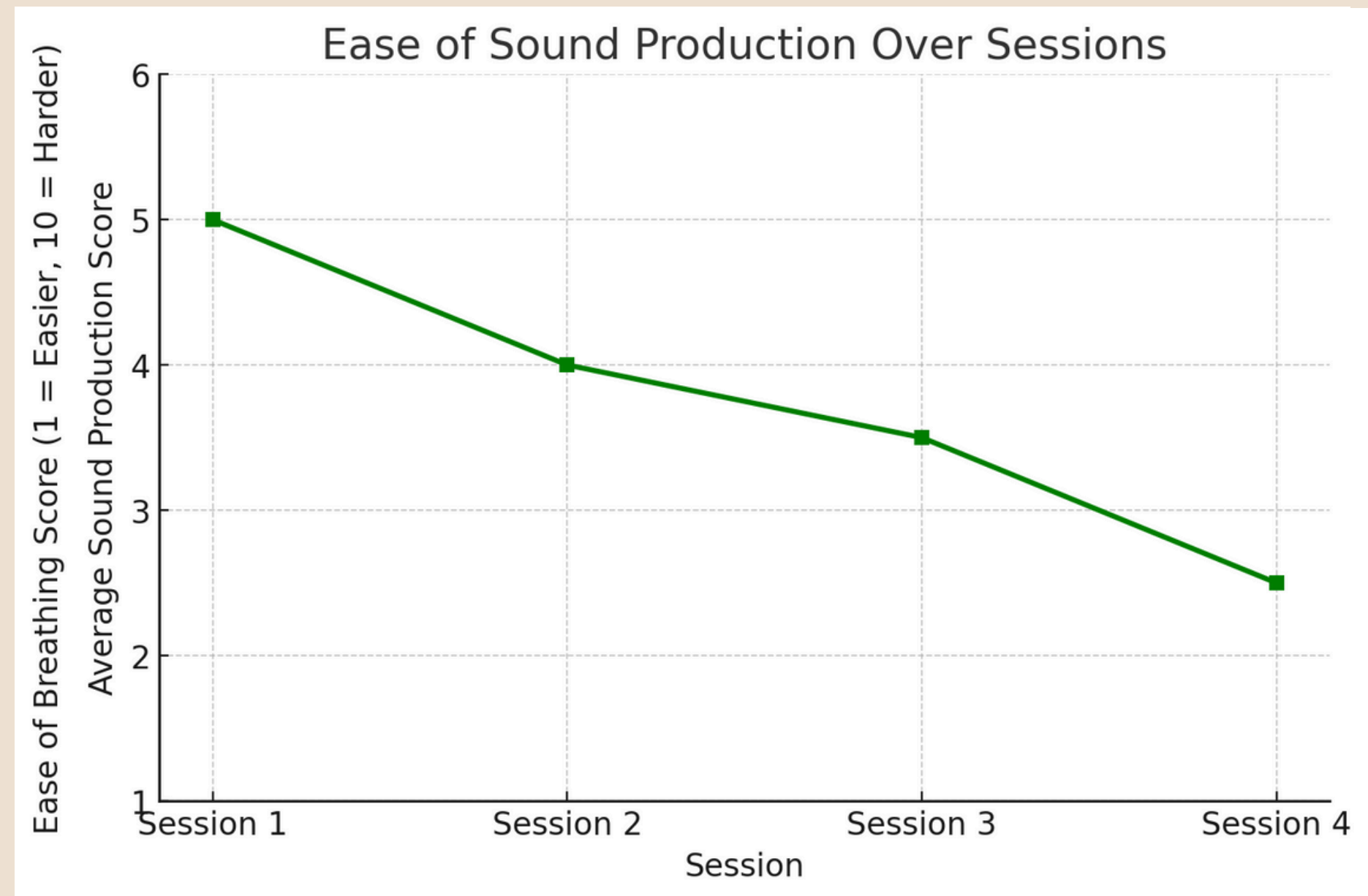
KEY FINDINGS - EASE OF BREATHING

- **Immediate improvement**
- **Plateaued over time**
- **$p = 0.099$ (Friedman test)**



KEY FINDINGS - EASE OF SOUND PRODUCTION

- **Consistent improvements across sessions**
- **$p = 0.0097$ (Friedman test)**



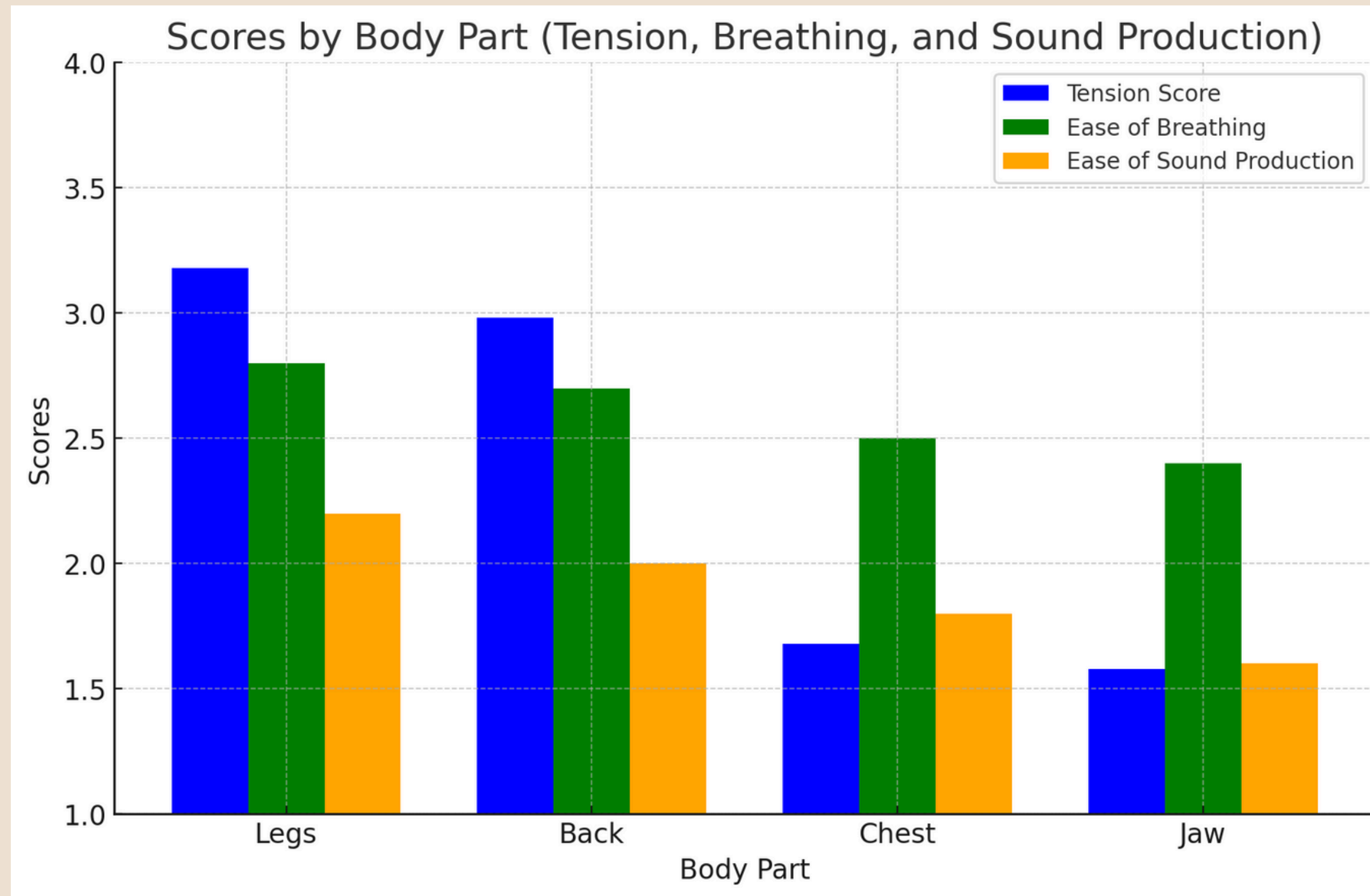
KEY FINDINGS - GENDER & AGE TRENDS

- **Gender Differences:**
 - **Females showed greater improvement in sound production**
- **Age Differences:**
 - **Younger participants improved breathing ease faster**

KEY FINDINGS - RESULTS BY BODY PARTS

- **Legs and back show higher tension compared to the chest and jaw.**
- **Ease of breathing scores are consistent across body parts, slightly lower when compared with tension in the chest and jaw.**
- **Ease of sound production improves significantly in relation to tension in chest and jaw, reflecting better resonance and vocal control.**
- **Aligns with the principle that lower body engagement supports upper body relaxation during exercises (Heirich, 2005; Klein, Bayard and Wolf (2014)).**

KEY FINDINGS - RESULTS BY BODY PARTS



KEY FINDINGS - QUALITATIVE INSIGHTS

- **Enhanced Body Awareness**
- **Improved Posture and Reduced Strain**
- **Freer Vocal Projection and Emotional Relaxation**
- **Participant Feedback:**
 - “I felt more grounded and connected to my breath.”
 - “My voice felt freer and less restricted.”

IMPLICATIONS

- **Practical Application:**
 - **Valuable for vocal pedagogy, even without AT certification**
 - **Exercises tailored by gender and age are more effective (Hunter, Tanner and Smith, 2011; Hunter *et al.*, 2012)**
- **Accessibility:**
 - **Bridges gap in regions with limited AT access**

LIMITATIONS & FUTURE RESEARCH

- **Limitations:**
 - **Small sample size**
 - **Subjective self-reports**
- **Future Directions:**
 - **Larger, diverse samples**
 - **Objective acoustic measurements (Roy *et al.*, 2013; Gunjawate, Rohit and Rajashekhar, 2018; Brockmann-Bauser and de Paula Soares, 2023)**
 - **Long-term impact studies (Woodman and Moore, 2012)**
 - **Targeted breathing interventions in addition to AT exercises area (Ali and I, 2016; Desjardins and Bonilha, 2020; Walker, 2021)**

CONCLUSION

- **AT effectively reduces tension and enhances vocal quality**
- **Offers accessible, holistic approach for non-professional singers**
- **Potential for broader integration into vocal teaching practices**

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THANK YOU!

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