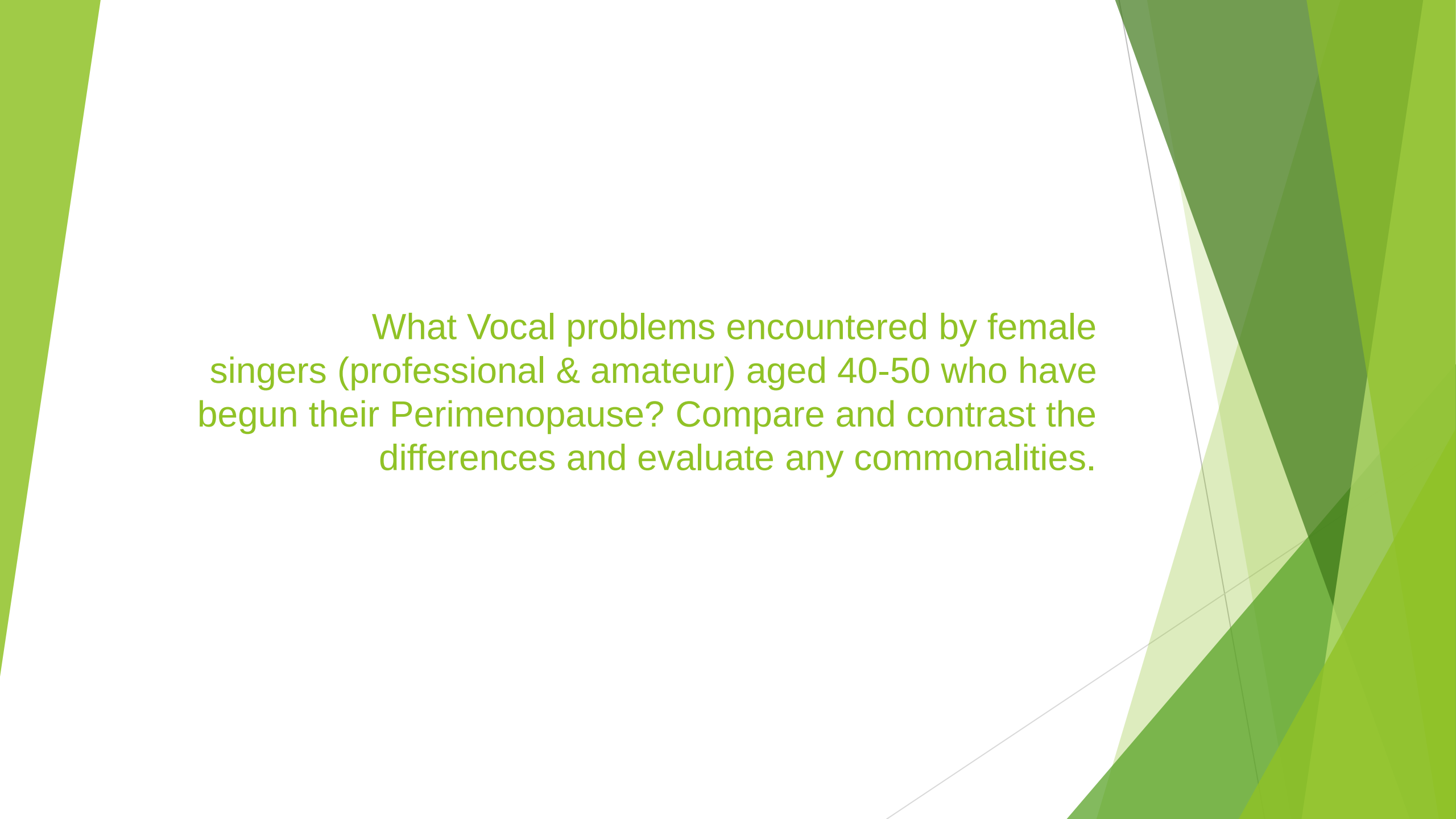


The background of the slide features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the left and right sides of the slide, framing the central text area. The shapes include triangles, polygons, and layered rectangles, creating a modern, layered effect.

What Vocal problems encountered by female singers (professional & amateur) aged 40-50 who have begun their Perimenopause? Compare and contrast the differences and evaluate any commonalities.

# What is the Perimenopause and what is the difference between the menopause?

- ▶ Perimenopause marks the beginning of the menopausal transition, characterised by fluctuations in sex hormones such as Estrogen, Progesterone and Androgens as well as changes in Endocrine system activity. Menstruation continues. This can affect women of between the ages 40-55 ( WNO, 1996; Abitbol et al 1999; Titze 1998).
- ▶ Menopause is defined as the cessation of the menstrual cycle for over 12 months, accompanied by the stabilisation of hormone levels. (Schnieder et al 2004; Caruso, Roccasalva, Sapienza, 2000; Goodwin S 2023,)

# Gap in the research

- ▶ During the literature review I observed the lack of available resources, teaching methods and guidance for singer navigating the vocal change
- ▶ Extensive research on the menopause and post menopause vocal issues

**Previous Research -**  
predominantly qualitative  
and narrative in nature  
often relying on interviews  
and questionnaires with  
little quantitative research

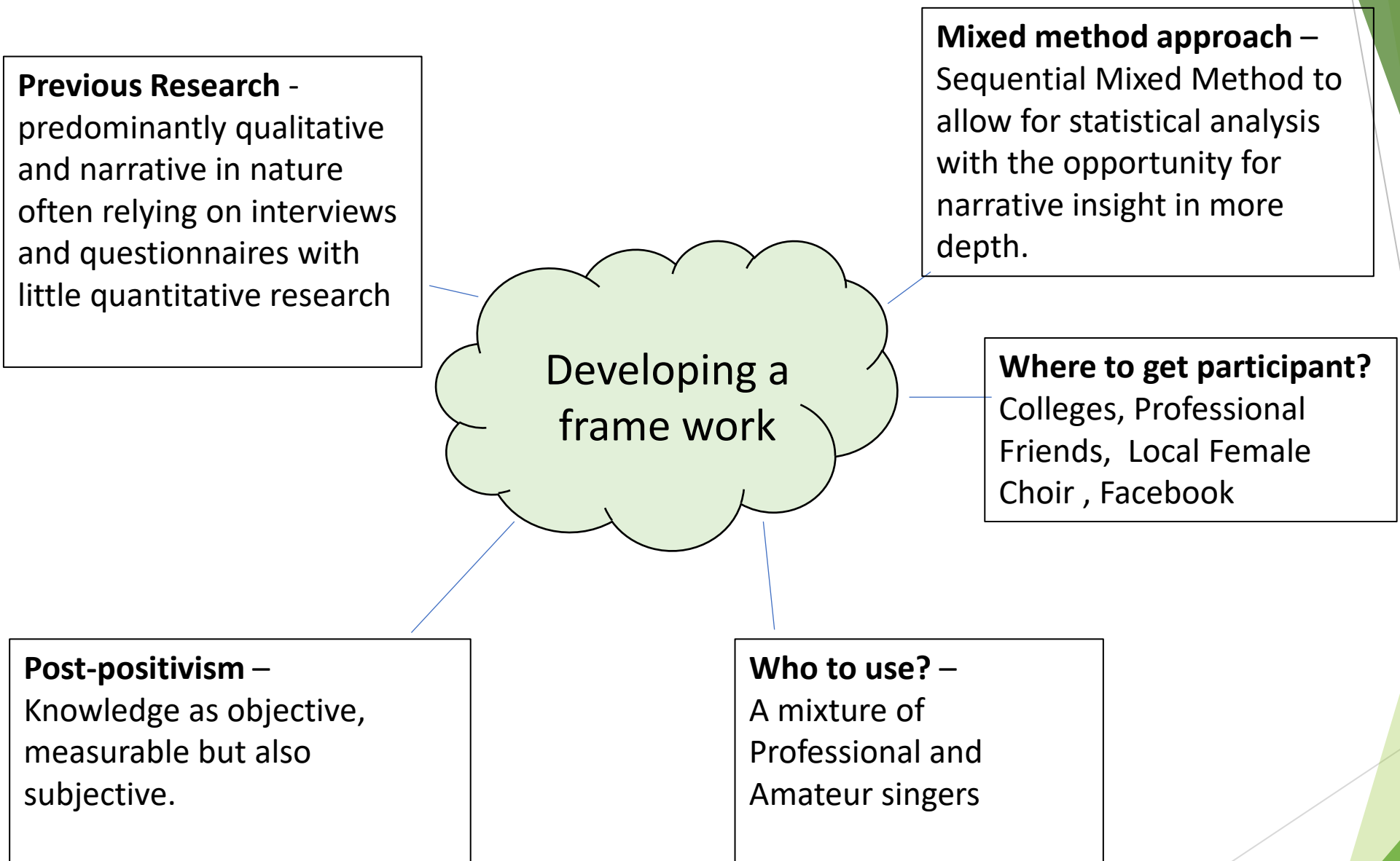
**Mixed method approach –**  
Sequential Mixed Method to  
allow for statistical analysis  
with the opportunity for  
narrative insight in more  
depth.

**Where to get participant?**  
Colleges, Professional  
Friends, Local Female  
Choir , Facebook

**Post-positivism –**  
Knowledge as objective,  
measurable but also  
subjective.

**Who to use? –**  
A mixture of  
Professional and  
Amateur singers

Developing a  
frame work



# Common Perimenopause Issues

(Abitbol J, Abitbol P, and Abitbol B, 1999; Brunssen, K, 2018; Edwin, R, 2012; Sataloff, R, and Kost, K, 2020; Titze, I, 1998; Roussel & Lobdell, 2006; Caruso, Roccasalva, Sapienza, 2000; Schneider et al 2004; Aibitol J, 2019.)

| Hormonal changes                                        | Vocal changes                                                                    | Physical changes                          | Psychological changes |
|---------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------|-----------------------|
| Estrogen and progesterone levels rise and fall unevenly | Increase soft phonation associated with breathy production and pressed phonation | All over dryness of throat and the vagina | Brain fog             |
| An increase in follicle-stimulating hormone (FSH)       | Changes to the structures of the vocal folds                                     | Sleep disturbances                        | Memory problems       |
| Elevated luteinizing hormone (LH)                       | Fluctuations in swelling, suppleness and lack of lubrication                     | Fluctuating menstrual cycles              | Low Mood              |
|                                                         | Hoarseness                                                                       | Changes in menstrua bleeding              | Irritability          |
|                                                         | Vocal Fatigue                                                                    | Changes in PMS                            | Cognitive function    |
|                                                         | Changes in range                                                                 | Lacking in energy                         |                       |
|                                                         | Pitch breaks                                                                     |                                           |                       |
|                                                         | More phlegm/clearing of throat                                                   |                                           |                       |

# Questionnaire

## Questionnaire Eligibility Criteria

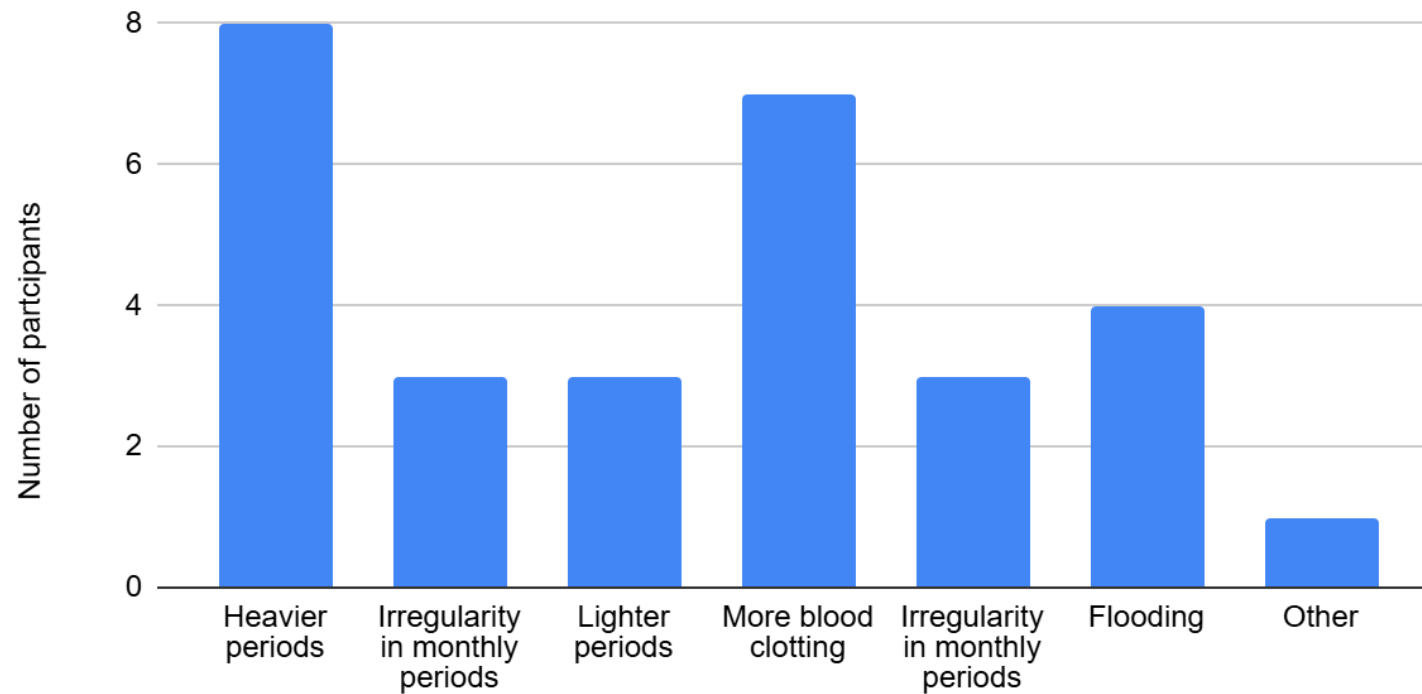
- ▶ Aged between 40-50
- ▶ Female from birth
- ▶ You do not suffer from vocal issues from injuries such as nodules, cysts or post-surgery
- ▶ Experiencing perimenopause, including changes in your menstrual cycle and associated physical or psychological changes
- ▶ Not currently taking Hormone Replacement Therapy (HRT)
- ▶ Not currently using birth control
- ▶ Singing at least once a week (in a choir, as a singing teacher, or as a semi-professional singer)

# Participants

- ▶ 13 participants completed the questionnaire, 4 out of 13 did not meet the requirements. These participants were not included in the analysis of the results
  - ▶ 4 Professional
  - ▶ 9 Amateurs
- ▶ The average age of participant was 46.2

# Symptoms of menstrual changes

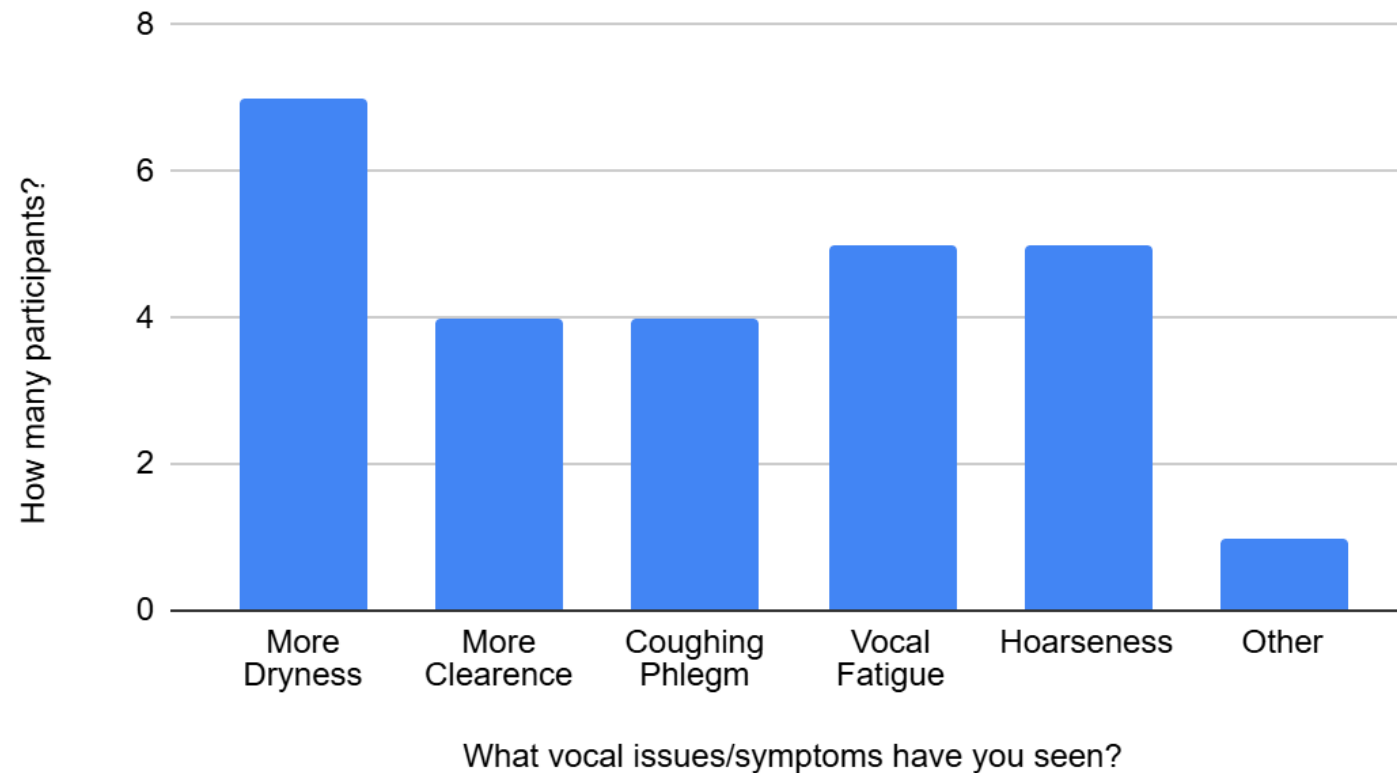
Number of Participants vs. Changes in Menstrual Cycle



What changes have you seen in your menstrual cycle?

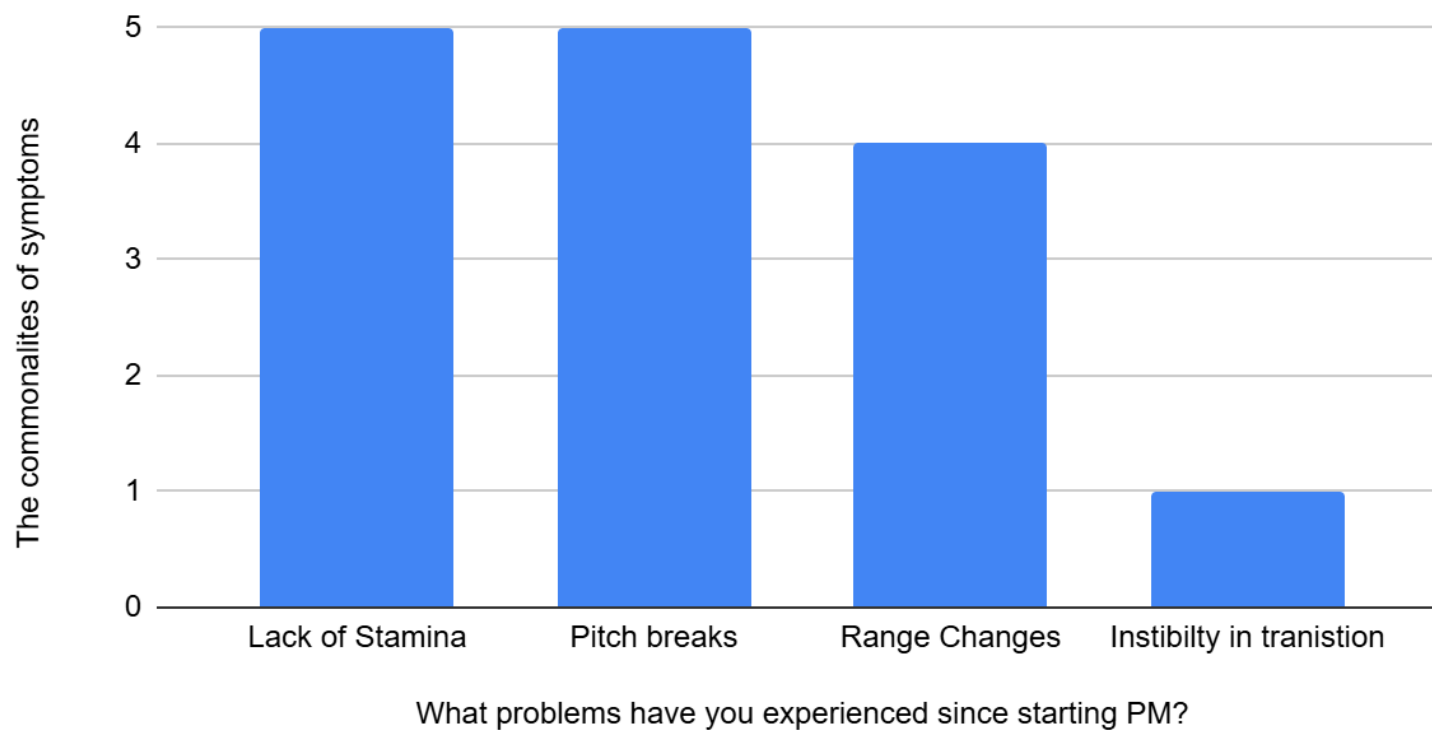
# Vocal Health Symptoms

How many participants have experienced symptoms? vs  
What vocal issues/symptoms have you seen?



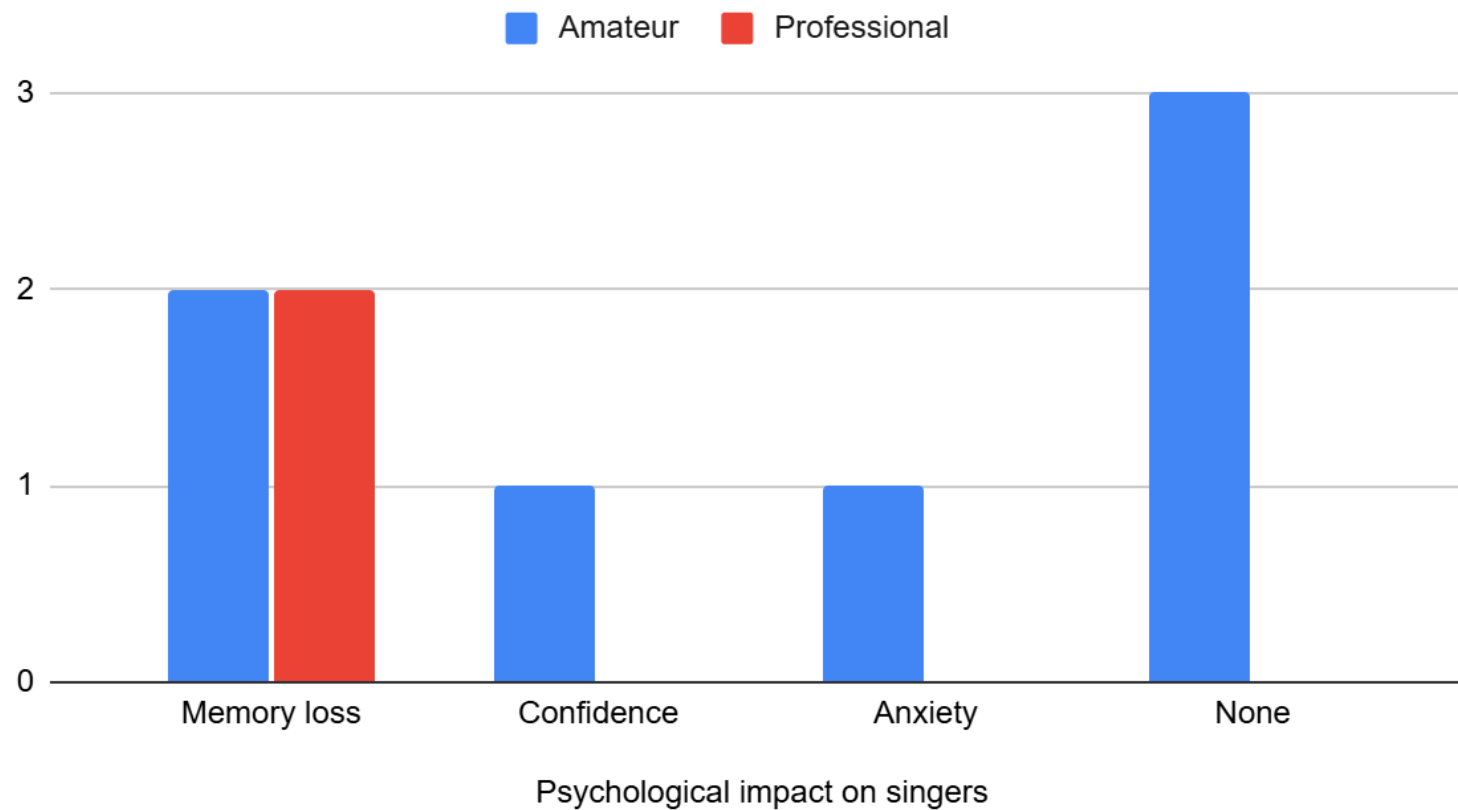
# Vocal Issues

Commonalities of Symptoms vs. Problems Experienced Since Starting PM



# Psychological impact

The difference psychological issues experienced



# Interviews

- ▶ The interviews conducted had four participants.
- ▶ 2 Professional
- ▶ 2 Amateur
- ▶ The interview was Semi structured which allow some questions asked derived from the statistical analysis and also to allow participants to flexible to bring in their own experiences or delve deeper in certain areas.

# Thematic Analysis

| Physical impact | Technical Impact | Psychological Impact |
|-----------------|------------------|----------------------|
| C1              | C5               | C24                  |
| C2              | C8               | C25                  |
| C3              | C9               | C26                  |
| C4              | C13              | C27                  |
| C6              | C14              | C28                  |
| C7              | C15              | C29                  |
| C10             | C19              | C30                  |
| C11             | C22              | C31                  |
| C12             | C23              | C32                  |
| C16             |                  | C33                  |
| C17             |                  |                      |
| C18             |                  |                      |
| C20             |                  |                      |
| C21             |                  |                      |

## ***Vocal Physical Impact:***

This theme reflects the physical changes participants experienced in their voices, which were most commonly shared among interviewees. These changes often affected their ability to sing across their vocal range and registers.

## ***Technical Impact:***

This theme addresses the adjustments participants had to make in their vocal technique to regain control, stability, and reliability. These changes were essential for continuing to sing, perform, and teach effectively.

## ***Psychological Impact:***

Participants reported a variety of psychological challenges. A common theme was the anxiety experienced on a daily basis, which contributed to heightened levels of Music Performance Anxiety (MPA).

# Future Research ideas

- ▶ Vocal Handicap Index - This measure assess a participant's perception of handicap due to vocal function and objectively evaluates the changes in severity of the vocal symptoms.
- ▶ Grbas Scale - a way to assess and measure the participant's vocal issues. Grading five different aspects of symptoms - Grade, Roughness, Breathiness, Asthenia & Strain
- ▶ Voice Symptom Scale - is a questionnaire that assess the impact of vocal issues on a person's life

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