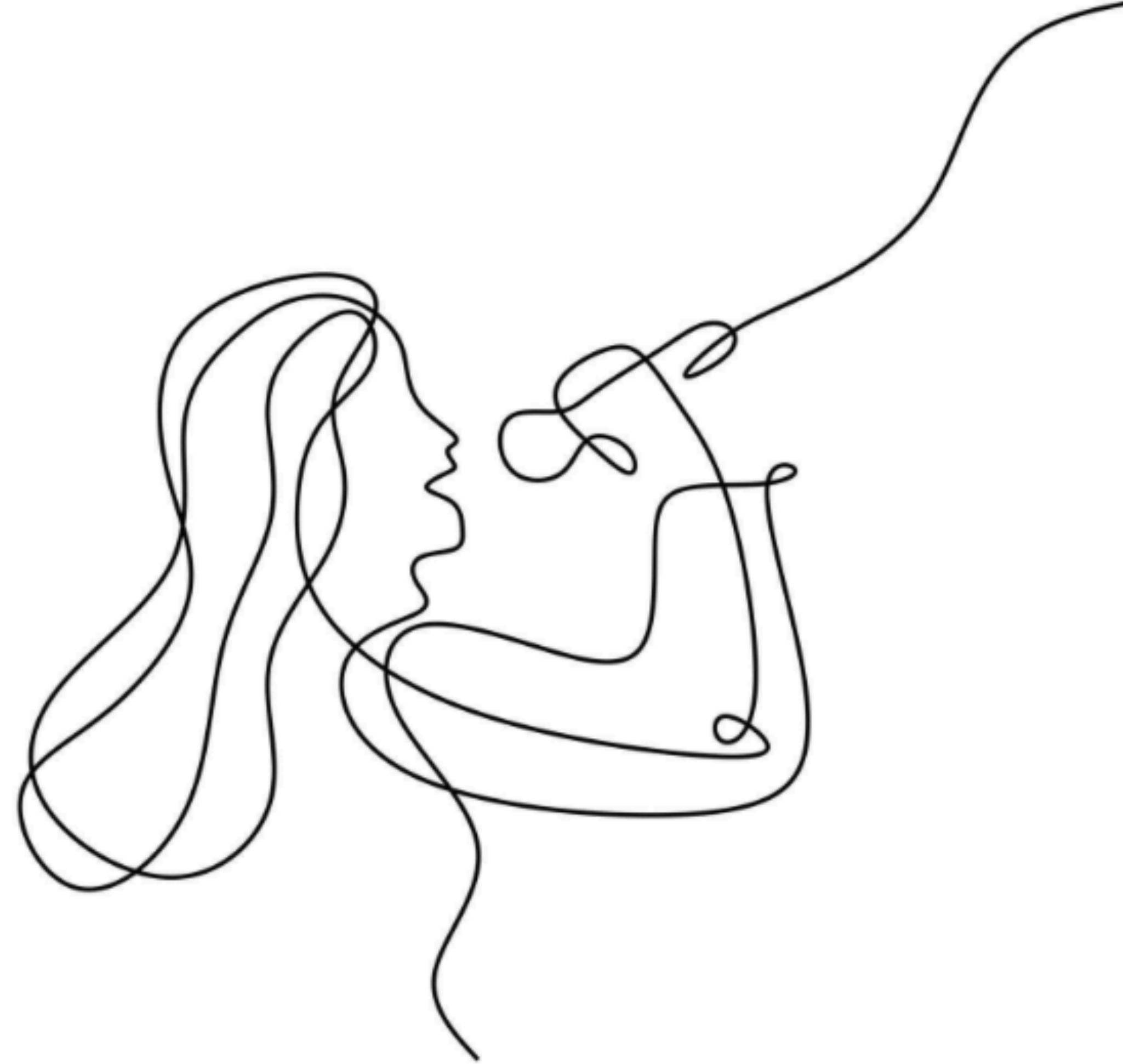


WHEN DO FEMALE MUSICAL THEATRE PERFORMERS USE MIX- BELT AND HOW DO THEY NAVIGATE MIX-BELT TECHNIQUE IN A HEALTHY, SUSTAINABLE WAY?

*Module 3 Work Based Research Project
BMPPF7008*

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JUSTIFICATION

- Mix-belt is a term frequently used in professional musical theatre and post secondary education (Bourne and Kenny, 2016; Edwin, 2020; Green et al., 2014; Lamesch et al., 2007; LoVetri et al., 2021)
- Appropriate use and technique was unclear to me
- Literature yielded unclear specification in uses and technique
- If a more concise understanding of WHEN and HOW mix-belt is used, my personal practice and pedagogy would benefit (Freeman et al., 2015; Bourne and Kenny, 2016; LoVetri et al., 2021; Lamesch et al., 2008; Edwin, 2020 LoVetri et al., 2021; Harris and Irene, 2020)

AIMS & OBJECTIVES

- Terminology -To explore if “mix-belt” is understood similarly by different singers and develop a comprehensive understanding of mix-belt vocabulary (Bourne and Kenny, 2016; Edwin, 2020; Green et al., 2014; Lamesch et al., 2007; LoVetri et al., 2021)
- What - To gain a clearer picture of what mix-belt is
 - What does it sound like
 - How does it differ from mix and belt (LoVetri et al., 2021; Harris and Irene, 2019)
- When - is it used (Hall, 2007)
- How - vocal tract adjustments, registration and mental navigation
 - To understand how candidates developed this skill
 - What exercises are used to maintain mix-belt (LoVetri et al., 2021; Roll, 2019)
- To suggest a working definition of mix-belt

INSIDER RESEARCH

- When the researcher is a member of the community being studied (Saidin, 2016)

CONS

- Personal Bias and motivation must be scrutinized
- Leading responses (Breen, 2007; Saidin, 2016)

PROS

- Ease in participant recruitment & consent
- Ease in building trust
- Understanding nuance (Saidin, 2016; Breen, 2007; Creswell, 2014)

METHODS

- Qualitative data - “understand how people interpret their experiences” (Merriam and Tisdale, 2015)
- Methods
 - Literature review
 - Questionnaire
 - Semi structured interviews
 - Focus group

Coding (descriptive, in vivo, emotion and versus) and Themed analysis were used (Denscombe, 2003)

METHODOLOGY

Relativist Ontology

- Based on personal experiences, individual realities (Cohen et al., 2007)

Constructivist Epistemology

- Subject and researcher are interwoven (Collin, 1982; Creswell, 2018)

Pragmatic Paradigm (Denscombe, 2003; Creswell, 2013)

- Research Practitioner, and triangulation of qualitative data (Mackenzie and Knipe, 2009)

ETHICAL CONSIDERATIONS

- Ethical Approval (UWTSD)
- Anonymization of Data
- Consent Forms
- Emotional Distress
 - Location
 - Access to helpline
 - All data securely stored

PARTICIPANTS

Inclusion criteria;

- 7+ years of training
- Female
- Attended post secondary school for voice
- Canadian Actors Equity Association members
- played 3+ vocally demanding roles in contemporary musical theatre shows in the last 10 years

small number of participants due to project limitations

FINDINGS – LITERATURE REVIEW

Legit

- Bell like timbre, most similar to classical voice, used in high range & traditional MT (Bourne and Kenny, 2015)
- Uses head registration, back placement, vertical mouth shape (Bourne and Kenny, 2012; Kochis-Jennings et al., 2015).

* Registration- type of vocal fold vibratory pattern (Head/Chest Registration)*

- Influenced by fold thickness, closed quotient, and activation of surrounding musculature (Bourne, Kenny and Garnier, 2010; Bourne and Kenny, 2016; Echternach et al., 2014; Miller and Schutte, 2005)

FINDINGS – LITERATURE REVIEW

Belt

- Perceived as loud, bright and is usually used in a lower female range (Bourne and Kenny, 2016; Echternach et al., 2014)
- Speech like intonation, degree of nasality (Sundberg and Thalen, 2010)
- Uses chest registration, raised larynx, high subglottic pressure, restricted pharynx, (Roll, 2014; Sundberg, Gramming and Lovetri, 1993; Flynn, Trudeau and Johnson, 2018; LoVetri, Lesh and Woo, 1999; Popeil, 2007)
- **Demands of belting have altered dramatically in the last 40 years initiating the use of the term mix-belt (Bourne and Kenny, 2015; Roll, 2016; Roll, 2019)**

FINDINGS – LITERATURE REVIEW

Mix

- Pretty and aesthetic sound that occurs in the transition area between head and chest registers, perceptually different (Bourne and Kenny, 2016; Miller and Schutte, 2005)
- Trained singers aim to navigate this areas without abrupt tonal change (Miller and Schutte, 2005)
- Registration Theories
 - 1. Head and chest mechanisms merge to become one function (Bourne at al., 2011; Lovetri, 2002; Roll, 2019; Titze, 2018)
 - 2. Singers modify tract to mimic other registration McKinney, 2005; Miller and Schutte, 2005; Titze, 2018; Vala, 2023; Vennard, 2012

Theory 1 is more prevalent but theory 2 has increased scientific support (Bourne at al., 2011; Lovetri, 2002; Roll, 2019; Titze, 2018).

FINDINGS – LITERATURE REVIEW

Mix-belt

- use of chest timbre in the middle range with speech-like tonality (Miller and Schutte, 2005; Valeriano, 2023)
- Is a relatively new style (Baker and Edwards, 2012; Roll, 2016) thus there is limited research
- No single theory on how to achieve mix-belt has been proven (Vala, 2023; Buescher, 2005; LoVetri, 2003; Bozeman, 2013)
- Perhaps the vast styles, pitches and physiology may be contribute to these limited resources (Titze, 2018)

FINDINGS – LITERATURE REVIEW

Roll's 2019 study on MT Belt of 17 students of “master teachers” found all singers who were able to sing in belt style above D5 stated they were actually **mix-belting** (2019).

- Forward placement
- Head voice registration while maintaining a “thread of connection” to chest registration
- Increased physical energy
- Narrowing sensation in the throat
- Closed vowels
- Less vibrato (Roll, 2019).

Roll's study heavily influenced this project

FINDINGS- PARTICIPANTS , RESEARCH PROJECT

* This section will present findings from the Questionnaire, Interviews and Focus Group to best meet the limitations of this presentation*

Terminology

- All 3 methods found that singers felt mix-belt was a clear identifiable style that is required in contemporary musical theatre
- Singers used similar terminology unprompted in questionnaire
 - ie. chest voice to describe belt
- This suggests perhaps there is some standardized lexicon among singers

FINDINGS

What does Mix-Belt Sound Like?

- FG and Interview findings asserted that;

Mix-belt has a sound profile that has the speech like, grounded sensation of belt but the lightness and range of head voice (Bourne & Kenny, 2016; Edwin, 2020; Green et al, 2014; Harris & Irene, 2019; Vala 2021)

- In the FG singers emphasized a key to mix-belt was ensuring that it had the same tonal quality as their belt *“I’m gonna feel the change but the audience won’t hear it”*

FINDINGS

When is Mix-Belt Used

These results initially presented in the interviews and were supported in the focus groups

Style

- Appropriate in contemporary Musical theatre, pop and traditional shows revivals
- Characterization

Pitch

- Mix-belt was stated by all participants to be necessary once they ascended past their belt range in these style
 - Supports Roll's 2019 assertion that **high belt is actually mix belt**
- The pitch at which singers usually made this transitions differed greatly (F4-E5) (Titze, 2014)

FINDINGS

Registration

- All singers classified mix as a third voice type/ style that exists between head and chest registers (FG and Interviews) (Bourne and Kenny, 2016; Miller and Schutte, 2005)
- Singers mix-belt could be head OR chest registration depending on pitch
- Singers would try to mask the transition between registers by mimicking the other
 - **This supports the two register theory** (McKinney, 2005; Miller and Schutte, 2005; Titze, 2018; Vala, 2023; Vennard, 2012)

FINDINGS

Technique (Interviews and FG)

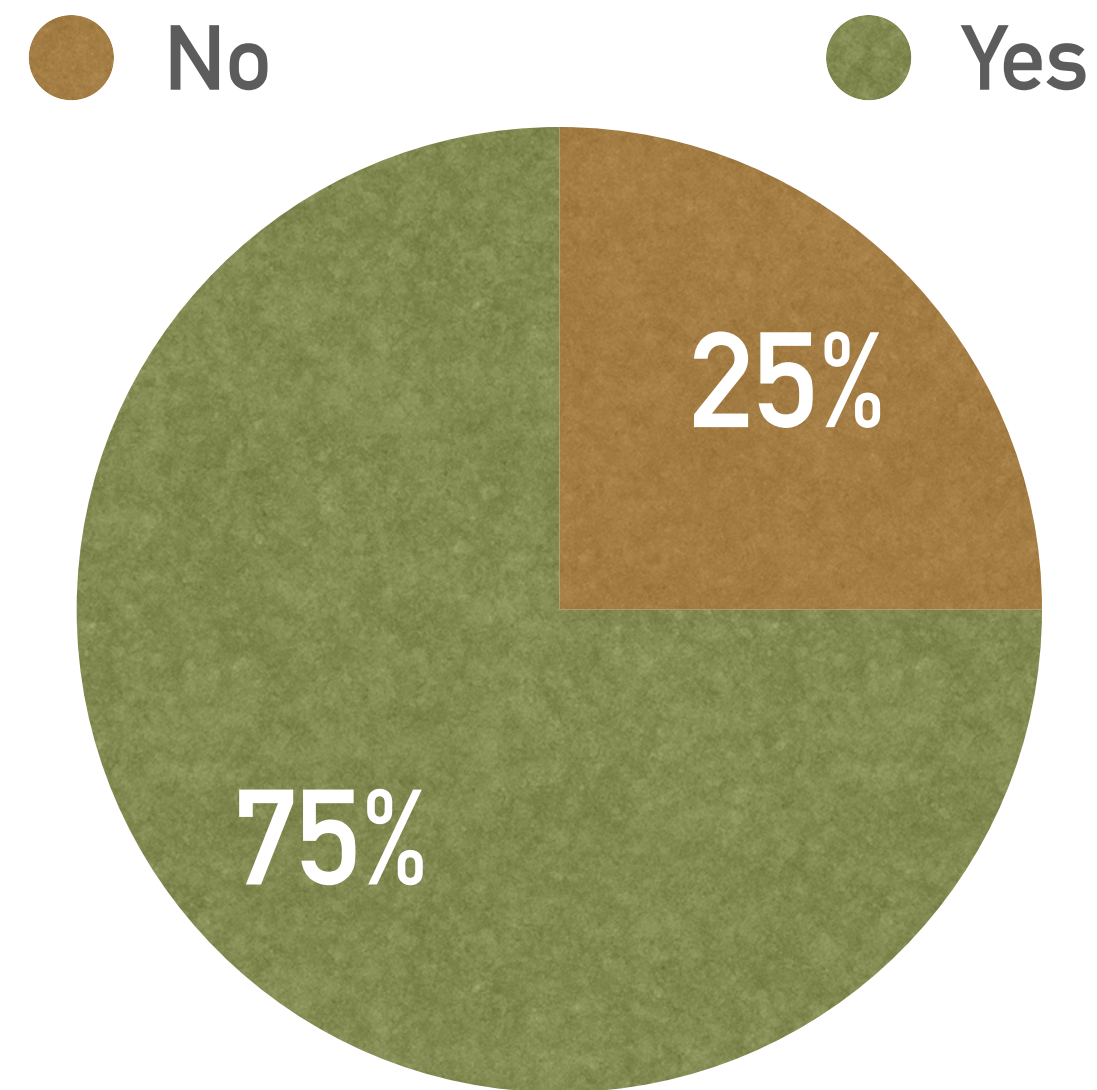
Common technical mix-belt adjustments were;

- Forward placement (teeth, cheeks, face, forehead) (Roll, 2019)
- Maintaining tonal quality of belt through transition to mix-belt,
 - Speech like intonation
 - Vowel modification
- Developing muscle memory to negotiate the belt to mix-belt/ mix to mix-belt transitions
- Narrowing sensation in throat (laryngeal constriction) (Roll, 2019)
- Up and over sensation in back of mouth (Perhaps raising of larynx)
- Relaxation (Roll, 2019)
- There was no preferred vowel
- All participants agreed that their natural physiology played largely into their ability to mix-belt and where their belt to mix-belt transitions sits (Titze, 2018) and thus why there is lacking consensus in technique (Bourne and Garnier, 2012; Bourne & Kenny, 2016; Lovetri et al. 2008; Vala 2021)

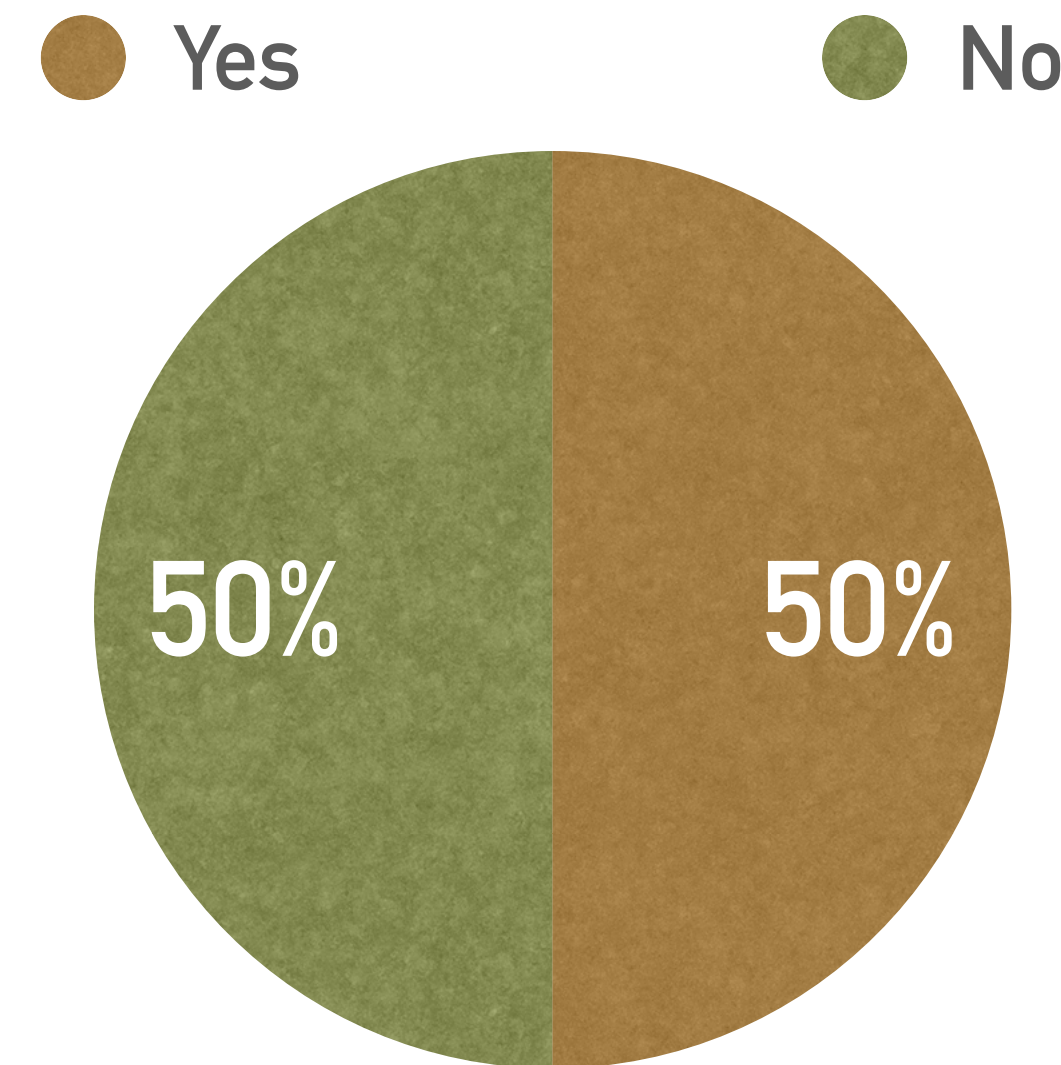
FINDINGS

Training (All methods)

Had Classical Training



Had Belt/ Chest Voice Training



- No consensus on best type of training
- Singers who trained classically felt this positively impacted their ability to mix-belt

FINDINGS

Mix-Belt Exercises & Training Techniques

- An equally balanced voice was agreed by all to be necessary in order to mix-belt
- Developing access and control to different placements
- Ensuring head voice is adequately warm prior to using belt/mix belt. Top down (Roll, 2019)
- Each singer had DIFFERENT exercises that helped them access mix-belt
 - This supports Titze's physiology theory (2018)

DISCUSSION

- A tentative definition based on this research;

Mix-belt is a voice style that is used in contemporary MT that creates a sound with the speech-like diction, grounded tonality of belt but the lightness and range of head voice. It can be created through the use of head or chest voice registration **dependent on pitch** and requires forward placement, core engagement, relaxation and a sense of laryngeal contraction.

CONCLUSION

- This project has determined that for the four participants mix-belt is used to meet the stylistic requirements of contemporary MT and as a technical adjustment when pitch in these styles ascends past a comfortable belt range (Bourne & Kenny, 2016; Edwin, 2020; Green et al, 2013; Harris & Irene, 2020; Roll, 2019; Vala 2021).
- Technical similarities of mix-belt among the four singers in this study were forward placement, constriction of the larynx, core engagement and maintaining relaxed physicality (Roll, 2019; Bozeman, 2013)
- Singers must gain great familiarity with their instrument to navigate placement, breath support, equal comfort in head and chest registrars and ease in transitioning between them (Roll, 2019).
- Mix-belt was found to be resoundingly safe and sustainable (Roll, 2019).

RECOMMENDATIONS

- Assessment of these results on a larger group of eligible participants to see if generalisation of these concepts can be determined
- Assessment of quantitative data through the use of electroglottography, and auditory feedback. This may help provide insight to the exact physiological occurrences of mix-belt that lay beyond the singers' general scope of understanding.
- A deeper look into the auditory and physiological differences between head-mix and mix-belt

REFLECTIVE EXAMINATION

- Insider Research

- Encouraging verbalization
- Resist interjection of personal experiences

- Challenges

- Performing and teaching while simultaneously conducting this project provide a fantastic opportunity for reflection on action (Dewey, 1910)

THANK YOU

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