

## Exploring the level of knowledge that undergraduate Musical Theatre students possess regarding vocal fatigue, and the culture surrounding the topic.

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How do undergraduate Musical Theatre students perceive vocal fatigue and it's surrounding culture? Are they aware of it's cause(s) and effect(s)? Do they have any individual mitigation strategies?



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# Context & Justification

- Various studies have been undertaken to analyse the impact of a heavy vocal load (Phyland et al., 2013; Pacheco & Behlau, 2019; Zuim, Stewart and Titze, 2023), with a commonly identified outcome being vocal fatigue.
- Vocal fatigue is a prominent condition within the musical theatre industry (Gaskill and Hetzel, 2017).
- There have been numerous attempts to define the phenomenon (Vilkman, 2004; Hunter et al., 2020; De Araújo Torres et al., 2024).
- There are multiple tools to measure the impact of vocal fatigue such as the EASE (Evaluation Of The Ability To Sing Easily) scale (Phyland et al., 2013) and the VFI (Vocal Fatigue Index) (Nanjundeswaran et al., 2022), both relying on the self perception of the individual.
- There are 5 potential biophysiological mechanisms underlying vocal fatigue (Shembelel and Nanjundeswaran, 2022).
- The literature also highlighted a stigma surrounding vocal injury both within training and in the professional industry (Pecen, Collins and MacNamara, 2018; Suddeth and Flynn, 2022; Moore, 2024).

# Methodology

- **Constructivist epistemology, the learner is actively involved in the developing of the knowledge, influenced by lived experience, social interactions and cognitive development (Ültanır, 2012; Onuf, 2012).**
- **Phenomenological approach, enabling the study to focus on the lived experiences of the participants (Runco et al., 2011).**
- **Predominantly a qualitative approach to the study, analysing language and experiences (Hignett and McDermott, 2015).**
- **Mixed method approach also used to explore the use of some descriptive statistics (Creswell and Plano Clark, 2023).**

# Participant Selection

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- Combination of both purposive and snowball sampling
- 15 questionnaire participants
- 5 participants for both the individual interviews and focus group
- 8 female-identifying and 7 male-identifying participants
- All currently in their second and third years of training at 9 different leading drama schools in and around London
- Limitation of using a small sample size, predominantly due to time constraints. However, the study focused on analysing language and lived experience of vocal fatigue as opposed to analysing the prevalence of the condition.

# Methods

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## Questionnaire

- *Combination of closed and open-ended questions*
- *Anonymity ensured for participants*



## Individual Interviews

- *Semi-structured approach to foster an open and supportive environment but still ensuring consistency across each interview (Magaldi and Berler, 2020).*
- *Using the online platform, Zoom.*



## Literature Review

- *Systematic approach*
- *Inclusion criteria sourcing literature predominantly post-2000*



## Focus Groups

- *Semi-structured, thematic approach.*
- *Fostering a supportive and collaborative environment.*
- *Utilising the online platform, Zoom, which featured useful tools to avoid participant domination and enable equal contribution (Falter et al., 2022).*



# Ethical Considerations

- Due to the nature of the study and the small sample size, participants may fear identification is likely and worry about potential repercussions within training.
  - **To mitigate this risk, participants were ensured that their anonymity was guaranteed.**
- Due to my previous teaching relationship with some of the participants, they may have felt obliged to partake or deliver desirable answers.
  - **To mitigate this, all participants were given the option to decline participation and during the process I aimed to create an honest and open environment, encouraging participants speak freely.**
- This topic may have created an emotional response for some participants and potentially flagged some voice related issues.
  - **If any participants expressed any concerns, mentally or vocally, they would've been guided to resources that may aid them such as BAPAM or BVA.**

# Methods for Data Analysis

## Qualitative Coding - Thematic Analysis

- Each interview was individually coded, then common codes were identified. Themes were then drawn from the individual coding (Braun and Clarke, 2006).
- Focus groups were individually coded, then themes were generated from the coding.
- Interview and focus group themes were then analysed to highlight any similarities.

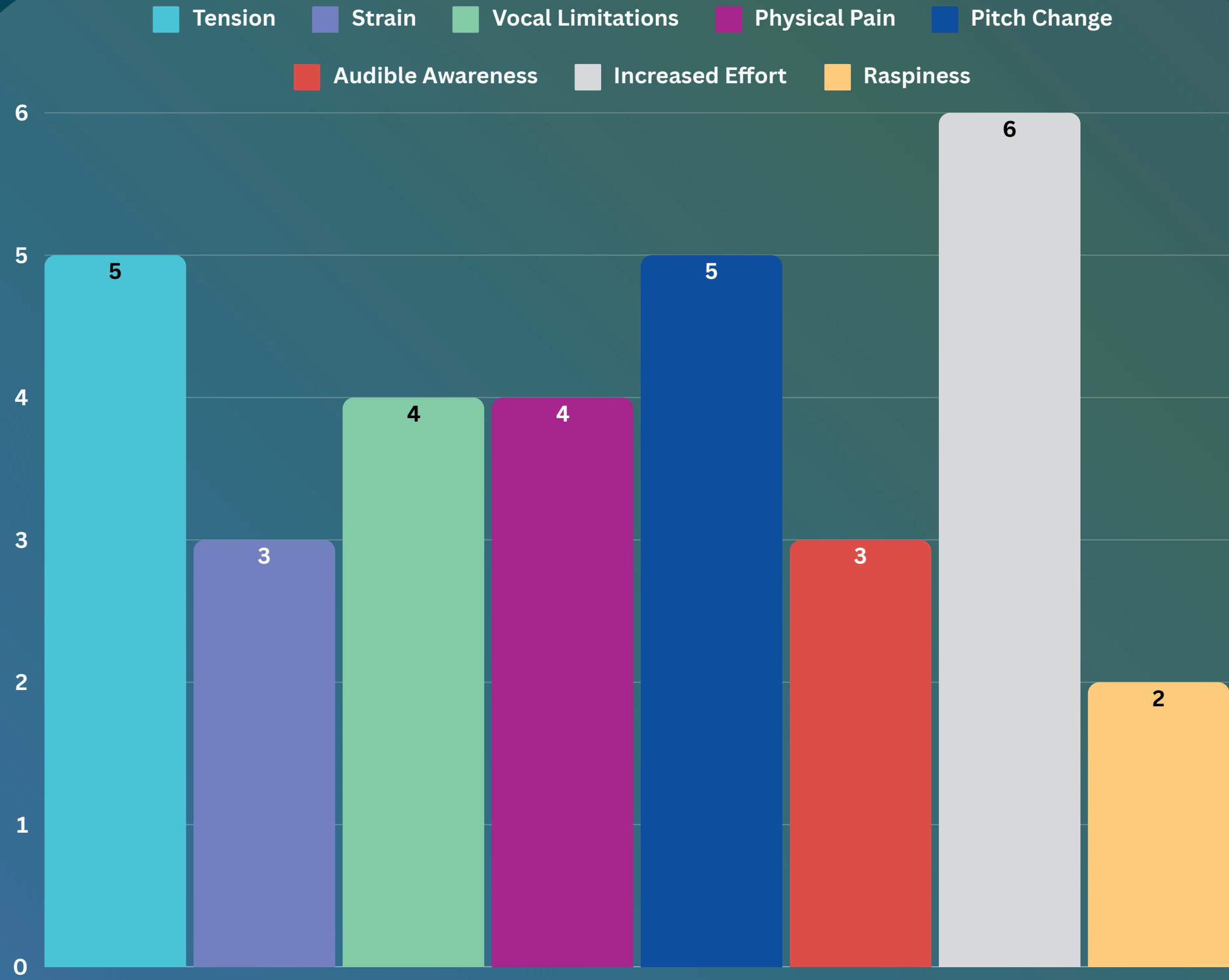
## Descriptive Statistics

- Upon analysing the data drawn from the questionnaire, descriptive statistics were used to display the themes. This enabled a clear visual representation of the data.

# Questionnaire Findings

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Number of participants



## How does your own individual voice respond to vocal fatigue?

- 100% of participants affirmed they had experienced vocal fatigue, based on their own self perception.
- Both physical and audible symptoms were identified.
- Physical symptoms such as feelings of tension and strain could be linked to the heightened effort also mentioned (Feindel, 2008)
- Other symptoms such as “swollen vocal folds” were mentioned. Some of these symptoms are not always linked to vocal fatigue and if experienced frequently should receive further attention (Weston and Schneider, 2023).

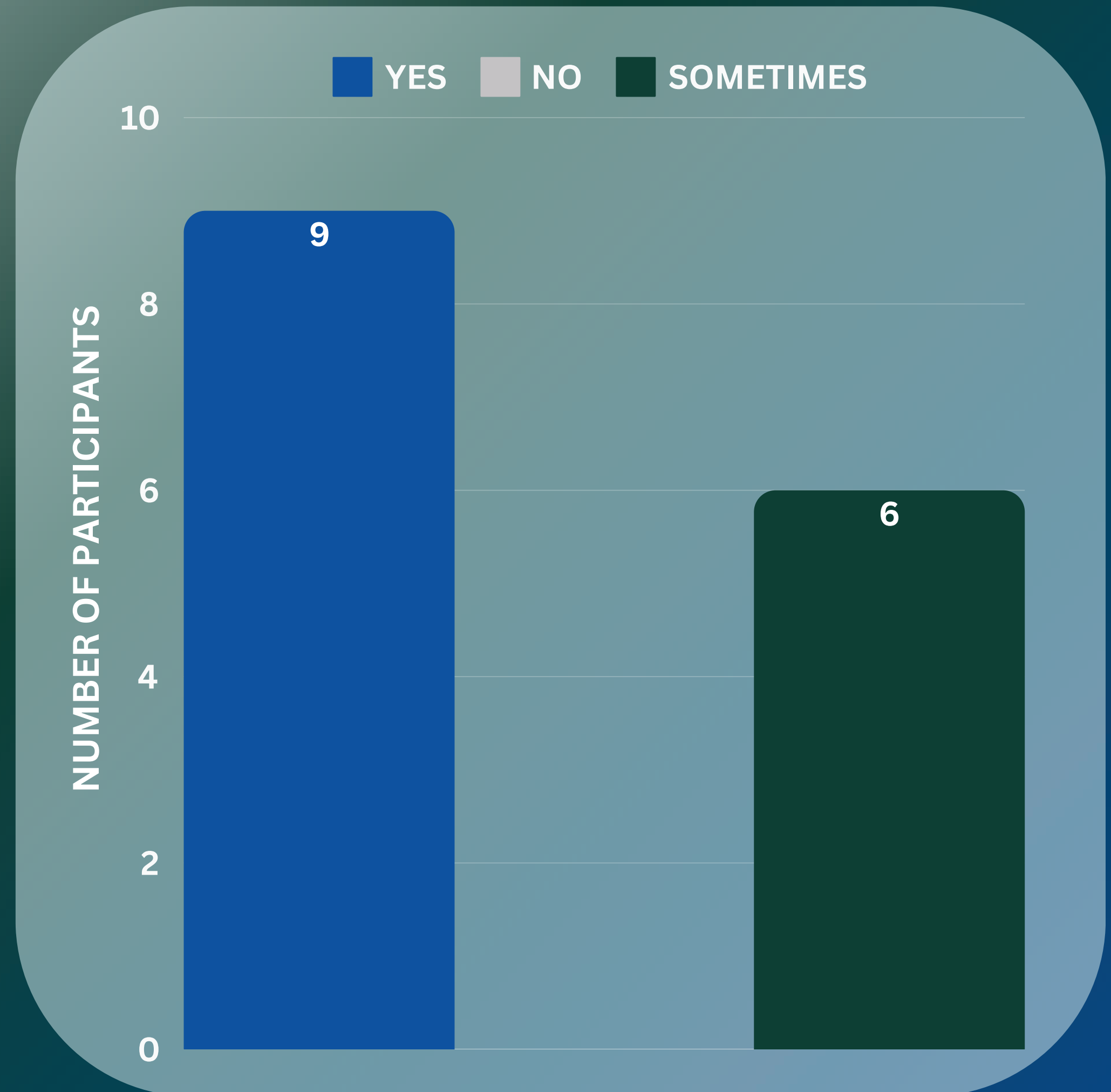
# Does vocal fatigue cause you to feel worried or anxious?

**60% = YES**

**40% = SOMETIMES**

When participants were asked why? The following themes were generated:

- *Pressure of the industry*
- *Pressure of perfection within training*
- *Fear of judgement*
- *Fear of vocal injury*
- *The inability to visibly see the vocal folds*



# Interview Findings

## THEME 1

### ***INDIVIDUAL PERCEPTION OF FATIGUE AND ITS CAUSES***

- Some of their individual perceptions were:
  - ***“unable to reach vocal capacity”***
  - ***“more effort to do everything”***
  - ***“loss of range and clear tone”***
  - ***“constant clearing of the throat”***
- Participants were then asked how they would recognise a vocal injury, some responses were:
  - ***“Complete voice loss”***
  - ***“Increase difficulty swallowing”***
  - ***“A feeling of physical pain”***
- These symptoms highlight particularly severe cases (Keidar and Menges, 2013), signifying a need for more clarification for students in identifying injury and making connections between fatigue and injury.
- Participants highlighted an increase of fatigue during intense periods of training however ***“often feel unable to preempt vocal fatigue”***.

# Interview Findings

## THEME 2

### ***LACK OF VARITETY WITHIN STRATEGIES FOR MITIGATION***

- Vocal steaming was identified as the most common mitigation strategy.
- Lots of inconsistency in application of the method.
- *“I don’t know what works for me personally, I know I feel some difference and a slight ease but there could be something that could make everything a whole lot easier, that I just haven’t found yet”*
- A need for greater guidance surrounding strategies.
- Keltz and McHenry identified that strategies are not universal and a one-size-fits-all approach will not suffice (Keltz and McHenry, 2022). This should be reflected within the guidance given to undergraduate students.

# Focus Group Findings

## THEME 1

### ***PRIORITIES WITHIN UNDERGRADUATE TRAINING***

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- Difficulty to balance the demands of training whilst mitigating fatigue.
- Underlying feeling of constant assesment and participants feeling like “***everything is a test***”, for upcoming opportunities.
- Fear of judgement surrounding vocal injury, reflected in the study undertaken by Suddeth and Flynn (2022).
- Constant time constraints meaning lack of time to successfully recover from vocal fatigue.
- Lack of communication between staff members surrounding vocal fatigue and consideration across disciplines.

# Focus Group Findings

## THEME 2

### ***PHYSICAL AND AUDIBLE AWARENESS OF FATIGUE***

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- Vocal Limitations
  - ***“I can’t reach my vocal capacity”***
  - ***“loss of range”***
  - ***“everything feels a bit heavier”***
- Physical Acknowledgement
  - ***“tenderness around the neck”***
  - ***“throat feels achy”***
- The difference in symptoms could relate to the biophysiological mechanisms of fatigue (Shembelel and Nanjundeswaran, 2022). A deeper understanding of these could help students tackle fatigue more successfully.

# BRINGING IT ALL TOGETHER

## Overarching Theme

### *MENTAL AND EMOTIONAL IMPACT OF VOCAL FATIGUE*

Feelings of inferiority

***“Why am I vocally tired and the person next to me is not?”***

If undergraduates were educated on how each individual student responds to fatigue, this could alleviate this feeling.

Feelings of anger or embarrassment towards prolonged fatigue

***“you want it to go away so fast that it comes to a point where you will just try everything that everyone else is doing, because you just want to be vocally fine again”***

This causes students to potentially try rush their recovery or try a number of strategies that may not benefit them.

Praise given to those students who do not experience fatigue or do not experience it as frequently as others

This heightens the feeling of inferiority between students and this emotional impact could further prolong the recovery time for those experiencing vocal fatigue (Hunter and Titze, 2009; Titze, 2009).

## Discussion

- Participants demonstrated a good level of awareness surrounding the symptoms of vocal fatigue.
- The findings revealed a gap between the participants' ability to distinguish between vocal fatigue and vocal injury and a lack of knowledge surrounding the relationship between the two.
- Participants are aware of strategies to mitigate fatigue however they lack personalised, individual guidance to enable them to manage fatigue effectively in the long term.
- Some participants did reflect on positive experiences with staff throughout training which suggests that while some participants have experienced judgment and miscommunication, of course this can not be taken as an overriding conclusion from the data.
- All participants still expressed a sense of potential judgement and embarrassment due to the overall culture surrounding fatigue within training.

## Recommendations & Self Reflection

- **Although the findings may not be entirely representative of the finite population, the study enabled me to gather rich qualitative data surrounding the way the participants perceive vocal fatigue and its surrounding culture.**
- **It would be beneficial to undertake a future study with a larger sample size to further explore and confirm the generated themes.**
- **It would be beneficial for future research to explore how individual perceptions of vocal fatigue reflect the underlying biophysiological mechanisms (Shembel and Nanjundeswaran, 2022).**
- **This study aided my development as a researcher, honing my skills in conducting both focus groups and interviews alongside working with data analysis, specifically thematic analysis and coding.**

## Suggested Actions

- *Self reporting and relying on self perception may not be a suitable way to identify and successfully mitigate vocal fatigue.*
- *The overall ambiguity within the definition increases the difficulty for undergraduate students to successfully identify the condition.*
- *Participants expressed a desire for more open conversation and support surrounding vocal fatigue within undergraduate training.*
- *More education surrounding the impact of vocal fatigue and it's links to vocal injury could be incorporated into undergraduate curriculums (Suddeth and Flynn, 2022; Moore, 2024).*

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**Thank you  
for listening!**