

Perceptions and Practices Surrounding Vocal Fatigue Among Professional Voice Users and Their Collaborators: An Exploratory Study Incorporating a Research-Informed Educational Guide.

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JUSTIFICATION

RESEARCH GAP

Limited research on individual experiences and collaborator perspectives

KNOWLEDGE & IMPLEMENTATION

Knowledge does not always translate into prevention

RESEARCH-INFORMED EDUCATION

Could accessible educational support greater understanding?

CONTEXT

PROFESSIONAL VOICE USERS

Vocal fatigue is a common and multifaceted experience for professional voice users

PROFESSIONAL CONTEXT

Workload, performance demands and collaborators may shape experiences

PARTICIPANTS

Professional voice users & collaborators

PROFESSIONAL PRACTICE

INSPIRATION

Frequent discussions with clients about vocal fatigue

PROFESSIONAL CONTEXT

Studio & training settings

WHY?

Understanding experiences may support individualised guidance

Research Question

- How do professional voice users and those who work with them perceive, identify and manage vocal fatigue, and how might an educational guide influence and contribute to their understanding and professional practice?

Aims

- **Explore** how professional voice users and their collaborators understand, recognise and respond to vocal fatigue.
- **Identify** gaps in knowledge, areas of uncertainty and contextual factors influencing responses to the condition.
- **Examine** how vocal fatigue is experienced within different professional contexts.
- **Evaluate** participants' responses to a research-informed educational guide and its potential contribution to practice.

LITERATURE REVIEW

Theme 1

Current Understanding of Vocal Fatigue

- Still a sense of uncertainty surrounding a definition and the nature of the condition (de Oliveira Lemos *et al.*, 2025)
- A combination of both physiological and psychological experiences
- Proposed definition by Hunter *et al.* (2020) used as the working definition for the study:
“Vocal fatigue is the perceived measurable symptom that influences vocal task performance and is individual specific; it is a multifaceted concept integrating self-perceived vocal symptoms and/or physiologic deficit.”

Hunter *et al.*, 2020, p.518

LITERATURE REVIEW

Theme 2

Identification, Aetiology and Management

IDENTIFICATION

- The Common-Sense Model (CSM) of Illness Self-Regulation
- Variable symptoms
- Self-perception vs objective / audible measures

AETIOLOGY

- Physical and vocal demands
- Vocal hygiene
- Psychosocial factors
- Multiple interacting underlying biophysiological mechanisms

MANAGEMENT

- Knowledge → practice gap
- Individualised management

LITERATURE REVIEW

Theme 3

Vocal Fatigue in Professional Voice Users and Their Collaborators

PROFESSIONAL DEMANDS

- Vocal effort = vocal demand + vocal demand response
- High workloads
- Demanding vocal qualities
- Unsuitable amplification and monitoring

PROFESSIONAL CONTEXTS AND COLLABORATORS

- Collaborative environments
- Schedules and working conditions
- Collaborator influence

METHODOLOGY

PRAGMATIC PARADIGM

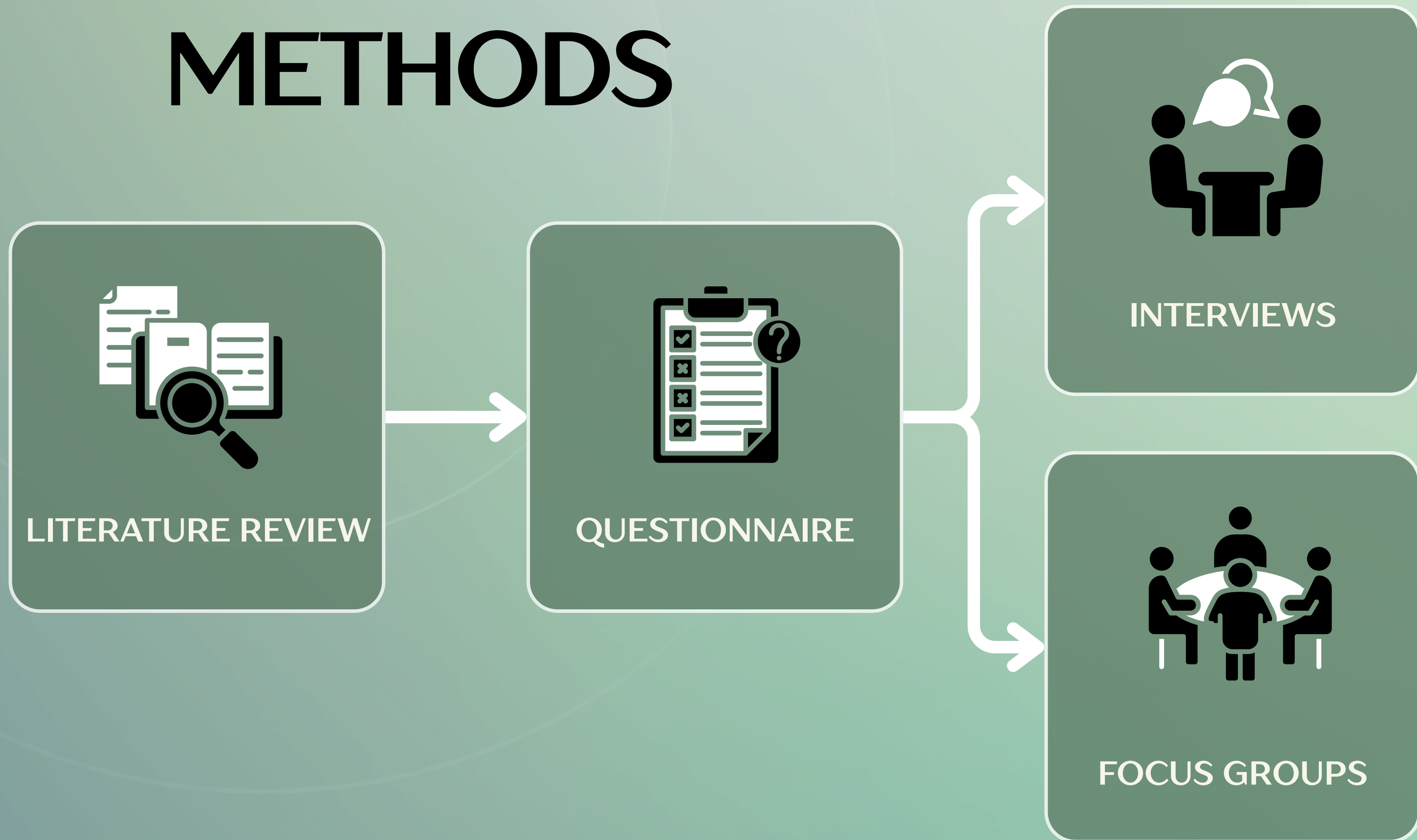
- Pragmatism recognises the collaborative relationship between knowledge, experience and action (Dewey, 1998; Elkjaer, 2009)

MIXED METHODS

- Qualitative-dominant mixed-methods approach
- Qualitative data → lived experiences, interactions and individual perceptions
- Quantitative data → contextual insight through descriptive statistics

(Mason, 2006; Creswell & Creswell, 2017)

METHODS





What is Vocal Fatigue?

Vocal fatigue is a **reduction in the efficiency of voice production**, resulting in **increased effort required** to produce and sustain voice.



An evidence-informed guide to help identify, understand and manage vocal fatigue.

Developed by Kasia Howley
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Early recognition of vocal fatigue is paramount, and professional voice users should be self-aware and attentive to any minor changes in their voice.

Below is a simple step-by-step guide to help you identify and manage vocal fatigue.

Identify your symptoms

Assess the duration of your symptoms

Evaluate the impact of your symptoms

Consider potential causes

Implement targeted strategies



COMMON SYMPTOMS



Reduced control of the voice



Discomfort in the laryngeal, neck or clavicular region



Reduced overall vocal power



Increased vocal effort required to produce sound



Temporary loss of voice



Reduced vocal flexibility

Or any other change that doesn't feel right for **your** voice. Remember, every voice and experience is unique - trust your own awareness!

WHY DOES VOCAL FATIGUE HAPPEN?

“

Vocal fatigue can arise from a **range of causes**, shaped by the **underlying mechanisms involved in voice production**. It often develops through a combination of **external factors** and **internal physiological responses**.

Below are some potential causes:

HIGH VOCAL DEMAND

Prolonged periods of intense voice use can overwork the vocal mechanisms.

INEFFICIENT TECHNIQUE

Using technique that doesn't effectively support the vocal mechanisms.

CHALLENGING ENVIRONMENTS

Dry air, dusty environments or poor acoustics can also contribute to vocal fatigue.

SUBOPTIMAL VOCAL CARE

Lack of hydration, poor diet and lifestyle choices can all contribute to vocal fatigue.

INADEQUATE RECOVERY TIME

Without adequate rest, there is limited recovery time after intense voice use, increasing the risk of vocal fatigue.



A SCIENTIFIC MOMENT!

THE BIOPHYSIOLOGICAL MECHANISMS THAT UNDERPIN THE CONDITION

Neuromuscular Mechanism Fatigue

When the muscles used for voice production lack the ability to sustain the tension required to produce sound efficiently.

→ May present as a weak voice quality or tightness surrounding the laryngeal muscles.

Vocal Fold Cover Mechanism Fatigue

When the high frequency of vibrations alter the composition of the folds making vibration less efficient.

→ May present as reduced flexibility in the sound or a more effortful process.

Afferent Mechanism Fatigue

When the sensory signals between the laryngeal muscles and the brain become less accurate.

→ May alter your perception of vocal fatigue meaning the brain “feels” vocally fatigued before it becomes audible.

Metabolic Mechanism Fatigue

When the energy supply to the muscles involved in voice production is depleted faster than it can be restored, potentially leading to a build up of metabolic by-products.

→ May present as “heaviness” or lack of vocal control.

Central Neural Mechanism Fatigue

When the central nervous system becomes less efficient at coordinating the muscles involved in voice production.

→ May present as reduced control or stability of the sound.

HOW CAN I STOP THIS FROM HAPPENING?

Effective management of vocal fatigue combines prevention strategies with symptom-relief strategies.
Every voice is different, so explore what works the best for you!

FUTURE PREVENTION

Healthy Vocal Habits

*Care for your voice as you would care for your body. Maintain awareness of your **daily habits, lifestyle choices** and **consistent voice care practices**.*



Vocal Technique

Efficient vocal technique helps manage high vocal demand and reduce the onset of vocal fatigue.

SYMPTOM RELIEF



Hydration and Humidification

*Regular water intake should be part of your **daily routine** rather than a precautionary measure. **Steaming and nebulising** may support vocal stability and **consistency** when carried out correctly, paying attention to the correct **duration, temperature and technique**.*

SOVT Exercises

***Semi-occluded vocal tract exercises** involve partially closing or narrowing the vocal tract (exercises such as **lip trills, tongue trills or straw-based work**) These can help to **enhance vocal efficiency** and **reduce phonation effort**.*



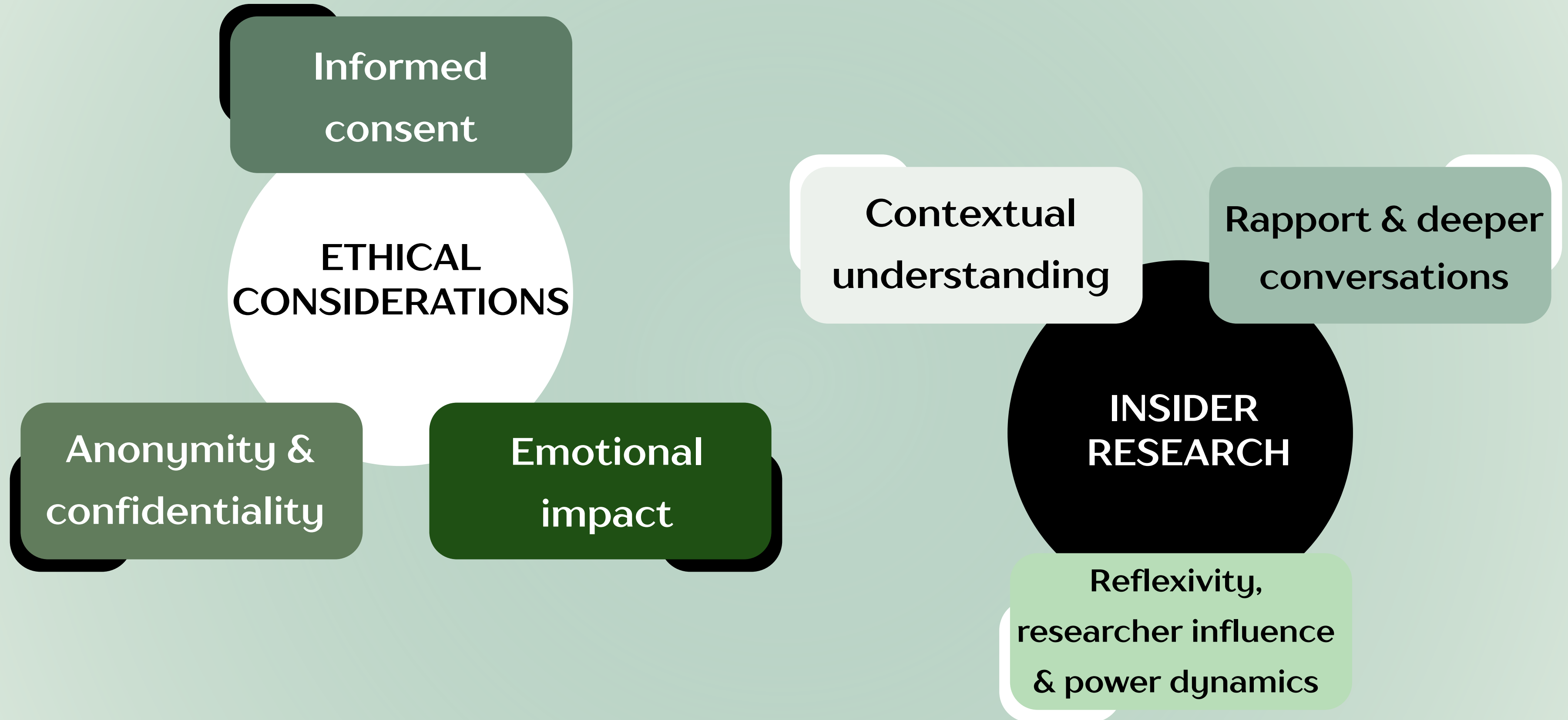
Laryngeal Manual Therapy

*A **contact-based treatment** targeting the laryngeal muscles and surrounding structures, conducted by a **trained professional**. This treatment can **reduce peri-laryngeal muscle tension** and **improve vocal flexibility**.*

Voice Rest

***Absolute voice rest** requires **complete silence** and is typically prescribed following vocal fold surgery. **Relative voice rest** involves **reducing overall use**, while incorporating small amounts of gentle, controlled phonation, to encourage efficient voice use. **Voice rest gives the mechanisms involved in voice production a chance to recover**, helping to prevent further damage.*

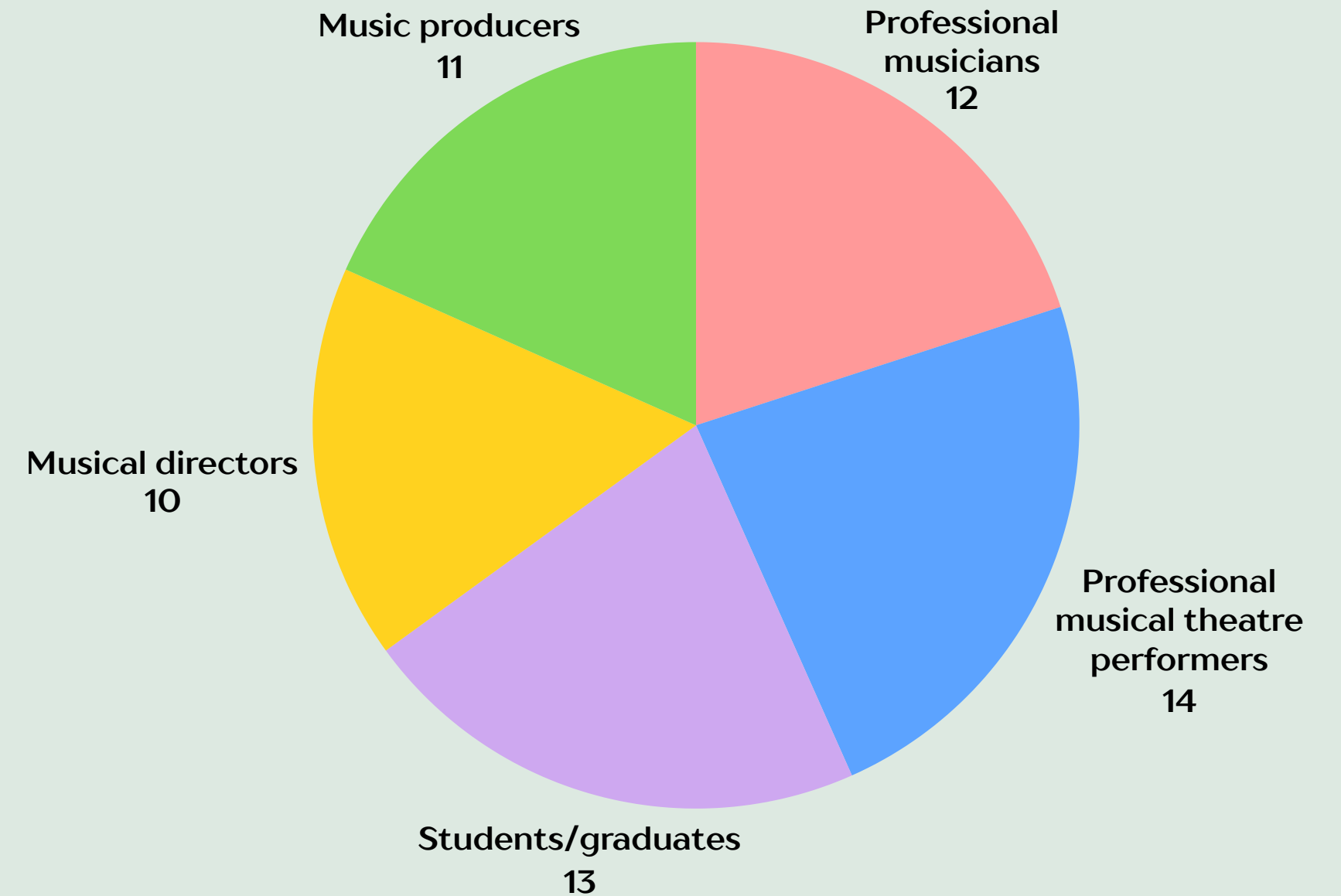
If you have questions about the approaches discussed above, please speak to a **qualified voice professional**. If your **voice symptoms persist for more than three weeks**, please seek professional assessment from a **voice specialist**.



Participant Inclusion and Recruitment

- Criterion purposive sampling + additional snowball sampling
- Professional voice users
- Collaborators
- Intentional variation

60 PARTICIPANTS IN TOTAL



DATA ANALYSIS

- Braun & Clarke's (2006) : six-phase thematic analysis
- Saldaña's (2013): first-cycle coding & category development

FIRST-CYCLE
CODING

CATEGORIES

THEMES

- Descriptive and in vivo coding
- Primarily inductive coding approach

THEME 1

Vocal Fatigue Amidst the Pressures and Demands of Professional Voice Users

THEME 2

The Multifaceted Experience and Perception of Vocal Fatigue Among Professional Voice Users and Their Collaborators

THEME 3

The Role and Impact of Collaborators in Supporting Professional Voice Users Around Vocal Fatigue

THEME 4

Moving from Reactive Management to Prevention of Vocal Fatigue

THEME 5

Participant Perspectives on the Educational Guide: Feedback, Learning and Relevance

THEME 1

Vocal Fatigue Amidst the Pressures and Demands of Professional Voice Users

SUB-THEME 1

Occupational Demands & Workload

- 38/39 professional voice users reported experiencing vocal fatigue
- Overuse, repetitive voice use & demanding material

“an almost unavoidable result of a voice dealing with exceptionally demanding material on a repeated day-to-day basis” (P19-M)

SUB-THEME 2

Financial Pressures and Professional Expectations

- Financial necessity, professional commitments and identity
- Vocal fatigue <> financial pressures <> professional expectations

“Unfortunately, even if I’m tired, I still have to go and do the gig to get paid” (P12-M)

SUB-THEME 3

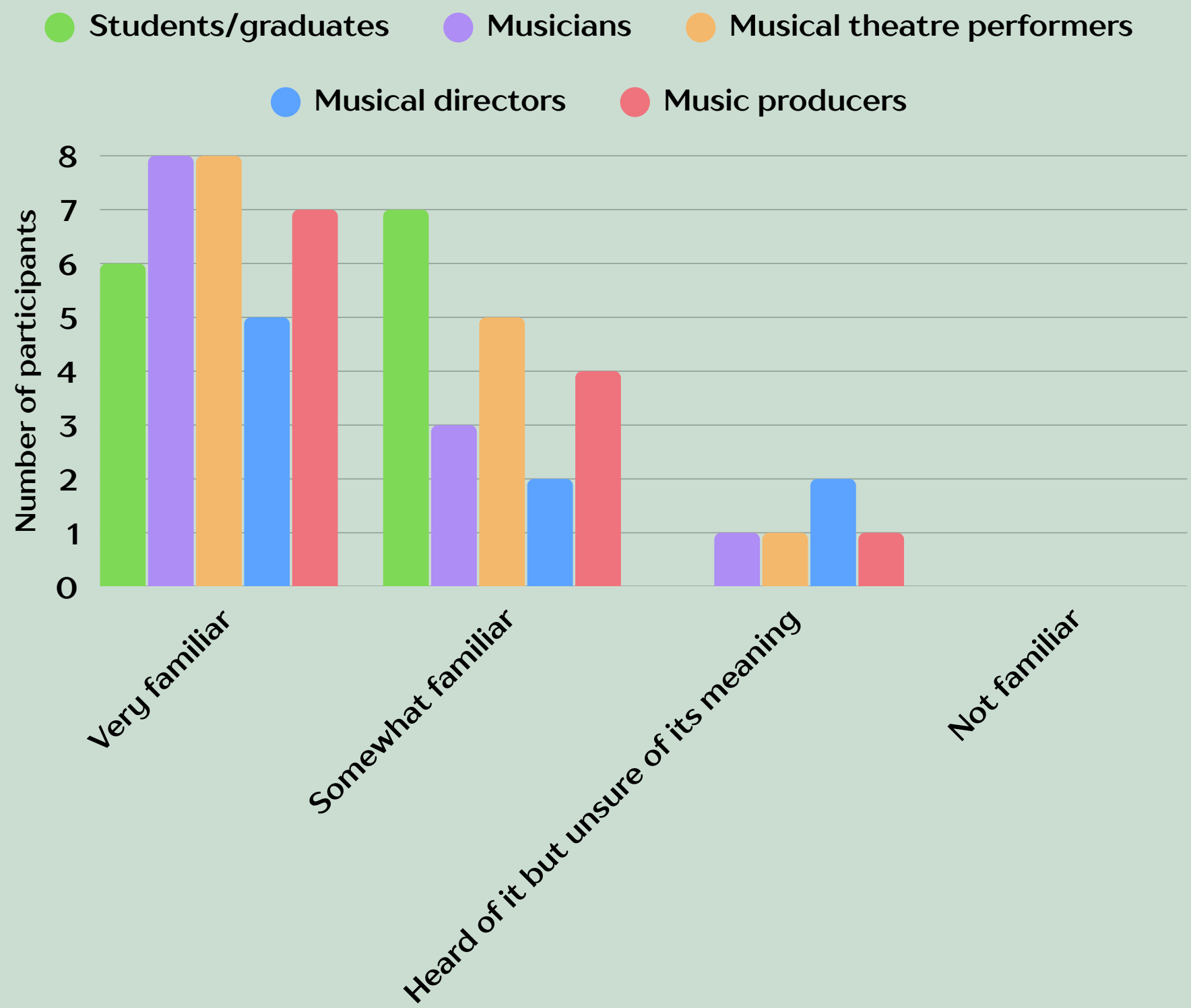
Lifestyle and External Factors that Influence Vocal Fatigue

- Lifestyle, environment, social demands and external conditions
- Behaviours cannot solely be understood as individual choices

“beheld to your job over your life” (P41-MTP)

DEFINING AND UNDERSTANDING VOCAL FATIGUE AND ITS AETIOLOGY

How familiar are you with the concept of vocal fatigue?



The Multifaceted Experience and Perception of Vocal Fatigue Among Professional Voice Users and Their Collaborators

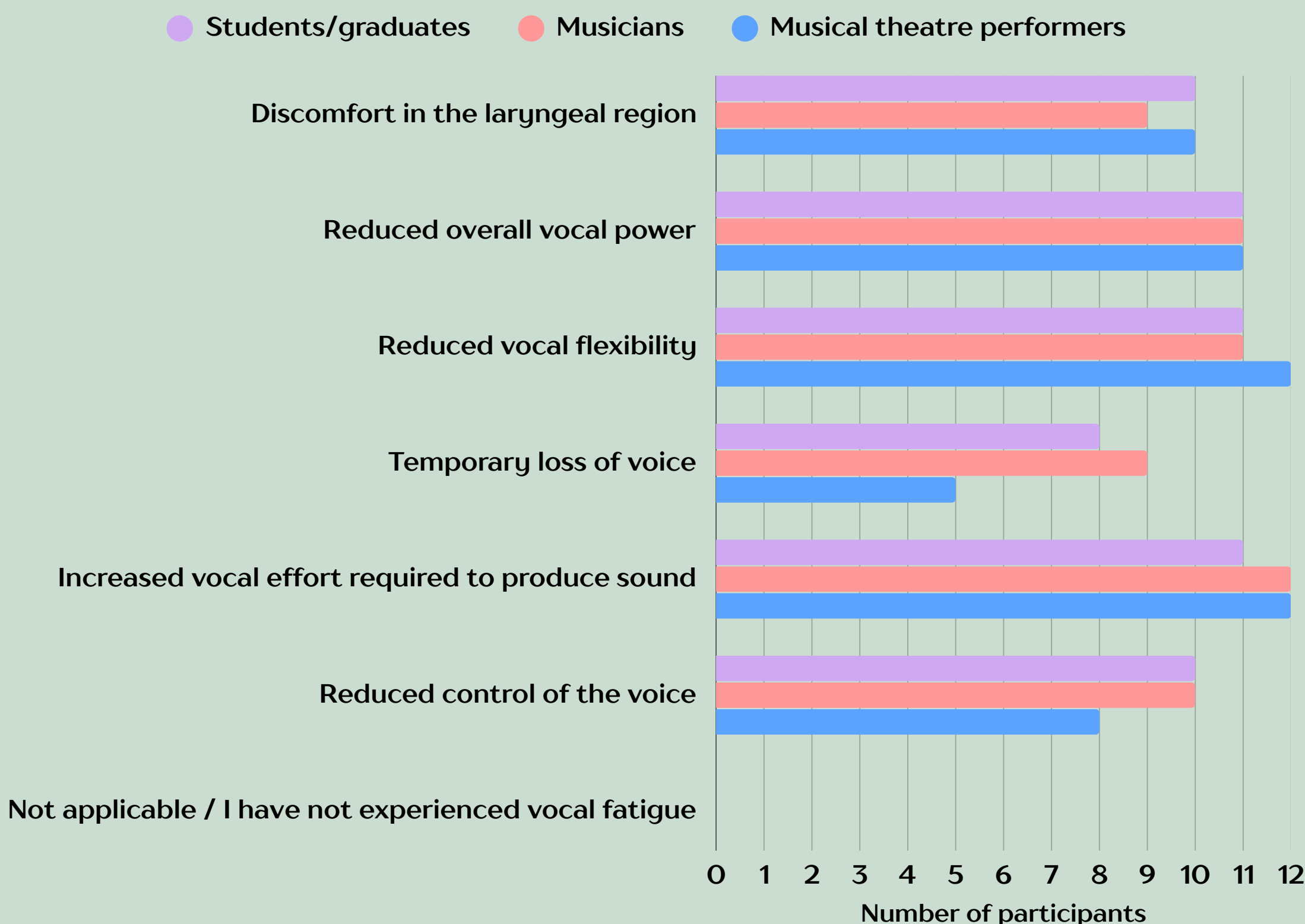
THEME 2

- Familiarity did not always reflect understanding
- Uncertainty remained around the definition and causes of the condition
- Some fatigue-related qualities were perceived as aesthetically desirable

“until you called it vocal fatigue, I don't think I'd really heard it called that before...” (P58-MP)

RECOGNITION AND INTERPRETATION OF SYMPTOMS

Please select any symptoms you have experienced when feeling vocally fatigued:



The Multifaceted Experience and Perception of Vocal Fatigue Among Professional Voice Users and Their Collaborators

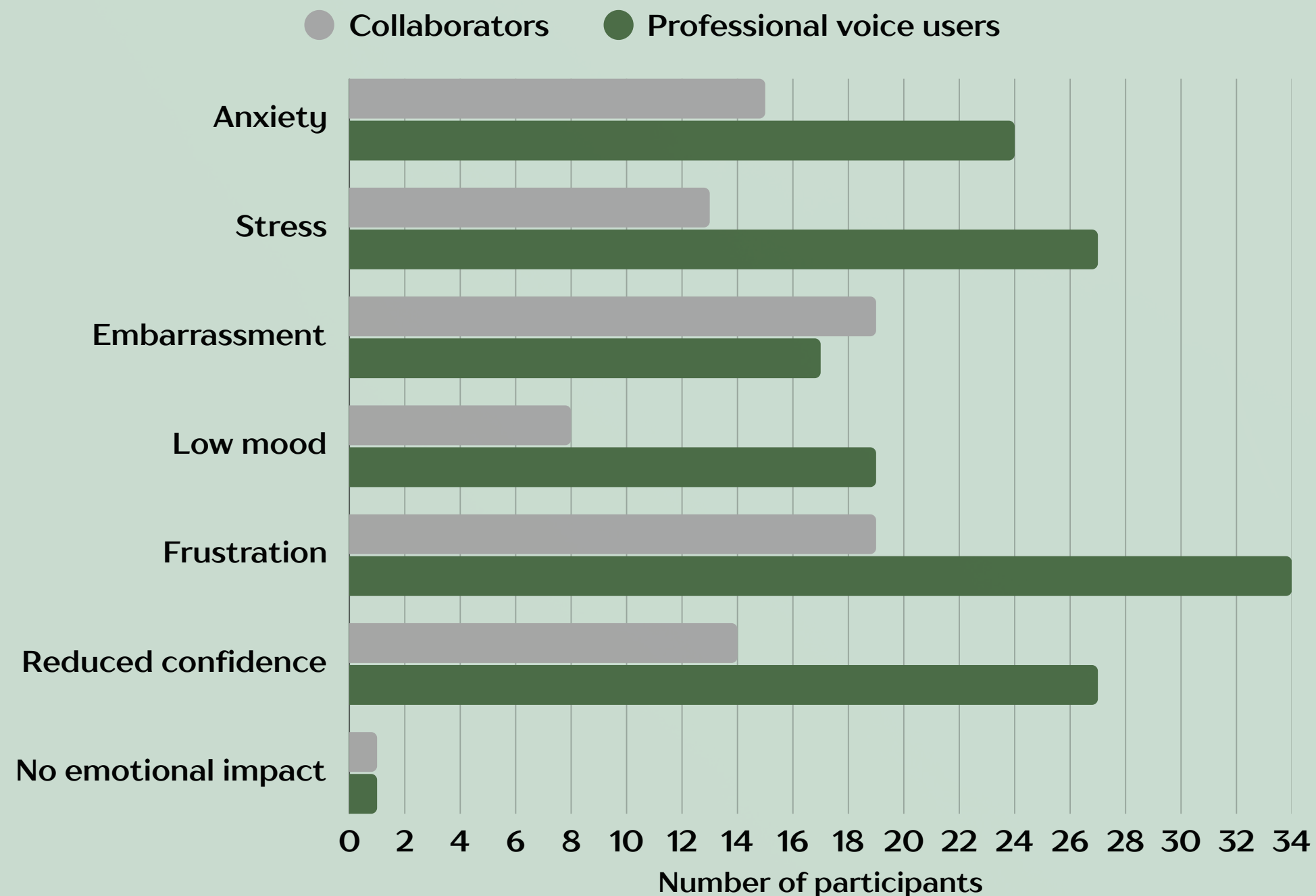
THEME 2

- Symptoms were broadly consistent
- Participants differed in whether vocal fatigue is externally audible
- Uncertainty around the difference between vocal injury and vocal fatigue

“that means I have nodules and I can't sing for the next six months. And it's like, one, two, skip a few” (P36-MD)

EMOTIONAL AND PHYSICAL IMPACT AND EXPERIENCES OF VOCAL FATIGUE

When you/those you are working with experience vocal fatigue, which of the following emotional responses, if any, do you experience/observe?



The Multifaceted Experience and Perception of Vocal Fatigue Among Professional Voice Users and Their Collaborators

THEME 2

- Participants described ‘negative connotations’ associated with vocal fatigue
- Reciprocal relationship between vocal and mental health
- Participants perceived a disconnect between vocal and physical health

“there's still such a warped view on vocal health” (P36-MD)

THEME 3

The Role and Impact of Collaborators in Supporting Professional Voice Users Around Vocal Fatigue

SUB-THEME 1

What is a collaborator's role and responsibility to a professional voice user?

- 90% of collaborators believe to have worked with a professional voice user experiencing vocal fatigue
- Conflicting and uncertain views around collaborator responsibility
- Sensitive communication was considered important when discussing voice-related issues

“although it’s heavily linked to my job, it isn’t my job” (P44-MD)

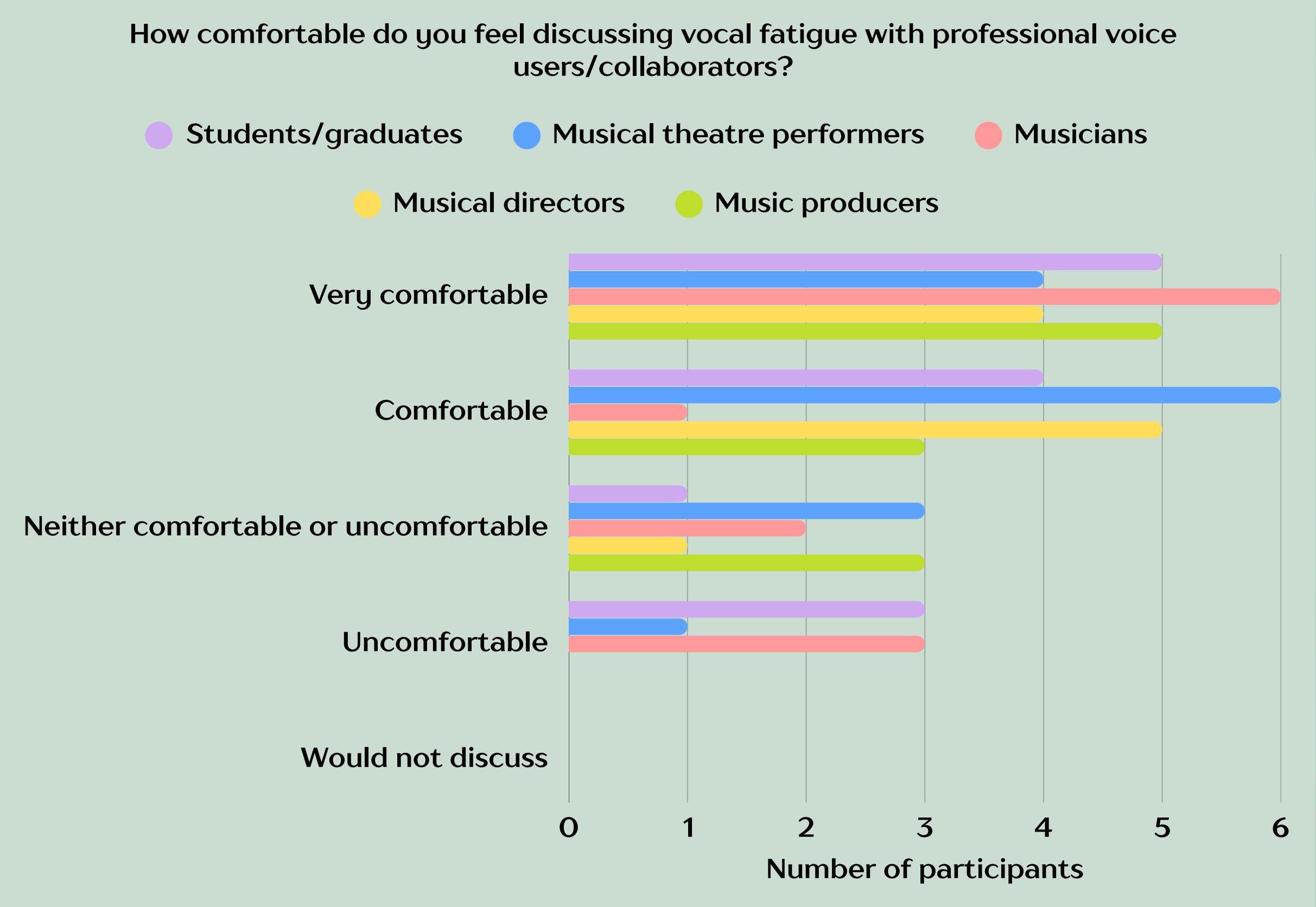
SUB-THEME 2

The role of training, education and alternative sources of information surrounding vocal fatigue.

- Participants questioned the credibility and consistency of existing guidance
- A culture of disguising illness within training environments
- Vocal injury potentially causing voice users to feel ‘publicly marked’

“You can't give advice to young people if you're not taking the advice yourself” (P49-S/G)

THE IMPACT OF COLLABORATORS AND PROFESSIONAL CONTEXTS ON VOCAL FATIGUE AMONG PROFESSIONAL VOICE USERS



The Role and Impact of Collaborators in Supporting Professional Voice Users Around Vocal Fatigue

THEME 3

- Collaborators appeared more comfortable overall in discussing vocal fatigue
- Professional contexts and expectations could impact the prioritisation of vocal health
- Age and professional experience were perceived to influence communication around vocal difficulties

“my frustration comes with watching younger performers who fear getting ridiculed, or older performers who have the mentality the show must go on” (P41-MTP).

THEME 4

Moving from Reactive Management to Prevention of Vocal Fatigue

SUB-THEME 1

The dominance of reactive management over prevention

- Participants predominantly described reactive management over prevention
- Financial constraints, professional workload or workplace culture could influence preventative practice

“I think human mentality in a lot of areas of life is more consequential than it is preventative” (P8-M)

SUB-THEME 2

The complexities, myths and misconceptions surrounding vocal fatigue management strategies

- Steaming, nebulising and voice rest were widely used as management strategies
- Participants differed in their views of the effectiveness of strategies, particularly commercial remedies

“I’m doing it because I think I should” (P27-MTP)

SUB-THEME 3

Understanding and responding to the individual experiences of vocal fatigue

- Importance of understanding individual experiences of vocal fatigue
- Knowledge of strategies did not always translate into effective implementation

“Do you think you could ever pinpoint as to when or where you're feeling it?” (P4-S/G)

THEME 5

Participant Perspectives on the Educational Guide: Feedback, Learning and Relevance

SUB-THEME 1

Feedback on the structure, format and accessibility of the educational guide

- Clear, accessible and logically structured, reducing cognitive overload
- Scientific content perceived as accessible to a non-specialist audience

“super easy to understand, really clear and tons of information. But, in a good way, it's not overwhelming” (P2-MP)

SUB-THEME 2

Participant learning, key areas of engagement and suggested additions

- Perceived learning around the potential causes and mechanisms, and encouragement of individualised understanding
- A tension between communicating the potential consequences of vocal fatigue and maintaining the positive approach

“I love the whole scientific elements of the voice, and it would be nice if we got taught this” (P49-S/G)

SUB-THEME 3

The potential application of the educational guide in professional practice

- Applications across training, healthcare and professional workplaces, or organisations such as ‘equity’
- The guide was perceived as relevant for anyone working closely alongside professional voice users, particularly collaborators

“creatives to understand what it is that voice users are coming to them with” (P41-MTP)

LIMITATIONS

- Larger samples could provide greater representation and enable stronger comparisons between groups
- Self-reported data may be influenced by individual interpretation
- The guide measured perceived learning and relevance, rather than measurable changes in knowledge

WHAT DID I DISCOVER?

Vocal fatigue is a multifaceted condition shaped by individual responses and wider professional contexts

Familiarity does not always equate to understanding

Prevention requires greater knowledge and individualised guidance

POTENTIAL CONTRIBUTION TO THE FIELD

- Extends understanding of vocal fatigue to include collaborator perspectives
- Highlights the influence of the wider professional context
- Supports the need for individualised approaches to prevention and management

WHAT NEXT?

- Explore whether increased knowledge translates into changes in preventative behaviour and experiences of vocal fatigue
- Investigate the knowledge and perspectives of singing teachers/vocal coaches surrounding vocal fatigue

PERSONAL REFLECTIONS

- Strengthened my skills in qualitative research while keeping participants' experiences central
- Deepened my understanding of vocal fatigue, its individual presentation and the wider contexts surrounding it
- Developed my ability to translate research into practice through a more reflexive approach

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