

What should a voice professional know before working with transgender and gender-diverse voices?

MODULE 4 BMPF7073D

Lydia Peters (2335205)

VOICE STUDY CENTRE | UNIVERSITY OF WALES TRINITY SAINT DAVID

Contents

What should a voice professional know before working with transgender and gender-diverse voices?	0
COMPONENT 1: PORTFOLIO	2
INTRODUCTION and RATIONALE	2
PLANNED PROGRAMME of STUDY	3
Context	3
Aims and Objectives	3
Aims	4
Objectives	4
Expected Learning Outcomes	4
A NARRATIVE LITERATURE REVIEW: METHODOLOGY	5
Entering the Hermeneutic Circle	5
Refining my Search: Inclusion and Exclusion Criteria	5
Review Methodology	6
COMPONENT 2: CRITICAL LITERATURE REVIEW	7
CRITICAL ANALYSIS	7
Introduction and Rationale	7
Literature Review	8
➤ Self-perception of the Voice and Identification: Questionnaires	8
➤ The Person-Centred Care: Coleman et al.'s Standards (2022)	10
3. Androgen Therapy and Its Impact on Voice and Communication	12
4. Work Ethics: Implementing New Approaches in Voice Therapy for Gender-Diverse People	14
5. Voice Communication Training (VCT)	19
6. The Unheard Voices of Gender Diversity	20
7. Conclusion for the Review	21
CRITICAL REFLECTION	22
REFERENCES	25
APPENDICES	29
APPENDIX ONE	29
Sexual and Gender Diversity Glossary	29
APPENDIX TWO	30
Frequently asked questions on sexual and gender diversity, health and human rights: an introduction to key concepts.	30
APPENDIX THREE	31
The Trans Woman Voice Questionnaire (TWVQ)	31
APPENDIX FOUR	32
The Voice and Communication Situation Questionnaire Developed With and for Transgender and Gender-Diverse People Presumed Female at Birth	32
APPENDIX FIVE	37
Standards of Care for the Health of Transgender and Gender Diverse People, Version 8	37

COMPONENT 1: PORTFOLIO

INTRODUCTION and RATIONALE

After working for several years as a private singing teacher and voice coach, I encountered for the first time a transgender male student -female assigned at birth- who reached out for help with voice issues that appeared after his initial months of hormonal therapy. Although I am not an expert in voice therapy for transgender individuals, my primary research on voice changes during menopause has provided me with valuable insight into the significance of hormonal changes on the voice and a range of pedagogical strategies to address these changes. This new challenge, which requires expanding my understanding of both the technical and psychosocial aspects of transgender and gender-diverse voice coaching, outlines the primary goal of this work.

To contextualise it, I consider it fundamental to provide brief definitions of gender incongruence, gender dysphoria, and gender nonconformity. Gender incongruence refers to identifying more strongly with the other sex than with the sex assigned at birth (Van Caenegem et al., 2015). Gender dysphoria mirrors gender incongruence, including a distress factor (Van Caenegem et al., 2015). Gender nonconformity refers to the divergence from binary gender-stereotypical expectations and cultural norms assigned to a specific sex (Van Caenegem et al., 2015; Rodrigues, 2025). Accordingly, transgender and gender-diverse individuals are those whose gender identity does not align with the gender assigned at birth based on their sexual organs or chromosomes (Chadwick et al., 2022). I want to point out that gender nonconformity does not necessarily entail distress factors (Van Caenegem et al., 2015). However, research has shown that sexual and gender minorities are more likely to be stigmatised and to suffer from violence (Rodrigues, 2025).

Many transgender individuals pursue a gender affirmation process (Chadwick et al., 2022). This process can involve medical, surgical, therapeutic, and sociocultural changes to be recognised by society (Chadwick et al., 2022). Because the voice tends to carry performative aspects, it is socially constructed, and it is seen as a secondary marker of gender (Leal, Rocha da Silva, and Nemr, 2025).

In this regard, transgender individuals' self-perception and social perception of their voices are pivotal to their identity conformity and well-being (Chadwick et al., 2022). According to Bultynck et al. (2017), self-perception of voice has a profound impact on transgender persons' everyday lives. In this context, I believe that the voice practitioner plays a vital role in supporting persons undergoing gender affirmation.

As Chadwick et al. (2022) recognise, voice-related satisfaction significantly affects quality of life, and an individualised approach to voice modification is advised to optimise results. I consider that this individualised approach should, however, be grounded in a series of pedagogical strategies that go beyond the technical aspects of the voice. Moreover, as Rodrigues (2025) states, guidelines for practitioners and educators are necessary to reduce stigma associated with gender nonconformity.

PLANNED PROGRAMME of STUDY

Context

In a recent scope review, Leal, Rocha da Silva, and Nemr (2025) noted that despite an increasing number of publications on vocal care for the trans population, few studies are of high quality. One reason is that speech-language-hearing (SLH) therapy for trans people is still developing (Leal, Rocha da Silva, and Nemr, 2025). Additionally, Leal, Rocha da Silva, and Nemr (2025) conclude that studies focus predominantly on voice therapy for transfeminine people, that is, transgender women, which may leave a gap in meeting the needs of other identities (transmasculine, non-binary). However, I would like to highlight studies about the transmasculine voice, such as Azul et al.'s (2017; 2022), which opens perspectives on the voice not only as "an identity marker but also as a means of resistance against restrictive gender norms" (Machado de Souza, 2025, p.162). In this light, as Zimman (2017) affirms, transgender voices encourage us to improve reflexivity in our approach to sexing or gendering voices.

Aims and Objectives

This section will outline the aims and objectives of this study. It also includes the personal learning outcomes I expect to have fulfilled by the end of this review. The aims describe what I am trying to achieve with this study and outline the broad purpose of this review (Praharaj and Amin, 2025). The objectives outline the specific steps required to achieve the aim (Praharaj and Amin, 2025).

Aims

1. To provide a broad overview of the literature that has been published about transgender and gender-diverse voice care in recent years, and outline the main pedagogical approaches, especially in transgender male voice care.
2. Critically evaluate these approaches and reveal the possible gaps in the research, as voice care for transgender people, especially transgender men, is a developing field (Leal, Rocha da Silva, and Nemr, 2025).
3. Contribute my ideas to the development of pedagogical strategies that improve voice coaches' practice of gender-affirming voice therapy through an empathetic, compassionate, and empowering approach.

Objectives

1. Locate and summarise enough peer-reviewed studies and articles (including quality grey literature) that explore transgender voice care.
2. Identify through the reviewed literature several methods, themes and possible gaps in research of transgender voice care.
3. Analyse and discuss a number of these methods, themes, and gaps in their context.
4. Propose a set of ideas for pedagogical approaches and strategies that may address both technical and emotional aspects of transgender voice care.

Expected Learning Outcomes

1. Developing skills in planning a literature review using a specific methodology. Although I gained some experience during module three, I remain unfamiliar with research terminology and procedures.
2. Acquiring in-depth understanding of the technical, emotional, and psychological implications of voice and communication therapy for transgender and gender-diverse persons, with particular emphasis on transgender men.
3. Having the capacity to ethically and empathetically utilise my acquired knowledge in daily practice with my students.
4. Striving to establish myself as an ally for transgender and gender-diverse people seeking voice and communication coaching.

A NARRATIVE LITERATURE REVIEW: METHODOLOGY

Entering the Hermeneutic Circle

Once I decided to explore the literature on the technical and emotional aspects of transgender voice care, I immediately began my search in the University of Wales Trinity Saint David's (UWTSD) online library, without yet having established a methodology for the literature review. I aimed to have an overview of what had been published on the subject to date. Using the Advanced Search in the UWTSD online library, I searched for the term "transgender voice", with no availability specified; 3,296 results were returned. I pinned my search to save the query, whose results were sorted by relevance. I sorted them chronologically from newest to oldest.

A peer-reviewed paper by Leal, Rocha da Silva, and Nemr (2025) drew my attention because it is a recent scoping review of what we know about vocal care for transgender people, and, as a scoping review, it serves as an adequate general introductory text (Boell and Cecez-Kecmanovic, 2014). I found that, although potentially discomforting, the terms "trans voice" and "transgender voice" are the most used in the literature (Leal, Rocha da Silva, and Nemr, 2025). Using this article as a point of entry, I entered the hermeneutic circle to conduct further literature searching, sorting, selecting, and reading (Boell and Cecez-Kecmanovic, 2014). I initiated a snowballing process by consulting sources both citing it and those it cites. At the same time, I began reading Randolph (2009), and Grant and Booth (2009) articles on how to conduct a Literature Review.

Refining my Search: Inclusion and Exclusion Criteria

I considered the citation-tracking (snowballing) option my primary means of defining my criteria (Boell and Cecez-Kecmanovic, 2014). I also determined that, given the increase in research on transgender and gender-diverse voices in the last five years, I will prioritise peer-reviewed papers published since 2021, using both the UWTSD online library and Google Scholar when the reference was not available in the UWTSD.

However, I excluded paid research articles and books, the latter due to time constraints, although I consider them for future reading. During the search process, I confirmed that although there was less published literature, I would prioritise peer-reviewed articles on the transgender male voice, following a pearl-growing strategy using the keywords "transgender male" AND "voice", "trans male" AND "voice", and "voice masculinization".

This decision, however, was not incompatible with continuing to consider more general documents on transgender and gender-diverse voices, as I thought them relevant to this work.

Review Methodology

As I am not familiar with academic research, selecting a review methodology is still challenging. I drew on Randolph's (2009) review of Cooper's (1988) *Taxonomy of Literature Review*, and I began planning my literature review accordingly.

Therefore, I established that:

- My review will focus on research outcomes.
- The primary goals of my review will be to critically analyse previous research, identify its weaknesses, and suggest areas of further investigation and new ideas to address these shortcomings.
- I will disclose my biases from an espousal perspective.
- Due to time constraints, I rely on a representative sample despite its fallibility.
- The literature review will be organised conceptually, with consideration of chronological order as well.

After outlining these initial considerations, I continued reading Grant and Booth's (2009) paper to gain a more detailed understanding of the different types of review and be able to decide on one. I decided that a narrative review aligns with my aims and objectives, as it recognises prior work, consolidates and builds on it, summarises, and pinpoints omissions or gaps (Grant and Booths, 2009).

A systematised search review, in which the researcher can gather and synthesise research evidence from a single database as a basis for more extensive work (Grant and Booths, 2009), could have been appropriate; however, now I have insufficient experience for the further systematic analyses required. Additionally, I considered a state-of-the-art review as it addresses current phenomena and identifies opportunities for research (Grant and Booths, 2009), and transgender male voice care is a very new field of study. I opted, however, for a review that incorporated historical views to offer an initial broad perspective.

COMPONENT 2: CRITICAL LITERATURE REVIEW

CRITICAL ANALYSIS

Introduction and Rationale

Although publications on voice care for transgender people have increased since 1997, effective practices for voice coaches remain insufficiently supported (Leal, Rocha da Silva, and Nemr, 2025). These authors reveal in a recently published scoping review that existing literature does not clearly identify the specific voice care needs of transgender individuals. Voice care for trans persons is an emerging field, and the number of high-quality studies is limited (Leal, Rocha da Silva, and Nemr, 2025). However, the authors also affirm that existing literature presents applicable protocols and promising practices.

On the other hand, voice care for transgender people is a sensitive topic with many complexities. For this reason, a series of subtopics for this review will be developed, starting with self-perception and identity. A brief glossary of sexual and diversity-related terms is included in Appendix One of this study to support ongoing definitions. The glossary of the University of the Basque Country has been selected for its clarity and succinctness.

Additionally, to understand and use correct terminology, this study strongly recommends downloading the “Frequently asked questions on gender diversity, health, and human rights- an introduction to key concepts” (see Appendix Two) by the World Health Organisation (2024).

Literature Review

➤ *Self-perception of the Voice and Identification: Questionnaires.*

Literature shows that transgender people are generally unsatisfied with their voices, and that it has repercussions in their lives (Barra, Gusmão, and Araújo, 2020). Hormone therapy, surgical processes to feminise the voice in case of transgender women, and speech-language hearing (SLH) therapy, are proven to get a voice more fitting to gender identity (Barra, Gusmão, Araújo, 2020).

As Bultynck et al. (2017) emphasised, measuring the patient's satisfaction with their voice is crucial during gender-affirmation processes, due to its psychosocial impact. Hence, the importance of self-evaluation questionnaires as an instrument for capturing a person's perception of their voice and communication in their daily life (Nygren et al., 2025).

In this line, the Transsexual Voice Questionnaire for Male-to-Female (TVQ-MtF) has been considered a valuable tool (Bultynck et al., 2017). The questionnaire was developed from Jacobson et al.'s (1997) Voice Handicap Index (VHI), a widely used instrument that evaluates the psychosocial consequences of voice disorders (Bultynck et al., 2017). According to Dacakis et al. (2013), this tool demonstrates clinical reliability. It is also essential to note that, given ongoing language changes within trans and gender-diverse spaces, the original title may be considered offensive; the authors (Dacakis and Davies, 2012) have changed it to The Trans Woman Voice Questionnaire (TWVQ). This questionnaire is available for free download in several languages (La Trobe Communication Clinic, 2025), and it is also included in Appendix Three.

As Hancock et al. (2025) assert, in the case of transgender and gender-diverse people assigned female at birth or presumed female at birth (PFAB), Dacakis and Davies (2012) acknowledge that the TWVQ, designed for people presumed male at birth, cannot accurately reflect the needs of the PFAB community. Hancock et al. (2025) report that to date, only one patient-reported outcome measure (PROM) has examined voice parameters in PFAB. This is the Swedish self-rating questionnaire "The Voice and Communication Situation Questionnaire Developed With and For Transgender and Gender-Diverse People Presumed Female At Birth", developed by Ulrika Nygren, Sand and Adrienne B. Hancock and David Azul in 2021 (Purdy, 2023).

The full questionnaire can be consulted in Appendix Four of the present work. It has been downloaded from Nygren et al.'s (2025) "Evaluation of the Voice and Communication Situation Questionnaire Developed With and for Transgender and Gender-Diverse People Presumed Female at Birth".

Nygren et al. (2025) support that Jacobson et al.'s VHI (1997) does not entirely cover voice issues experienced by transgender and gender-diverse persons. Although general well-being questionnaires for transgender people may include voice-related questions, several studies reveal that PFAB persons experience voice problems during testosterone treatment (Nygren, 2025) and defend specific questionnaires that meet their needs (Azul et al., 2017). In this context, the "Voice and Communication Situation Questionnaire Developed with and for Transgender and Gender-Diverse People Presumed Female at Birth" (VCSQ-PFAB) developed by Hancock et al. (2025) may be a reliable tool for working with transgender PFAB in a person-centred and culturally sensitive way (Nygren, 2025). Hancock et al. (2025) have developed a tool grounded in the current understanding of transgender health following Coleman et al.'s (2022) standards, which will be discussed in the following section. The VCSQ-PFAB encompasses not only transgender PFAB's perspectives on their voice and communication but also on their well-being and on how voice, communication, and well-being are related; it also considers issues identified in the existing literature on transgender PFAB's voice function (Hancock et al., 2025).

Voice concerns are reported by 79%-95% of transgender PFAB individuals (Pan et al., 2025). Although the VCSQ-PFAB has been shown to be an effective tool for providing valuable data for voice professionals (Hancock et al., 2025), further work is required not only to re-examine its validity but also to offer a variety of options to gender-diverse PFAB clients. Moreover, the validity of this test has been evaluated by some of its authors (Nygren, 2025), which may introduce obvious bias.

The present study aims to emphasise the importance of specific training for vocal coaches working with gender-diverse clientele. This focused training involves developing both technical and emotional understanding, including specific knowledge related to gender diversity. Voice professionals worldwide should receive adequate information and easier access to resources such as the VCSQ-PFAB.

Additionally, this study aims to highlight that research on gender diversity and voice care remains limited. One example of this is that the only voice questionnaire for transgender PFAB persons was developed in 2021, and there exists no other validated questionnaire.

➤ *The Person-Centred Care: Coleman et al.'s Standards (2022)*

Coleman et al. (2022) redacted the Eighth Edition of the World Professional Association for Transgender Health's (WPATH) Standards of Care (SOC) to provide clinical guidance to healthcare professionals to help transgender and gender diverse individuals access safe and effective methods for improving physical health, psychological well-being, and self-fulfilment, ultimately achieving lasting personal solace in their gender identity. The first edition of the SOC was published in 1979, and the last version prior to the Eighth SOC was published in 2012. During the ten years between the seventh (SOC-7) and eighth (SOC-8) editions, the visibility of the transgender and gender-diverse community seeking support, and the number of related scientific studies published, have increased significantly (Coleman et al., 2022). The present study considers Coleman et al.'s 2022 standards and core principles as an essential reference for voice professionals who care for the voices and communication of transgender and gender-diverse people. The download link for the open-source file is provided in Appendix 5 of this study.

In a chapter dedicated specifically to Voice and Communication, the SOC-8 recommends a broad, inclusive approach to gender identification, namely, not only transgender, masculine or feminine, but also gender fluid, non-binary, genderqueer, and agender (Coleman et al., 2022). It is also advised not to consider gender in isolation, but rather in intersection with parameters such as First Nation status, ethnicity and race, dis/ability or sexuality (Coleman et al., 2022). Additionally, the SOC-8 recommends adhering to best-practice guidelines for language translation to create high-quality written resources that are culturally and linguistically suitable for the local context. It is essential that translators understand TGD identities and cultures to ensure literal translations are culturally appropriate and safe for local TGD communities. Translation should follow established quality assurance processes (Coleman et al., 2022)

In this line, Azul et al. (2022) propose a transdisciplinary, person-centred approach to speech-language therapy when supporting gender-diverse people, and a culturally responsive approach to minority stress, microaggressions, coping and resilience.

Culturally responsive approaches are those that consider and prioritise the patient's or client's sociocultural positionings (Azul et al., 2022) across all aspects of education or service provision (Hyter and Salas-Provence, 2019).

Coleman et al. (2022) enumerate the three current approaches that gender-diverse people may use to align their voice and communication with their identity. First, sessions of behavioural training supported by voice and communication specialists. Second, hormonal treatment and/or laryngeal surgery. Third, self-initiated change that may be supported by various sources, such as social media. A recent study conducted in Belgium (Papeleu et al., 2025) revealed the importance of voice and communication training for reducing misattribution and increasing voice satisfaction among transgender individuals in Belgium.

Coleman et al. (2022) cite the books by Hancock and Siegfriedt (2020) and Mills and Stoneham (2017) to describe the work of the voice and communication specialist. The voice and communication specialist in charge of behavioural training needs to include in their practice speaking and singing voice exercises, mindfulness, relaxation, respiration, pitch and pitch range exploration, voice quality assessment, resonance/timbre, loudness, projection, facial expression, gesture, posture, movement, introducing self to others, and also resilience and assertiveness when facing misattributions.

Liebenow and Cassidy (2025) define misattribution or misgendering as an expression of anti-transgender prejudice and bias. Misattribution refers to misidentification and identity denial, for example, using the feminine she/her pronouns with a transmasculine person (Albuja, Sanchez, and Gaither, 2019; Liebenow and Cassidy, 2025). Identity denial is linked to worse mental health outcomes among trans people (Albuja, Sanchez, and Gaither, 2019).

The SOC-8 concludes its Voice and Communication chapter with recommendations for voice and communication specialists working with gender-diverse people.

These are the following (Coleman et al., 2022) :

- Voice and communication specialists should evaluate the patient's current voice, identify their desired voice, and design targeted interventions for patients dissatisfied with their voice.
- Voice and communication specialists should receive specialised training to support the gender-diverse community.
- Health care professionals working with gender-diverse people should make referrals to a voice and communication specialist as needed. This includes pre- and postoperative support for patients undergoing voice surgery.
- Health care professionals in transgender health must inform patients of the potential and variable effects of testosterone treatment on voice and

communication. This subject is discussed in the following section, which examines hormone treatments.

The standards set out by Coleman et al. (2022) provide a valuable and essential reference for establishing an empathetic, respectful and supportive pedagogical relationship with the transgender community. They can serve as an excellent starting point for voice professionals working with gender-diverse persons. In fact, the present review emphasises that these standards should be highly recommended reading for all voice professionals.

3. Androgen Therapy and Its Impact on Voice and Communication

Androgen therapy is a testosterone-based regimen that is indicated for gender-diverse people, mostly PFAB, who seek a masculinising treatment (Coleman et al., 2022). Testosterone is available as injectable preparations, transdermal formulations, and subcutaneous pellets (Coleman et al., 2022).

Coleman et al. (2022) suggest voice and communication counselling before initiating testosterone therapy. This is due to the potential disappointment that some patients or clients may experience when expectations are unrealistic (Coleman et al., 2022).

As reported by Hodges-Simeon et al. (2021) in their study on testosterone therapy and masculinisation of speech, participants rated voice as the trait they were least satisfied with before transition compared with all others. These points are essential and should not be ignored. Health professionals who work with gender-diverse individuals and support their transitions should have a thorough understanding of voice-related factors.

Hodges-Simeon et al. (2021) also confirmed that undergoing testosterone (T) therapy is associated with a more masculine speech and, therefore, greater well-being. However, Eagen, Brennan, and Hilger (2025) report that there are fewer studies addressing voice incongruence in transgender men than in transgender women. Additionally, Hodges-Simeon et al. (2021) reported that T therapy may not be sufficient to achieve a fully masculinised speech. Again, these affirmations underscore the essential role of a voice professional in any gender affirmation process.

Testosterone therapy leads to vocal fold thickening, which is associated with a lower pitch (Eagen, Brennan, and Hilger, 2025). Several studies of testosterone therapy-related changes in the voices of transgender men have shown that fundamental

frequency (F0), that is, pitch, is considerably reduced in most participants in about 60-70 Hz after three to four months on testosterone therapy (Hodges-Simeon et al., 2021).

In general, these decreases in F0 fall within the normative speaking range for cisgender men, which is internationally considered average between 85 and 155 Hz (Eagan, Brennan, and Hilger, 2025). As a reminder, a cisgender/cissexual person is “a person who identifies with the gender assigned to them at birth based on their biological characteristics. In other words, it is a term used to classify people whose gender identity and expression align with their biological sex. It is used in contrast to trans, transsexual and transgender” (University of the Basque Country, no date). See Appendix One for a glossary of terms.

However, F0 is not the only vocal characteristic that defines voice masculinisation: formant frequencies or the related measure of vocal tract length (VTL) can potentially be used as outcome measures to evaluate the effectiveness of transition strategies and improve patient satisfaction (Hodges-Simeon et al., 2021).

The spectral structure of formant frequencies gives vowels their identity and also reflects vocal tract length (VTL). Formant frequencies, or formants, are the vocal tract resonances of the sound produced at the vocal fold level (Kieffe, 2016). During puberty in cisgender males, in addition to vocal fold thickening and elongation, the larynx descends, resulting in a larger and longer vocal tract. This 10–20% difference in VTL between cisgender men and women explains the generally lower formant frequencies in cisgender men (Hodges-Simeon et al., 2021). However, Hodges-Simeon et al. (2021) noted that, while research indicates that formants and VTL are essential parameters for perceiving gender, there is limited research on formant changes specifically in transgender men. In fact, Hodges-Simeon et al. (2021) developed their study to prove that transgender men estimated VTL was significantly longer than that of cisgender women but shorter than that of cisgender men. In fact, 23% of the VTL estimates were smaller in transmen than the lowest value in their cisgender men sample.

Another recent study by Papeleu et al. (2024) reports that after one year of testosterone therapy, most participants experienced a dry or rough throat, hoarseness, voice breaks during prolonged talking, decreased loudness, difficulty with shouting, screaming or singing, and in some cases, insufficient pitch decrease, with a higher incidence during the initial period.

The transmasculine population is heterogeneous, and generalisations and simplifications about vocal situations need to be addressed with an individualised approach (Azul, 2016). Following Azul's (2016) recommendations, voice professionals

should focus on the client's perspective to develop a careful and detailed personalised pedagogical strategy.

Papeleu et al. (2024) also advocate for an individualised, careful and comprehensive approach to voice therapy for transmasculine individuals, consistent with the SOC-8. Still, there remains a strong need for research on voice masculinisation.

In this context, the following chapter examines the role of the voice professional in supporting the well-being of gender-diverse people.

4. Work Ethics: Implementing New Approaches in Voice Therapy for Gender-Diverse People

Voice-gender incongruence, when a person's voice does not align with their gender identity, can lead to vocal strain, fatigue, emotional distress, and increased risk of suicidality (Pan et al., 2025).

According to Azul et al. (2022), the anxiety and distress that may provoke voice-related gender dysphoria can lead to speaking activity limitations and lead to social isolation, difficulties with securing employment, and, therefore, financial instability.

Azul et al. (2022) advocate that speech-language pathologists (SPLs) should actively take responsibility for supporting the well-being of their gender-diverse clients. The present study extends this proposal to any voice professional who works with, or may work with, gender-diverse people in the future. However, standard curricula in formal education for voice professions often lack specific or adequate training for working with transgender and gender-diverse populations (Coleman et al., 2022). In fact, the standards that guide treatment targets imply there is only a single definition of what constitutes unambiguously male or female in human beings (Azul et al., 2022).

In this setting, following Azul et al. (2022) and Holmberg et al. (2023) suggestions, this study proposes a series of innovative practices for voice professionals:

- Taking responsibility for providing a setting that supports the client's well-being, both physical (e.g. with an all-gender bathroom) and emotional, where fears can be expressed (Holmberg et al., 2023).
- Developing cultural humility and self-awareness in the practice: voice professionals should ask the client whether there is anything they might change in their practice, so that the client feels supported and comfortable. They should also explore what

well-being means to the person, as well as other key concepts that may or may not align with the voice professional ones (Azul et al., 2022). This is what Holmberg et al. (2023, p.2256) call a “therapeutic alliance”.

- Accessing a variety of knowledge sources: perspectives of the client’s significant others, voice world colleagues, journal articles, podcasts, social media, clinical guidelines, fiction and poetry, therefore not limiting knowledge approaches to SLP literature (Azul et al., 2022).
- Focusing on changing communication practices that increase the client’s agency in developing and maintaining self-presentation and communication in alignment with their identification. Azul et al. (2022) suggest that readers seeking detailed descriptions of techniques used in SLP with gender-diverse individuals in self-presentation, voice and communication, consult the books by Adler et al. (2019), Hancock and Siegfriedt (2020), and Mills and Stoneham (2017, 2020).
- Respectfully replacing unhelpful speaker behaviours with more effective practices. Unhelpful practices and behaviours include self-thoughts that internalise transphobia, negative expectations of social encounters, or avoiding specific settings and/or people. According to Azul et al. (2022), this avoidance provides short-term relief, and professionals should focus on long-term well-being rather than encouraging concealing and avoidance.
- Building the capacity to respond assertively to external and societal, systemic prejudice, discrimination and stigma -namely ‘distal stressors’ as defined by Google AI Overview (Azul et al., 2022).

Certainly, adhering to these guidelines requires specialised training beyond the standard curricula that the author has not encountered in Spain, the country in which the present review is conducted. The Law 4/2023 aims to promote true and effective equality for transgender people and to protect the rights of LGBTI individuals in Spain, representing a major step forward in social justice and equality (Martínez Rodríguez, 2023). However, as there are few studies on the linguistic strategies used by gender-diverse people to manage their voice in everyday social contexts (de Souza, 2025), voice and communication training for gender-diverse people also shows shortcomings in Spain.

In the line proposed by Azul et al. (2022), this study suggests developing a compassionate framework of trust, empathy, patience, inclusion, community and connections in the workplace (Hendricks, 2021). This approach can apply to working with gender-diverse voices; therefore, this chapter on Work Ethics includes strategies previously suggested by the author in other reviews for working with injured singers.

These strategies are based on the Acceptance and Commitment Training (ACT method developed by Juncos and De Paiva e Pona (2022, pp. 288-293).

The Acceptance and Commitment Training (ACT) is an adapted form of Acceptance and Commitment Therapy used by non-clinical professionals (Juncos and De Paiva e Pona, 2022). The ACT encourages flexibility in the presence of unwanted symptoms rather than aiming to reduce them (Juncos and De Paiva e Pona, 2022). It is developed through the "Hexaflex" processes (graphically represented in Figure 1).

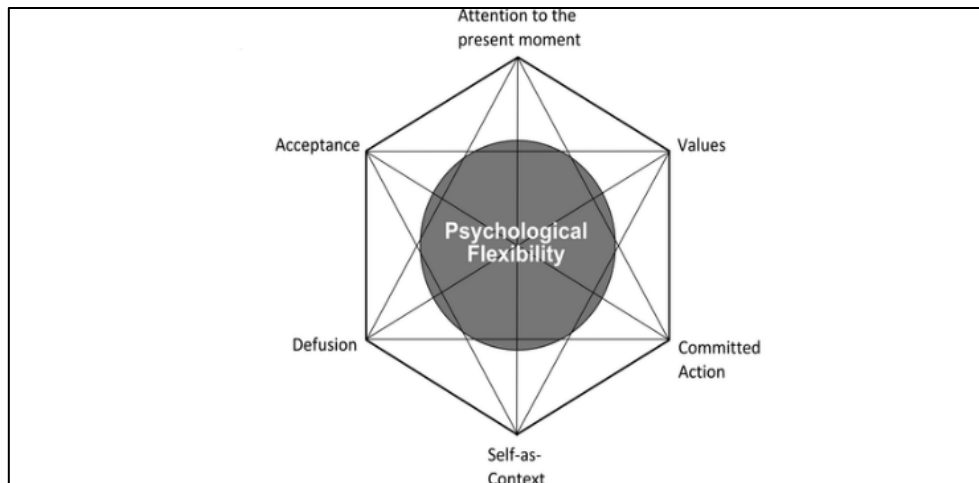


Figure 1: The "ACT" Hexaflex (Shaw, Juncos and Winter, 2020, p.4; original by Batink et al., 2016; Hayes et al., 2006)

With regard to voice and communication therapy for gender-diverse people, the Hexaflex processes proposed by Juncos and De Pona e Paiva (2022) would be applied in the following way:

- 1) *Attention to the present moment* by meditating to enhance body awareness and notice sensations of tension and other symptoms, including breaks during practice and outside, and focusing on the outcomes.

A study by Ken and Liew (2016) suggested that *trait mindfulness* moderates the association between gender non-conformity and depression. *Trait mindfulness* is defined as a person's tendency to habitually maintain a mindful state more consistently than others, acting as a stable trait that can be cultivated through practices such as meditation. This trait affects both state mindfulness and emotional health, emphasising its importance in self-regulation (Sampei and Morisaki, 2024).

- 2) *Acceptance* by integrating repeated willingness to address avoidance and concealment.

It is essential for speech-language pathologists to openly acknowledge how traditional views of SLP practice with gender-diverse individuals have sometimes led to concealment and avoidance (Azul et al., 2022). Azul et al. (2022) support that recognising past mistakes and demonstrating how conceptualisations and support strategies have evolved can be effective in motivating clients, encouraging them to enhance their immediate resources and address challenges to their well-being in a sustainable manner.

3) *Defusion* by separating from phobia-related thoughts.

4) *Self-as-context* by relating the person to others with similar experiences.

Additionally, the voice professional should check their own assumptions about gender-diverse voices (Wolpow et al., 2009). As stated by Holmberg et al. (2023), the gender-diverse voice client should feel they are in control of their voice.

5) *Committed Action* by “activity pacing” (Juncos and De Pona e Paiva, 2022, p. 292), increasing daily activity to maintain consistency and practising communication more when experiencing negative emotions.

The voice professional should provide “unconditional positive regard” (Wolpow et al., 2009, p.72). The studio should be considered a safe place where all feelings are welcome.

6) *Values* by recalling what matters most as a person with a voice to be heard and validating oneself compassionately.

Studies suggest that self-compassion acts as a protective factor and can be beneficial for individuals struggling with stress related to gender non-conformity (Keng and Liew, 2016). According to Arslan, Bişkin, and Kocaayan (2025), self-compassion refers to offering oneself support and understanding when dealing with suffering or challenges, and it involves treating oneself with kindness and understanding in the face of personal shortcomings, setbacks, or difficult circumstances.

Arslan (2024) suggests that self-compassion plays a crucial role in fostering healthier emotional reactions to traumatic events, whereas psychological flexibility supports

sustaining this emotional equilibrium. Self-compassion significantly contributes to enhancing mental health and well-being by reducing the impact of adverse childhood experiences in young adults (Arslan, 2024).

In this line, alongside the ACT processes, the present study proposes a voice and communication pedagogical strategy grounded in the six principles of empathy and compassionate teaching as outlined by Wolpow et al. (2009) and summarised by Foulkes (2023), as shown in Figure 2.



Figure 2: Graphic illustration of The Six Principles (Wolpow et al., 2009, p.78)

These principles align with the SOC-8 core principles for working with transgender and gender-diverse people, developed by Coleman et al. (2022), as established in Statement 2.5. The SOC-8 full document is available in Appendix 5.

The General principles include:

- Being empowering and inclusive, and working to reduce stigma and facilitate access to appropriate health care for all who seek it.
- Respecting diversity: respect for all clients and all gender identities, avoiding pathologising differences in gender identity or expression.
- Respecting universal human rights, the right to bodily and mental integrity, autonomy, and self-determination; freedom from discrimination and the right to the highest attainable standard of health

5. Voice Communication Training (VCT)

As previously discussed, testosterone therapy (TT) generally deepens the voice, but many times develops side effects such as hoarseness, sore throat, vocal fatigue, and pitch fluctuations, ultimately leading to dissatisfaction (Papeleu et al., 2025). Moreover, there are transgender and gender-diverse individuals who do not have access to or do not wish to follow a testosterone protocol, like in some cases of non-binary PFAB individuals (Coleman et al., 2022; Papeleu et al., 2025). Again, studies on voice communication training for voice masculinisation remain minimal (Papeleu et al., 2025). In their research on voice and communication practices for PFAB, Papeleu et al. (2025) propose focusing on intonation to achieve gender-congruent patterns, such as downward intonation shifts at the end of utterances and a generally flatter intonation. These practices can be challenging in everyday life, sometimes because of guilt stemming from the strong influence of vocal gender norms (Holmberg et al., 2023). However, the positive outcomes surpass the challenges (Papeleu et al., 2025). Holmberg et al. (2023) suggest that active client participation in goal setting promotes empowerment and a feeling of control.

In this context, Machado de Souza (2025) proposes vocal modulation as a tool for identity shaping and resistance. Machado de Souza (2025) considers that:

- Vocal modulation represents an active, ongoing exercise in creativity and identity, serving as a discursive space that challenges traditional binary norms. Following Butler's (2011) concept of *performativity*, gender can be constructed through acts that challenge the established social norms. Hence, the voice serves as a helpful resource for negotiating identity in front of social expectations.
- Speech therapists and audiologists require ongoing, up-to-date training in gender diversity and cultural competence. Developing and refining protocols for assessing vocal dysphoria is essential to enable comprehensive, multidimensional monitoring of vocal experiences in this population.

Ultimately, to foster a more inclusive society, the voice must be recognised not as an obstacle that isolates or invalidates but as a legitimate and respected means of expressing identity (Machado de Souza, 2025).

In public services, medical teams involved in gender transitions should be adequately trained and refer patients to voice specialists. However, on a global scale, it is crucial to account for the varying laws concerning gender diversity. It should not be forgotten that gender diversity continues to elicit diverse opinions, often influenced by the polarisation

societies are experiencing today, and that many of the advances made in recent decades may be reversed.

Within this framework, as voice professionals committed to diversity, we should take a stand in support of our vision to offer safe practices and spaces for gender-diverse individuals who require voice therapy.

6. *The Unheard Voices of Gender Diversity*

This chapter of the present study seeks to examine the relationship between the literal and metaphorical silence of the transgender and gender-diverse community. Although many advances in terms of visibility and legislation have occurred in recent years, transgender voices remain unheard. As Beauregard et al. (2018) affirmed, individuals maintain a voluntary silence (*quiescent silence*) to protect themselves from unfavourable situations. *Quiescent silence* is often found among disadvantaged or marginalised individuals, and it is often found in the transgender and gender-diverse community (Beauregard et al., 2018).

Beauregard et al. (2018) linked transgender invisibility in organisations and business environments to inaudibility, which may be metaphorical, physical, or both, and often developed as a defence mechanism. Although transmasculine actors such as Elliot Page and Brian Michael Smith, and musicians like Chaz Bono (Cher's son), have become increasingly active and therefore, visible and heard in pop culture, the present work highlights that representation of transgender male figures in the mainstream media remains scarce. As noted by Mocarski et al. in 2021, media portrayals offer a limited view of acceptable transgender representations. This perspective is built on a binary logic that perpetuates misogyny towards transwomen and leads to the erasure of transmen (Mocarski et al., 2021). Furthermore, identifying as gender-diverse does not require surgery or hormone therapy, and the media increases scrutiny on gender-diverse individuals who do not conform to binary gender options (Mocarski et al., 2021).

Furthermore, there are external “forces” (as defined by Azul, Hancock, and Nygren, 2021) that affect a transgender person's physical voice function and can extend to the metaphorical voice. These “forces” or circumstances remain unexplored, although researchers such as Azul, Hancock, and Nygren (2021) have described them, while also calling for further research.

“Forces” can be the binders transgender males use to hide their chest: they can alter voice function when used very tightly (Azul, Hancock, and Nygren, 2021). As previously mentioned, testosterone therapy may not be a sufficient intervention for transgender male voice therapy, and secondary effects (hoarseness, breaks, throat clearing, pain) can act as negative “forces” or barriers to voice function (Azul, Hancock, and Nygren, 2021). In fact, the majority of participants of Azul, Hancock, and Nygren’s study (2021) perceived testosterone therapy as a barrier to a healthy voice function, despite lowering the voice. When voice function is impaired, silence is usually the response. Therefore, the present work suggests that although the primary aim with respect to voice and communication is addressed (masculinisation), voice health and function require professional supervision to ensure a healthy, functional voice for those who need it.

As stated by Azul, Hancock, and Nygren (2021), voice specialists (SLP, voice coaches, singing teachers) can offer clients opportunities to examine their habitual reactions to negative attributions from others and practice replacing these reactions with responses such as mindfulness and self-compassion, which have proven to be helpful for managing stressors in life (as explained in chapter 4).

Advances in understanding how trans and non-binary individuals modulate their voices will significantly influence societal views and strategies regarding gender diversity (Machado de Souza, 2025).

7. Conclusion for the Review

From a global perspective, the circumstances under which transgender and gender diverse individuals live are frequently challenging (Coleman et al., 2022). They are often deprived of universally recognised rights as outlined in international human rights law (Coleman et al., 2022). These variable circumstances require a clear positioning by voice professionals, a clear commitment to adhering to the core principles of the SOC-8, and engagement in targeted training and pedagogical strategies that may differ from conventional voice therapy.

CRITICAL REFLECTION

Professional development and growth are inherently linked with reflective practice (Hamilton, 2017). Moreover, personal growth is also inherently related to reflection. The current review commenced with several open questions that stemmed from a personal experience as a voice coach working for the first time with a transgender male client who needed voice and communication therapy. The situation unquestionably demanded a certain degree of personal and professional growth in regard to practice. A quote by Driscoll (1994) as cited in Hamilton's own reflection (2017, p.3) succinctly captures this need for reflection: "Reflection bridges the gap between how we would like to practice and what we actually do."

A personal need for a highly structured reflection model has led me to follow Driscoll's cycle triggering questions template, the "What?" model (Hamilton, 2017), for this final critical reflection.

As previously introduced, this work was conceived as a practical response to a very specific situation I encountered in my studio: a transgender male client who sought help due to a series of voice disorders: hoarseness, dysphonia, pitch breaks and occasional strain. I am not a speech-language pathologist (SLP) or a phoniatrist, so first I referred him to two specialists. Nevertheless, he decided to commence voice and communication sessions with me to initiate the process as soon as possible.

Faced with these responsibilities and after consulting with my speech therapist, I decided to dedicate this work to acquiring comprehensive knowledge of all essential information that a vocal coach must possess when working with gender-diverse persons, especially transgender males.

During the initiation of the literature review process, I quickly recognised that most work concerning transgender male voice care was predominantly authored by the same individuals (Azul, Hancock, Nygren), who have undoubtedly made significant contributions to the transgender community and their allies. However, I searched for Spanish authors on Google Scholar to obtain a broader overview of recent publications. I highlight the work of Machado de Souza (2025), a peer-reviewed study on transgender voice and communication written in Spanish.

Even so, the two most relevant conclusions that meet the objectives of this study are as follows: given the available material, substantially more research is needed on transgender voice care, particularly regarding PFAB transgender and diverse voices

It is of paramount importance that the medical community working with transgender individuals has easy access to the SOC-8 by Coleman et al. (2022) and is aware of the importance of vocal care and voice and communication therapy when necessary, including issuing suitable referrals.

Regarding the technical aspects of the process, as the author of this review, I had to consider the following factors: an exhaustive coverage approach would have been ideal, but it was too challenging given time constraints. Furthermore, my lack of research experience was a relevant factor in selecting a review type; therefore, a critical review was excluded. Also, a qualitative systematic review would have been ideal to address the research question I started with, since it compares findings and develops 'themes'. However, a literature/narrative review aligned with my needs, as I am not familiar with research writing, and I had chosen to rely on peer-reviewed sources that reflect prior statements (Grant and Booth, 2009).

Regarding my positioning, it was not free of bias, which, given the sensitive nature of the research subject, may have been evident in this review. Ultimately, this work presents a statement that is not free from ideological implications.

The primary motivation for this project has undeniably been the opportunity to explore in depth an issue of personal interest, for which a personal and professional commitment had been duly established. Nevertheless, I must acknowledge the frustration associated with the limited progress currently observed in transmasculine and gender-diverse voice care, especially regarding the secondary effects of testosterone therapy. In accordance with the recommendations of Azul et al. (2022) and Holmberg et al. (2023), I have consistently communicated all acquired knowledge to my client throughout the process. He is currently assimilating some of the conclusions from the studies I provided, particularly those concerning the irreversible effects of voice masculinisation on vocal agility and flexibility. We have also discussed the necessity for further research on the subject and the potential medical biases that transgender and gender-diverse individuals presumed female at birth (PFAB) often encounter, based on his personal experience and the present review.

This situation can, however, serve as a catalyst for greater research, as well as greater commitment and education among SPLs and phoniatrists in Spain, a country that has one of the most progressive laws on gender diversity in Europe (Martínez Rodríguez, 2023). In this context, I have chosen to disseminate information via social media and among my colleagues to raise awareness and bolster support for the necessity of increased voice care research for the PFAB gender-diverse community.

Therefore, I can confidently say that this process has helped me achieve important learning and personal growth goals. I have overcome prejudices and barriers that I might have held prior to beginning the research, and my technical knowledge of voice care has increased significantly. However, with respect to the process itself and its development, I still see one of the main limitations as my very busy work schedule. I feel I need more time and better personal scheduling to explore resources and options that could help me achieve further progress.

I would also like to highlight that this practice of reflective criticism is necessary for my classes, and that from now on, I will apply it to all my classes in a more rigorous and structured manner. Therefore, I want to calmly review all the reflective models and experiment with each one, although answering Driscoll's questions has been very helpful for this reflection.

I will remain firmly dedicated to deepening and specialising my knowledge of transgender voices across male, female, and diverse identities. I will focus on this area in my academic work, advocacy, and professional practice to create a safe and responsible environment for those seeking support. I consider this commitment especially important now, given the potential global setbacks to rights that have been so hard to establish.

REFERENCES

- Albuja, A.F., Sanchez, D.T. and Gaither, S.E., 2019. Identity denied: Comparing American or White identity denial and psychological health outcomes among bicultural and biracial people. *Personality and Social Psychology Bulletin*, 45(3), pp.416-430.
- Arslan, G. (2024) "Unlocking the Power of Self-Compassion and Psychological Flexibility: Enhancing Emotional Health, Subjective Wellbeing, and Quality of Life in College Students," *Studia psychologica*, 66(1), pp. 50–65. Available at: <https://doi.org/10.31577/sp.2024.01.890>.
- Arslan, G., Bişkin, S.Ö. and Kocaayan, F., 2025. Adverse childhood experiences, self-compassion, psychological flexibility, and posttraumatic stress disorder. *Children and Youth Services Review*, 169, p.108109.
- Azul, D. (2016) "Gender-related aspects of transmasculine people's vocal situations: insights from a qualitative content analysis of interview transcripts: Voice and gender in transmasculine people," *International journal of language & communication disorders*, 51(6), pp. 672–684. Available at: <https://doi.org/10.1111/1460-6984.12239>.
- Azul, D. et al. (2017) 'Transmasculine People's Voice Function: A Review of the Currently Available Evidence', *Journal of voice*, 31(2), p. 261.e9-261.e23. Available at: <https://doi.org/10.1016/j.jvoice.2016.05.005>.
- Azul, D., Hancock, A.B. and Nygren, U. (2021) "Forces Affecting Voice Function in Gender Diverse People Assigned Female at Birth," *Journal of voice*, 35(4), p. 662.e15-662.e34. Available at: <https://doi.org/10.1016/j.jvoice.2020.01.001>.
- Azul, D. et al. (2022) 'Supporting Well-Being in Gender-Diverse People: A Tutorial for Implementing Conceptual and Practical Shifts Toward Culturally Responsive, Person-Centered Care in Speech-Language Pathology', *American journal of speech-language pathology*, 31(4), pp. 1574–1587. Available at: https://doi.org/10.1044/2022_AJSLP-21-00322.
- Barra, B.G.A., Gusmão, Ú.M. de A.S. and Araújo, A.N.B. de (2020) 'Self-perception of voice in transgender people', *Revista CEFAC*, 22(4). Available at: <https://doi.org/10.1590/1982-0216/20202244819>.
- Beauregard, A.T. et al. (2018) "Listen carefully: transgender voices in the workplace," *International journal of human resource management*, 29(5), pp. 857–884. Available at: <https://doi.org/10.1080/09585192.2016.1234503>.
- Boell, S.K. and Cecez-Kecmanovic, D. (2014) 'A Hermeneutic Approach for Conducting Literature Reviews and Literature Searches', *Communications of the Association for Information Systems*, 34, p. 12. Available at: <https://doi.org/10.17705/1CAIS.03412>.
- Bultynck, C. et al. (2017) 'Self-perception of voice in transgender persons during cross-sex hormone therapy', *The Laryngoscope*, 127(12), pp. 2796–2804. Available at: <https://doi.org/10.1002/lary.26716>.
- Butler, J., 2011. *Bodies that matter: On the discursive limits of sex*. routledge.

Chadwick, K.A. *et al.* (2022) 'Outcomes of Gender-Affirming Voice and Communication Modification for Transgender Individuals', *The Laryngoscope*, 132(8), pp. 1615–1621. Available at: <https://doi.org/10.1002/lary.29946>.

Coleman, E. *et al.* (2022) 'Standards of Care for the Health of Transgender and Gender Diverse People, Version 8', *International journal of transgender health*, 23(Suppl 1), p. S1. Available at: <https://doi.org/10.1080/26895269.2022.2100644>.

Cooper, H.M., 1988. Organizing knowledge syntheses: A taxonomy of literature reviews. *Knowledge in society*, 1(1), p.104.

Dacakis, G. *et al.* (2013) 'Development and Preliminary Evaluation of the Transsexual Voice Questionnaire for Male-to-Female Transsexuals', *Journal of voice*, 27(3), pp. 312–320. Available at: <https://doi.org/10.1016/j.jvoice.2012.11.005>.

Dacakis, G., Oates, J.M. and Douglas, J.M. (2017) 'Further Evidence of the Construct Validity of the Transsexual Voice Questionnaire (TVQMtF) Using Principal Components Analysis', *Journal of voice*, 31(2), pp. 142–148. Available at: <https://doi.org/10.1016/j.jvoice.2016.07.001>.

De Souza, E.M., 2025. La voz como herramienta de identidad y resistencia: Modulación vocal y autoafirmación en personas trans y no binarias. *MariCorners: Revista de Estudios Interdisciplinarios LGTBIA+ y queer*, 2(2), pp.161-194.

Eagen, C.M., Brennan, C. and Hilger, A.I. (2025) 'The Impacts of Testosterone Therapy Beyond Fundamental Frequency in Transmasculine Voice: Vocal Quality and Fricative Articulation', *Journal of voice* [Preprint]. Available at: <https://doi.org/10.1016/j.jvoice.2025.06.005>.

Foulkes, E. (2023) 'Trauma-informed singing teaching-part 3' *Trauma-Informed Singing Teaching*. Voice Study Centre. January 2023. Available at: public links disabled (Accessed: 24 September 2024).

Grant, M.J. and Booth, A. (2009) 'A typology of reviews: an analysis of 14 review types and associated methodologies', *Health information and libraries journal*, 26(2), pp. 91–108. Available at: <https://doi.org/10.1111/j.1471-1842.2009.00848.x>.

Hamilton, J., 1994. *The power of reflection* [online]

Hancock, A.B. and Siegfriedt, L.L., 2019. *Transforming voice and communication with transgender and gender-diverse people: An evidence-based process* (Vol. 1). Plural Publishing.

Hancock, A.B. *et al.* (2025) 'Conceptual Model and Content Validity of the Voice and Communication Situation Questionnaire Developed With and for Transgender and Gender-Diverse People Presumed Female at Birth', *Journal of speech, language, and hearing research*, 68(3), pp. 963–986. Available at: https://doi.org/10.1044/2024_JSLHR-24-00203.

Hodges-Simeon, C.R. *et al.* (2021) 'Testosterone therapy masculinizes speech and gender presentation in transgender men', *Scientific reports*, 11(1). Available at: <https://doi.org/10.1038/s41598-021-82134-2>.

Holmberg, J. *et al.* (2023) 'Exploring Motives and Perceived Barriers for Voice Modification: The Views of Transgender and Gender-Diverse Voice Clients', *Journal of*

- speech, language, and hearing research*, 66(7), pp. 2246–2259. Available at: https://doi.org/10.1044/2023_JSLHR-23-00042.
- Hyter, Y.D. and Salas-Provance, M.B., 2021. *Culturally responsive practices in speech, language, and hearing sciences*. Plural Publishing.
- Jacobson, B.H., Johnson, A., Grywalski, C., Silbergleit, A., Jacobson, G., Benninger, M.S. and Newman, C.W., 1997. The voice handicap index (VHI) development and validation. *American journal of speech-language pathology*, 6(3), pp.66-70.
- Juncos, D.G. and e Pona, E.D.P., 2022. *ACT for musicians: A guide for using acceptance and commitment training to enhance performance, overcome performance anxiety, and improve well-being*. Universal-Publishers.
- Keng, S.-L. and Liew, K.W.L. (2017) “Trait Mindfulness and Self-Compassion as Moderators of the Association Between Gender Nonconformity and Psychological Health,” *Mindfulness*, 8(3), pp. 615–626. Available at: <https://doi.org/10.1007/s12671-016-0639-0>.
- Kieffe, M., 2016. Formants in speech perception. *Journal of the Acoustical Society of America*, 140(4_Supplement), pp.3162-3162.
- La Trobe Communication Clinic (2025) *The Trans Woman Voice Questionnaire*. Available at: <https://www.latrobe.edu.au/school-allied-health-human-services-and-sport/ds-documents/TGV-Resources.pdf> (Accessed: 6 December 2025).
- Leal, G. da C., Rocha da Silva, F.R. de F. and Nemr, N.K. (2025) ‘What Do We Know About Speech-Language-Hearing Practice in Vocal Care for Transgender People? A Scoping Review’, *Journal of voice* [Preprint]. Available at: <https://doi.org/10.1016/j.jvoice.2024.12.004>.
- Leyns, C. *et al.* (2024) ‘Acoustic and Perceptual Effects of Articulation Exercises in Transgender Women’, *Journal of voice*, 38(1), p. 246.e15-246.e25. Available at: <https://doi.org/10.1016/j.jvoice.2021.06.033>.
- Martínez Rodríguez, Nieves (2023) “Ley 4/2023, de 28 de febrero, para la igualdad real y efectiva de las personas trans y para la garantía de los derechos de las personas LGTBI [BOE-A-2023-5366]: Aspectos civiles,” *Ars iuris salmanticensis*, 11(2), p. 139.
- Mills, M. and Stoneham, G., 2017. *The voice book for trans and non-binary people: A practical guide to creating and sustaining authentic voice and communication*. Jessica Kingsley Publishers.
- Mocarski, R. *et al.* (2019) “The Rise of Transgender and Gender Diverse Representation in the Media: Impacts on the Population,” *Communication, culture & critique*, 12(3), pp. 416–433. Available at: <https://doi.org/10.1093/ccc/tcz031>.
- Norman, K. and Nixon, V., 2013. Reflection and Reflective Practice. *Professional Practice in Paramedic, Emergency and Urgent Care*, pp.107-131.
- Nygren, U. *et al.* (2025) ‘Evaluation of the Voice and Communication Situation Questionnaire Developed With and for Transgender and Gender-Diverse People Presumed Female at Birth’, *Journal of speech, language, and hearing research*, 68(12), pp. 1–19. Available at: https://doi.org/10.1044/2025_JSLHR-25-00285.

- Pan, A.Y. *et al.* (2025) 'What Contributes to Masculine Perception of Voice Among Transmasculine People on Testosterone Therapy?', *Journal of voice* [Preprint]. Available at: <https://doi.org/10.1016/j.jvoice.2024.12.037>.
- Papeleu, T., Leyns, C., Alighieri, C., Vermeeren, A., Motmans, J., T'Sjoen, G. and D'haeseleer, E., 2024. Voice and communication in transmasculine individuals one year under testosterone therapy: A qualitative study. *Journal of Voice*.
- Papeleu, T., Oates, J., Motmans, J., Morsomme, D., T'Sjoen, G. and D'haeseleer, E., 2025. Voice-related challenges experienced by transgender and gender diverse individuals in Belgium. *International Journal of Transgender Health*, pp.1-28.
- Papeleu, T. *et al.* (2025) 'The Experiences of Transgender and Gender Diverse Individuals After Intonation Training for a More Masculine-Sounding Voice: A Qualitative Study', *Journal of voice* [Preprint]. Available at: <https://doi.org/10.1016/j.jvoice.2025.08.001>.
- Praharaj, S.K. and Ameen, S., 2025. Aim, Research Questions, Objectives, and Hypotheses-Which One and How to Write in a Manuscript?. *Kerala Journal of Psychiatry*, 38(1), pp.84-88.
- Purdy, A.C., 2023. *Validity of the Voice and Communication Situation Questionnaire for People Presumed Female at Birth (VCSQPFAB) in Serving the Needs of Professional Singers* (Master's thesis, The George Washington University).
- Randolph, J.J. (2009) 'A Guide to Writing the Dissertation Literature Review', *Practical assessment, research & evaluation*, 14(13), p. 13.
- Rodrigues, D.L., 2025. Conformed to Gender Conformity? Gender Nonconformity Stigma is Buffered by Personal Contact. *Journal of Social and Personal Relationships*, 42(2), pp.392-420.
- University of the Basque Country (no date) *Dirección para la Igualdad. Documents in English. Sexual and Gender Diversity Glossary*. Available at: <https://www.ehu.eus/es/web/berdintasuna-direccionparalaigualdad/sexual-and-gender-diversity-glossary> (Accessed: 7 December 2025).
- Van Caenegem, E., Wierckx, K., Elaut, E., Buysse, A., Dewaele, A., Van Nieuwerburgh, F., De Cuypere, G. and T'Sjoen, G., 2015. Prevalence of gender nonconformity in Flanders, Belgium. *Archives of sexual behavior*, 44(5), pp.1281-1287.
- Wolpaw, R., Johnson, M.M., Hertel, R. and Kincaid, S., 2009. The heart of learning and teaching. *Olympia, WA: Office of Superintendent of Public Instruction (OSPI) Compassionate Schools*.
- World Health Organization (October 2024) *Frequently asked questions on sexual and gender diversity, health and human rights: an introduction to key concepts*. Available at: <https://www.who.int/publications/m/item/frequently-asked-questions-on-sexual-and-gender-diversity--health-and-human-rights--an-introduction-to-key-concepts> (Accessed: 15 December 2025).
- Zimman, L. (2017) 'Gender as stylistic bricolage: Transmasculine voices and the relationship between fundamental frequency and /s', *Language in society*, 46(3), pp. 339–370. Available at: <https://doi.org/10.1017/S0047404517000070>.

APPENDICES

APPENDIX ONE

Sexual and Gender Diversity Glossary

(from the University of the Basque Country Equality Directorate, Euskal Herriko Unibertsitatea, [Berdintasunerako Zuzendaritza](#), no date).

ANDROGYNY: An androgynous person is an individual who has a high degree of both feminine and masculine traits.

(GENDER) BINARISM: A social construct that dichotomously categorises people's activities, behaviours, emotions and anatomy into two mutually exclusive genders: male and female.

CIS/CISEXUAL/CISGENDER: A person who identifies with the gender assigned to them at birth based on their biological characteristics. In other words, it is a term used to classify people whose gender identity and expression align with their biological sex. It is used in contrast to trans, transsexual and transgender.

GENDER EXPRESSION: This refers to how a person expresses their gender and is based on traditional roles attributed to being a man or a woman. It includes the way we express ourselves, the way we dress and the way we are expected to behave according to societal norms. Gender expression can be feminine, masculine, or androgynous in cases where elements of both are combined.

GENDER: A set of culturally derived characteristics that shape patterns of behaviour and identity, forming the basis for the social distinction between men and women. It is neither static nor innate but is a socio-cultural construct that has varied and may vary over time. It should not be confused with sex, which refers to biological or physical characteristics. Although the male gender is socially associated with the male sex and the female gender with the female sex, they are not equivalent concepts.

GENDER IDENTITY: The self-perception of one's gender, i.e. the gender with which we identify ourselves, typically from a very early age. It does not necessarily align with a person's biological sex, nor does it have anything to do with affective or sexual orientation. There are identities that go beyond the binary system, leading to categories such as bigender, demigender, agender, gender fluid, etc., which we can group under the term "non-binary".

SEXUAL IDENTITY: This is defined by the set of characteristics related to sexuality and is part of a person's identity. Although sometimes used as a synonym for "gender identity", sexual identity is a broader concept that encompasses other elements, such as gender identity itself, biological sex, sexual orientation, gender expression and sexual behaviour.

INTERSEX/INTERSEXUAL: A person who is born with sexual characteristics that do not fit typical definitions of male or female reproductive or sexual anatomy.

LGBT/LGBTI/LGBTI+: LGBT is the acronym used for "Lesbian, Gay, Bisexual and Transgender". In keeping with the inclusive nature of this terminology, it is used as an umbrella term to encompass different sex/gender expressions and identities. Additional

letters are often included, such as I for Intersex or Intersexual, Q for Queer or A for Asexuality. The + (plus) symbol is also often included to express “and others”, to reflect the full spectrum of sexual orientations and identities.

NON-BINARY/NON-BINARY GENDER/NON-BINARY IDENTITY: This applies to people and identities that are outside the gender binary, meaning those who do not perceive themselves entirely as male or female. They may identify with a third gender, none or even fluctuate between several. Non-binary identities often fall under trans or queer identities (sometimes referred to as “genderqueer”), although some non-binary people prefer not to identify with any other category. Non-binary identities, expressions or behaviours are also very diverse and include agender, bigender, gender fluid, gender-neutral, non-normative identities, etc.

SEXUAL ORIENTATION/SEX-AFFECTIVE/AFFECTIVE-SEXUAL: This refers to each person's tendency to feel an affective, erotic and sexual attraction towards another person or people. Orientation is one of the components of sexual identity. Heterosexual people are attracted to the opposite sex, homosexual people to the same sex and bisexual people to both. Beyond the binary model, there are other categories of orientation, such as pansexual, omnisexual, polysexual, etc.

QUEER: This is a complex term with different meanings and is difficult to define. In English, it originally meant odd, strange and unusual and was used as an insult to refer to homosexuals in a derogatory way. As has happened with other terms, activism has redefined it, reclaiming it as an empowering concept.

TRANS*: This is a category that forms part of gender identity. It refers to people whose sex assigned at birth – according to their biological characteristics – does not align with their gender identity. Within the trans* community, there are those who choose to undergo a hormonal transition process, those who opt for partial or complete reassignment and those who focus solely on changing their gender expression.

In addition, some non-binary people also define themselves as trans because they do not identify with a specific gender, which therefore differs from the sex they were assigned at birth. Being trans does not imply having any specific sexual and affective orientation. In other words, a trans person can be gay, lesbian, bisexual, heterosexual or asexual.

APPENDIX TWO

Frequently asked questions on sexual and gender diversity, health and human rights: an introduction to key concepts.

World Health Organisation (October 2024)

Available at: <https://www.who.int/publications/m/item/frequently-asked-questions-on-sexual-and-gender-diversity--health-and-human-rights--an-introduction-to-key-concepts>

APPENDIX THREE

The Trans Woman Voice Questionnaire (TWVQ)

To download in several languages, click here: <https://www.latrobe.edu.au/school-allied-health-human-services-and-sport/ds-documents/TGV-Resources.pdf>

TWVQ		Rating Scale 1 = never or rarely 2 = sometimes 3 = often 4 = usually or always			
Name: _____					
Date: _____					
<i>Based on your actual experience of living as a female, please tick the response that fits you best.</i>		1	2	3	4
1.	People have difficulty hearing me in a noisy room.	☐	☐	☐	☐
2.	I feel anxious when I know I have to use my voice.	☐	☐	☐	☐
3.	My voice makes me feel less feminine than I would like.	☐	☐	☐	☐
4.	The pitch of my speaking voice is too low.	☐	☐	☐	☐
5.	The pitch of my voice is unreliable.	☐	☐	☐	☐
6.	My voice gets in the way of me living as a woman.	☐	☐	☐	☐
7.	I avoid using the phone because of my voice.	☐	☐	☐	☐
8.	I'm tense when talking with others because of my voice.	☐	☐	☐	☐
9.	My voice gets croaky, hoarse or husky when I try to speak in a female voice.	☐	☐	☐	☐
10.	My voice makes it hard for me to be identified as a woman.	☐	☐	☐	☐
11.	When I speak the pitch of my voice does not vary enough.	☐	☐	☐	☐
12.	I feel uncomfortable talking to friends, neighbours and relatives because of my voice.	☐	☐	☐	☐
13.	I avoid speaking in public because of my voice.	☐	☐	☐	☐
14.	My voice sounds artificial.	☐	☐	☐	☐
15.	I have to concentrate to make my voice sound the way I want it to sound.	☐	☐	☐	☐
16.	I feel frustrated with trying to change my voice.	☐	☐	☐	☐
17.	My voice difficulties restrict my social life.	☐	☐	☐	☐
18.	When I am not paying attention my pitch goes down.	☐	☐	☐	☐
19.	When I laugh I sound like a man.	☐	☐	☐	☐
20.	My voice doesn't match my physical appearance.	☐	☐	☐	☐
21.	I use a great deal of effort to produce my voice.	☐	☐	☐	☐
22.	My voice gets tired quickly.	☐	☐	☐	☐
23.	My voice restricts the sort of work I do.	☐	☐	☐	☐
24.	I feel my voice does not reflect the 'true me'.	☐	☐	☐	☐
25.	I am less outgoing because of my voice.	☐	☐	☐	☐
26.	I feel self-conscious about how strangers perceive my voice.	☐	☐	☐	☐
27.	My voice 'gives out' in the middle of speaking.	☐	☐	☐	☐
28.	It distresses me when I'm perceived as a man because of my voice.	☐	☐	☐	☐
29.	The pitch range of my speaking voice is restricted.	☐	☐	☐	☐
30.	I feel discriminated against because of my voice.	☐	☐	☐	☐
<i>Please provide an overall rating of your voice:</i>					
<i>Currently, my voice is:</i>		☐	☐	☐	☐
		Very female	Somewhat female	Gender neutral	Somewhat male
<i>My ideal voice would sound:</i>		☐	☐	☐	☐
		Very female	Somewhat female	Gender neutral	Somewhat male
Trans Woman Voice Questionnaire (Formerly TVQ ^{M6}) (© 2012, Dacakis and Davies)					

APPENDIX FOUR

The Voice and Communication Situation Questionnaire Developed With and for Transgender and Gender-Diverse People Presumed Female at Birth

Available at: https://pubs.asha.org/doi/10.1044/2025_JSLHR-25-00285

**Voice and Communication Situation Questionnaire:
Developed with and for transgender and gender diverse people
Presumed Female At Birth
(VCSQ^{PFAB})**

Instructions

This tool contains 5 parts:

For **part A**: Please respond yes or no. If yes, there is space to add information.

For **part B-E**: Please circle the number that best applies to you.

For **part C-D**: If anything is irrelevant for you, please circle the number 0 = Never/not relevant.

If you would like to add or comment on responses, there is room to do so at the end of the tool.

Thank you for taking the time to help us understand what is important to you regarding your voice and communication situation. There are no right or wrong answers for this questionnaire. This is only a tool to guide our discussion of your needs, goals, wishes, and options for support.

Name: _____
ID-number: _____
Today's date: _____

Part A: What you desire to communicate about yourself

Aspects of identity.	Is this aspect important to you? (yes/no)	Is this an aspect you would like to convey to others? (yes/no)	If "yes" in either column, please describe and explain this aspect and any context you'd like to provide.
Your gender identity			
Your age			
Your physical and psychological health			
Your cultural affiliation (e.g. ethnicity)			
Your sexual orientation			
Other aspects (see examples below)			
Other aspects			
Other aspects			

Examples: education/profession, religion/faith, relationship status, first language or other languages spoken, place of origin or current residence, roles or responsibilities at work, home or in society.

Part B: Your current voice function and impact it has on you

Consider the last month . How often did you have difficulty with the following?	0 = Never 1 = Rarely 2 = Sometimes 3 = Frequently 4 = Always
1. Using my speaking voice in my everyday life	0 1 2 3 4
...and this bothers me	0 1 2 3 4
2. Speaking with a good loudness level in my everyday life	0 1 2 3 4
...and this bothers me	0 1 2 3 4
3. Yelling or raising the loudness of my voice	0 1 2 3 4
...and this bothers me	0 1 2 3 4
4. Speaking with a clear voice (not hoarse)	0 1 2 3 4
...and this bothers me	0 1 2 3 4
5. Speaking with a good pitch level	0 1 2 3 4
...and this bothers me	0 1 2 3 4
6. Speaking with a pitch as low as I want	0 1 2 3 4
...and this bothers me	0 1 2 3 4
7. Speaking with a pitch as high as I want	0 1 2 3 4
...and this bothers me	0 1 2 3 4
8. Varying my pitch when speaking	0 1 2 3 4
...and this bothers me	0 1 2 3 4
9. Using my voice without losing it in the middle of speaking	0 1 2 3 4
...and this bothers me	0 1 2 3 4
10. Speaking with a stable voice, not unstable as during puberty	0 1 2 3 4
...and this bothers me	0 1 2 3 4
11. Talking as long as I need to without feeling a strained voice	0 1 2 3 4
...and this bothers me	0 1 2 3 4
12. Having enough air when I use my voice	0 1 2 3 4
...and this bothers me	0 1 2 3 4
13. Feeling muscle tension in the upper part of the body when I use my voice	0 1 2 3 4
...and this bothers me	0 1 2 3 4
14. Having aligned posture when I sit or stand, not slouched, when I use my voice	0 1 2 3 4
...and this bothers me	0 1 2 3 4
15. Singing with a pitch and/or pitch range that I want	0 1 2 3 4
...and this bothers me	0 1 2 3 4
16. Singing without losing my voice in the middle of singing	0 1 2 3 4
...and this bothers me	0 1 2 3 4

Part C: How you communicate your identity to others

Consider the last month . How often did your voice and communication make it difficult to present your...	0 = Never/not relevant 1 = Rarely 2 = Sometimes 3 = Frequently 4 = Always
17. gender identity	0 1 2 3 4
...and this bothers me	0 1 2 3 4
18. age	0 1 2 3 4
...and this bothers me	0 1 2 3 4
19. physical and psychological health	0 1 2 3 4
...and this bothers me	0 1 2 3 4
20. cultural affiliation	0 1 2 3 4
...and this bothers me	0 1 2 3 4
21. sexual orientation	0 1 2 3 4
...and this bothers me	0 1 2 3 4

Part D: How others understand your identity

Consider the last month . When I communicate with other people, I think they misunderstand my...	0 = Never/not relevant 1 = Rarely 2 = Sometimes 3 = Frequently 4 = Always
22. gender identity	0 1 2 3 4
...and this bothers me	0 1 2 3 4
23. age	0 1 2 3 4
...and this bothers me	0 1 2 3 4
24. physical and psychological health	0 1 2 3 4
...and this bothers me	0 1 2 3 4
25. cultural affiliation	0 1 2 3 4
...and this bothers me	0 1 2 3 4
26. sexual orientation	0 1 2 3 4
...and this bothers me	0 1 2 3 4

Part E: How you feel about your voice and communication situation

Consider the last month .	0 = Strongly Disagree 1 = Somewhat Disagree 2 = Neutral 3 = Somewhat Agree 4 = Strongly Agree
27. I am dissatisfied with my voice and communication	0 1 2 3 4
28. My voice and communication make me feel insecure	0 1 2 3 4
29. My voice and communication contribute to dysphoria	0 1 2 3 4
30. My voice and communication make me feel limited in my everyday life	0 1 2 3 4
31. I wish my voice sounded differently to me	0 1 2 3 4
32. I avoid situations because of my voice and communication	0 1 2 3 4
33. I avoid speaking because of my voice and communication	0 1 2 3 4
34. I avoid singing because of my voice	0 1 2 3 4
35. I am dissatisfied when other people misunderstand my identity	0 1 2 3 4
36. How other people perceive me makes me feel insecure	0 1 2 3 4
37. How other people perceive me contribute to my dysphoria	0 1 2 3 4
38. I wish other people addressed me correctly	0 1 2 3 4
39. I avoid situations because of how others might treat me	0 1 2 3 4

Does your voice and communication cause other difficulties that are of concern to you? Please list them here:

--

Is there anything you like about your voice and communication, and if so, what?

--

Does anything help your voice and communication work better, and if so, what?

--

**Voice and Communication Situation Questionnaire:
Developed with and for transgender and gender diverse people
Presumed Female At Birth
(VCSQ^{PFAB})**

Score Report

		Raw score		Average score	Difficulty Rating
B: Voice Function & Impact	Sum of scores for frequency of difficulty*	_____ out of 64	÷16 =	B-function _____ B-impact	< 0.6 Low 0.6 - 2.2 Medium > 2.2 High Frequency of difficulties
	Sum of scores for the frequency of "bothers me"	_____ out of 64	÷16 =	B-impact	
C: How You Communicate Your Identity to Others	Sum of scores for frequency of difficulty*	_____ out of 20 (optional)			
	Sum of scores for the frequency of "bothers me"	_____ out of 20	÷5 =	C-impact	
D: How Others Understand your Identity	Sum of scores for frequency of difficulty*	_____ out of 20 (optional)			
	Sum of scores for the frequency of "bothers me"	_____ out of 20	÷ 5 =	D-impact	
E: Feelings about Communication Situation	Sum of scores for agreement level	_____ out of 52	÷13 =	E-impact	
Sum of the four average impact scores: _____ ÷4 =				VCSQ^{PFAB} Impact Composite Score Impact Rating < 0.8 Mild 0.8 – 2.0 Mod > 2.0 Severe	

* these scores are not in composite calculations but may be useful for interpretation

APPENDIX FIVE

Standards of Care for the Health of Transgender and Gender Diverse People, Version 8 <https://doi.org/10.1080/26895269.2022.2100644>

Available at: <https://pubmed.ncbi.nlm.nih.gov/36238954/>