



# Vocal self-perception and psychism in transsexual people: multiple case studies

Autopercepção vocal e psiquismo  
em pessoas transexuais:  
estudo de casos múltiplos

Autopercepción vocal y psiquismo  
en personas transexuales:  
múltiples estudios de casos

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## Abstract

**Introduction:** The gender transition is a phenomenon that mobilizes different areas of knowledge and Speech-Language Pathology has been weaving research on the subject. **Objective:** to analyze the relationship between vocal self-perception and psyche in transsexual people. **Method:** multiple case study. **Casuistry:** 03 transsexual adults aged between 18 and 40 years. **Selection criteria:** adults (18 to 44 years old) who declare themselves as transsexuals. **Participants** were selected from a method defining objects that are part of the social relations of the aura. **Procedures:** Step 1. Sending the access link to the invitation to participate in the research, the Free and Informed Consent Term and scheduling the individual meeting between the researcher and the participant via WhatsApp; Step 2. Individual meeting of the researcher with each subject to collect the free testimony (audio recording) and send the links to access the Vocal Self-Assessment Questionnaire for Transsexuals (TWVQ) and the Beck Anxiety Scale (EAB). **Criteria for analyzing the results:** Free testimonial: Content Analysis according to Bardin (2011). TWVQ and EAB: templates proposed by the instruments. In the free statements, 04 thematic categories were highlighted: voice, narratives about childhood, trajectory and family. The TWVQ results indicate positive vocal self-perception only in 01 subject and negative in the others. At EAB, 02 had a moderate

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### Authors' contributions:

DRP: conception and development of the study;

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level and 01 had a high level. **Conclusion:** the vocal self-perception of the research studies reveals that the voice plays a fundamental role in gender expressions.

**Keywords:** Transgender Persons; Transsexuals; Gender Identity; Voice; Voice training.

### Resumo

**Introdução:** A transição de gênero é um fenômeno que mobiliza diferentes áreas do conhecimento e a Fonoaudiologia vem tecendo pesquisas sobre o tema. **Objetivo:** analisar as relações entre autopercepção vocal e psiquismo em pessoas transexuais. **Método:** estudo de casos múltiplos. Casuística: 03 adultos transexuais na faixa etária de 18 a 40 anos. Critérios de seleção: pessoas adultas (18 a 44 anos) que se autodeclararam transexuais. Os participantes foram selecionados pelo método Bola de Neve a partir de indicações de sujeitos que fazem parte das relações sociais da pesquisadora. **Procedimentos:** Etapa 1. Envio do link de acesso do convite de participação para a pesquisa, Termo de Consentimento Livre e Esclarecido e agendamento do encontro individual da pesquisadora com o participante via WhatsApp; Etapa 2. Encontro individual da pesquisadora com cada sujeito para coleta do depoimento livre (gravação do áudio) e envio dos links de acesso ao Questionário Autoavaliação Vocal para Transexuais (TWVQ) e da Escala de Ansiedade de Beck (EAB). **Crítérios de análise dos resultados:** Depoimento livre: Análise de Conteúdo segundo Bardin (2011). TWVQ e EAB: gabaritos propostos pelos instrumentos. **Resultados:** Nos depoimentos livres destacaram-se 04 categorias temáticas: voz, narrativas sobre a infância, trajetória e família. Os resultados do TWVQ indicaram autopercepção vocal positiva somente em 01 sujeito e negativa nos demais. Na EAB, 02 sujeitos apresentaram nível moderado e 01 alto. **Conclusão:** a autopercepção vocal dos sujeitos da pesquisa revela que a voz tem papel fundamental nas expressões de gênero.

**Palavras-chave:** Pessoas transgênero; Pessoas transexuais; Identidade de gênero; Voz; Treinamento da voz.

### Resumen

**Introducción:** La transición de género es un fenómeno que moviliza diferentes áreas del conocimiento y la Logopedia viene tejiendo investigaciones sobre el tema. **Objetivo:** analizar la relación entre la autopercepción vocal y el psiquismo en personas transexuales. **Método:** estudio de casos múltiples. Casuística: 03 adultos transexuales con edades comprendidas entre 18 y 40 años. Criterios de selección: adultos (18 a 44 años) que se declaren transexuales. Los participantes fueron seleccionados por el método Snowball a partir de indicaciones de sujetos que forman parte de las relaciones sociales del investigador. **Procedimientos:** Paso 1. Envío del link de acceso de la invitación a participar de la investigación, Término de Consentimiento Libre e Informado y programación del encuentro individual entre el investigador y el participante vía whatsapp; Paso 2. Reunión individual del investigador con cada sujeto para recoger la declaración libre (grabación de audio) y enviar los enlaces para acceder al Cuestionario de Autoevaluación Vocal para Transexuales (TWVQ) y la Escala de Ansiedad de Beck (EAB). **Criterios para el análisis de los resultados:** Testimonio libre: Análisis de Contenido según Bardin (2011). TWVQ y EAB: plantillas propuestas por los instrumentos. **Resultados:** En los enunciados libres se destacaron 04 categorías temáticas: voz, narrativas sobre la infancia, trayectoria y familia. Los resultados del TWVQ indicaron autopercepción vocal positiva solo en 01 sujeto y negativa en los demás. En la EAB, 02 sujetos presentaron nivel moderado y 01 nivel alto. **Conclusión:** la autopercepción vocal de los sujetos de la investigación revela que la voz juega un papel fundamental en las expresiones de género.

**Palabras clave:** Personas Transgênero; Transexuales; Identidad de Género; Voz, Entrenamiento de la Voz.

## Introduction

This study addresses the gender transition focusing on the vocal therapy process, considering the importance of the voice for the comfort of individuals with their gender expression in interactions and social environments<sup>1</sup>. To this end, the study involves the interaction between Speech-Language Pathology and Psychoanalysis in order to discuss the vocal self-perception of transsexual people.

It should be noted that there is a terminological imprecision about voice therapy in the context of gender transition. Some studies use the term “vocal readjustment”, while other studies use “vocal reassignment”, or even both terms, to name the therapeutic process aimed at the vocal and communicative aspects of the transsexual person. Therefore, this study will use the term “vocal therapy” when dealing with the work of speech-language pathology for and with transgender people.

In this sense, it should be said that Jesus<sup>2:14</sup> reports that the term transgender is an “umbrella” term that includes a wide diversity of gender: An “umbrella” term that includes the diverse group of people who do not identify, to different degrees, with expected behaviors and/or gender roles that were assigned to them at birth”. On the other hand, the term transsexual is a “generic term that characterizes a person who does not identify with the gender assigned at birth”<sup>2:14</sup>.

In this context, this study will adopt the term transsexual as a reference to the study participants, as the selection method did not reach individuals identified in other gender identity expressions, such as transvestites and/or agender people so that the term transgender could be used.

In addition, it is important to briefly discuss national public policies aimed at the Lesbian, Gay, Bisexual and Transvestite and Transsexual (LGBTQIA+) population. The development of health programs aimed at minority populations contributed to the growth of anthropological research involving the support of public health policies in specific communities formed by transsexuals and transvestites, for example<sup>3</sup>. Until the late 1980s, when public policies and the health reform movement were implemented, anthropology focused on the relationship between biomedicine and health practices in order to “develop alternative paradigms to the biological and quantitative approach dominant in public health and epidemiological

research”<sup>3:59</sup>. However, the process of depathologizing transsexuality began to impact health classifications and manuals only in 2018<sup>3</sup>.

The recent ICD-10 [*International Classification of Diseases*], published in June 2018, classifies transsexuality as Gender Incongruence, being moved to the “Conditions Related to Sexual Health” chapter. In previous classifications, transsexuality was defined as Gender Identity Disorder and categorized as “Mental and Behavioral Disorders”<sup>3</sup>. Despite the positive consequences resulting from the change in the ICD-11 for transgender people, there are also processes that go beyond the classification of transsexuality in medical manuals: “depathologizing means understanding what other people understand and how such knowledge can add to your own knowledge, or the knowledge of an outpatient clinic, where there are medical teams and care practices established in protocols and flowcharts”<sup>4:54</sup>.

The combination of several factors, such as the inclusion of sex reassignment surgery, in 2001, as a procedure performed in the SUS [*Unified Health System*]; the creation of the Technical Committee for the Health of the LGBT Population, implemented by the Directive of the Ministry of Health No. 2,227, on October 14, 2004; and contributions from academic research, lectures and seminars on the transsexualization process in the SUS [*Unified Health System*], resulted in the publication of the Directive of the Ministry of Health No. 1,707/2008, based on the qualification of services in university hospitals and the performance of hospital procedures<sup>3</sup>. The Directive No. 859 was published on July 30, 2013 and defined a line of care from primary to specialized care. It should be noted that the specialized care is focused not only on surgical and hospital procedures, but also on structuring and expanding outpatient care services<sup>5</sup>. Then, Directive No. 2,803 was published on November 19, 2013, redefining and expanding the Transsexualization Process in the Unified Health System<sup>5</sup>.

“The care services provided to the trans and transvestite population in Brazil include a speech-language pathologist to carry out rehabilitation, habilitation and vocal expressiveness actions”<sup>1:174</sup>. It should be noted that the speech-language pathologist is not necessarily included in Directive No. 2,803, which seems to weaken the (political and professional) presence of these professionals

in this area, since they are not considered essential to take care of this population<sup>6</sup>.

In this line, the World Professional Association for Transgender Health (WPATH) reports that verbal and non-verbal communication is a fundamental aspect of comprehensive health care, being considered as a factor involved in human behavior and gender expression. In this context, transgender people who feel the need for such care may develop vocal characteristics and/or non-verbal communication patterns that promote comfort with their gender identity<sup>6</sup>.

This study proposes a speech-language approach aiming to articulate voice and subjectivity in the context of the transsexual experience. The notions of body and psyche are intertwined in this study and support the relationship between subject and language, privileging the inalienable dimension of the voice<sup>7</sup>. Thus, this study aimed to analyze the relationship between vocal self-perception and psyche in transgender people.

Finally, it should be noted that Brazilian speech-language pathologist's researchers have been developing an innovative production of knowledge about the articulations between voice and gender transition<sup>6,1,8,9</sup>.

## Purpose

To analyze the relationship between vocal self-perception and psyche in transgender people.

## Method

This is a qualitative and exploratory study that was developed through multiple case studies. The project was submitted to the Research Ethics Committee and it was approved under the CAAE [Certificate of Presentation for Ethical Consideration] No. 45160521.8.0000.5482.

## Research Subjects

The study included 01 transsexual woman and 02 transsexual men, selected by the snowball technique based on referrals from subjects who are part of the researcher's social relationships. The study selection criterion defined the participation of adults (18 to 44 years old) who were experiencing gender transition. The names and any details that

could identify the participants have been modified and/or suppressed in order to preserve them.

## Procedures

1<sup>st</sup> Stage: Invitation to participate in the study

The researcher's contact with the study participants was made remotely due to the Covid-19 pandemic. Thus, the researcher sent an invitation to participate in the research through a Google Forms link. After confirming their interest in participating in the research, the subjects accessed the ICF and formalized their acceptance. At this stage, the participants had to provide their name, date of birth, telephone number and e-mail address so that the individual reports could be scheduled.

2<sup>nd</sup> Stage: Individual report

Individual reports were collected from the following question: "What are your thoughts on your own voice?". The full statement was recorded using the WhatsApp messaging application. At this stage, the participants and the researcher exchanged audio messages and the collected reports were transcribed literally.

3<sup>rd</sup> Stage: Application of the Trans Woman Voice Questionnaire (TWVQ)

Presentation and submission of the access link to the Trans Woman Voice Questionnaire<sup>10</sup>, which is an instrument for assessing the vocal self-perception of transsexual women. As a specific instrument for research with transsexual women, the questionnaire was adapted by the researcher so that transsexual men could also answer it. In this context, some words, terms and expressions referring to the female gender were modified to contemplate the vocal self-perception of transsexual men.

- Procedure description: presentation of the instrument consisting of 30 questions about the social impact of the voice, which aims to measure the experiences of transgender people with their voices. Then, each subject answered the questions according to a rating scale ranging from 1 to 4: 1 (never and rarely), 2 (sometimes), 3 (often) and 4 (usually and always). The total score ranged from 30 (minimum) to 120 (maximum) points, in which the higher the participant's score, the worse their self-perception of their voice.

#### 4<sup>th</sup> Stage: Application of the Beck Anxiety Inventory

Presentation and submission of the access link to the Beck Anxiety Inventory<sup>11</sup>, which is an appropriate test for use not only in psychiatric or medical clinic patients, but also in the non-clinical population.

- Procedure description: presentation of the instrument consisting of 21 items in which the individual must report the intensity of the symptom. The items were answered based on a zero to three point scale, where zero corresponded to “Not at all”, one point corresponded to “Mildly, but it didn’t bother me much”, two points corresponded to “Moderately, it wasn’t pleasant at times” and three points corresponded to “Severely, it bothered me a lot”. The total test score ranges from 0 to 63 allowing verification of the level of anxiety as follows: 0-7 (minimal), 8-15 (mild), 16-25 (moderate) and 26-63 (severe). Note: The two instruments used in this study were fully transcribed into an electronic form made available by Google Forms.

#### Criteria for analyzing results

The **individual reports** were analyzed using the Content Analysis technique<sup>12</sup> over the following three steps: 1. Prior analysis of the material: inferences about the topics that are frequently repeated from the reading of the transcription of the participants’ free reports; 2. Exploration of the material: preparation of thematic categories based on the frequency of a certain common characteristic among the reports of the participants; and 3. Inferential interpretation. The data collected in the **TWVQ** were entered in a specific spreadsheet and the results on the self-perception of the voice were associated with the subjects’ reports. In turn, with respect to the **Beck Anxiety Inventory**, data were analyzed based on the template proposed in the instrument in order to classify the degree of severity of anxiety (minimal, mild, moderate and severe).

The results obtained in the three procedures were analyzed in the dimension that characterizes the study of multiple cases: individual analysis of each case followed by intra-subject analysis.

#### Results

The results obtained will be presented as follows: characterization of the subjects, thematic

categories, Trans Woman Voice Questionnaire (TWVQ) and the Beck Anxiety Inventory.

#### Characterization of the subjects

##### Valentina

Valentina is a 27-year-old self-declared transsexual woman who has completed high school and works as a professional make-up artist and salesperson. She lives in São Paulo with her maternal grandparents.

*“I used to live alone, but I quit my previous job and now I can’t pay rent and other expenses. So, now I’ve been living with my grandparents, but I want to live alone and take an undergraduate degree in Fashion”.*

She reports that she went through a process of (re)discoveries throughout her recognition as a woman: in childhood, she had a wide desire for objects and roles generally attributed to the female gender (she liked dolls, and in role-taking games, she assumed the role of the “mother”, “princess” or the “woman” of the play). Throughout her teens and early adulthood, she felt something was missing and so, at opportune moments, she began wearing female props/clothing and makeup.

She decided to use hormones in her gender transition and reports that she feels distressed for not having started this process sooner. At the time of collection of her report (on May 24, 2020), Valentina was in the beginning of the hormonal intervention. She also reports that she started taking contraceptives on her own (after a friend’s recommendation) and, after a period, she sought health care. However, the health services she attended were temporarily suspended due to the Covid-19 pandemic and Valentina decided to resume taking contraceptives. She believes that the voice is the main element among all the factors that define “being a woman”: *“In my opinion, the voice is the main thing about being a woman”.*

##### Marcus

Marcus is a 37-year-old self-declared transgender man, who graduated as a Nursing Technician, but currently works as an Administrative Assistant. He lives in São Paulo with his family.

He went through the gender transition process gradually and has been part of the Transsexualization Process of the SUS [*Unified Health System*] for 07 years. He explains that he went through a

consultation for 02 years with a multidisciplinary team to obtain a medical report and, with the report, he could start hormone therapy. He also reports that he feels satisfied with the changes he has achieved with the use of hormones, because since he was a child he wanted to have a beard and played shaving in front of the mirror: *“Hormone therapy is an option that I want to follow, as it results in changes that, in one way or another, are satisfying for me”*.

Marcus explores the variations his voice has acquired by recording videos and singing in the church he attends. He also reports that some people confuse his voice with that of his brother, who is a cisgender man: *“I believe that voice change makes a lot of difference nowadays. There are even people who confuse my voice with the voice of my brother, who is a cis man.”*

Gael

Gael is a 33-year-old self-declared transsexual man, who graduated in Biology and also has a Graduate Degree, he lives with his family in São Paulo.

Gael reports that he identifies as a trans man since the end of 2020 - about 5 months before the date of collection of his report (05/03/2021): *“I’ve identified as a trans man for about 4-5 months now, so this is new information for me as well.”* In his report, he states his desire to start hormone therapy as soon as possible, but whatever intervention he undergoes (hormonal or surgical), he wants it to be safe.

His report shows his dissatisfaction with his own voice: *“I never liked my own voice. And that’s why I avoid any contact that requires my voice”*. He believes that hormone therapy is essential precisely because of the effect it generates on the voice of trans men, making it lower: *“Based on everything I’ve studied and read, I believe hormone therapy would be my lifeline and hope to change it”*.

### Thematic Categories

From the analysis of the free reports, the researcher elaborated 04 thematic categories that are related to representing issues present in the experience of the gender transition.

The thematic categories will be presented as follows: 1. Voice; 2. Childhood narratives; 3. Journeys; and 4. Family.

### Thematic Category: Voice

The Voice category combines topics such as the relationship between voice and gender expression, vocal self-perception and the effects of vocal perception by others. The excerpts highlighted for this category address unique experiences about the voice from the perspective of transsexuality. In this way, it is possible to explore experiences common to the participants, although surrounded by the subjectivity of each one. There is an emphasis on the association of sub-themes such as the desire for hormones and their effects, especially for the voice.

**Valentina:** *“It is very difficult to be trans, because people have to be 100% women, we have to be more women than cis women. I’m terrified of being criticized. Recently, a man told me that I had a strange voice, and that I was beautiful and even looked like a woman, but I had a male voice. I felt really bad and it hurt me a lot what he said.”*

**Valentina:** *“There are a lot of straight men who approach me to talk to me and I try to talk in a voice that’s not mine, so I end up screwing it up. If I could change something about myself that bothers me, it would certainly be my voice. I even accept my body, but I am terrified and afraid of my voice.”*

**Valentina:** *“There was a day when I was feeling very bad when I arrived at the outpatient clinic and the endocrinologist asked what I had and what I didn’t like about my body. So I replied that my voice was the problem bothering me. I really wanted to have follow-up with a speech-language pathologist, but just when I was supposed to return with my exams, the pandemic came and stopped everything.”*

**Marcus:** *“I wanted to have a beard, and I really wanted to have a deeper voice, you know? And since I’m strong, I didn’t think it was cool to have such a high voice and be my size.”*

**Marcus:** *“I liked to sing a lot, but I didn’t like my voice before, because my voice was very thin and very high. Today, after 5 years of hormone therapy, I can notice a change in my voice. My voice got a little thicker and today I realize that I can reach low notes that I couldn’t before.”*

**Marcus:** *“The change in my voice was very noticeable at the beginning of hormone therapy. I commented on this a lot when I was in the outpatient clinic, I remember talking about my voice being different and that I had a lot of sore throat. I believe hormone therapy makes a muscle in the throat stronger as well.”*

**Gael:** *“For me, the hardest part is talking about my voice. I never liked my own voice. Never! This thing*

*we're doing now, talking via audio messages, if we had scheduled this, I would have already taken a tranquilizer. Just knowing that I'm going to have to talk makes me start to sweat and shake all over; you know? I have a crisis peak that starts just like that."*

**Gael:** *"I try to avoid situations involving the use of my voice, regardless of the subject or reason for communication. Even ordinary situations are difficult for me, such as calling the bank card call center. If I have the option of resolving something via WhatsApp or e-mail, or any other way that avoids talking, I will certainly do so. I only make calls as a last resort."*

**Gael:** *"I don't like my voice personally, I don't like listening to recordings of my voice and I get distressed by any situation in which I have to speak. We hear the voice coming out of our mouth (...) and a female sound comes out of my mouth, but I see myself as a male (...) I find this very contradictory!"*

**Gael:** *"Some time ago I got sick and had pharyngitis. Strange as it may seem, I ended up liking it because the disease makes the voice deeper, and the hoarse I got, the more I liked it and forced my voice to speak."*

### Thematic Category: Childhood Narratives

The second category includes narratives about childhood and the relationship with gender expression. The reports even imply the other categories described here.

**Valentina:** *"When I was a child, I heard that I couldn't act like that, with a female behavior. There is a lot of pressure, people say a lot of things, such as 'you can't be like that', 'you have to wear blue and play with cars, play ball', 'you can't cry all the time, you look like a little girl', 'you have to be a boy', so we grow up following what is to be very male"*

**Valentina:** *"I was very upset because my sister got a Barbie, and I wanted one too. My mom even let me play with these dolls, but I had to put everything away before my dad got home. I wanted to be the center of attention when I went to children's parties, so I danced a lot and showed off but my mother asked me to stop doing that."*

**Marcus:** *"When I was a kid, I remember studying in the afternoon and every day when I got home from school, I would run and play soccer with the kids from my street, and when the boys took off their shirts, I took mine off too."*

**Marcus:** *"I often played with a razor. I would run my hand over my face, and pretend I was shaving. I always wanted to go through this transformation to get a beard and have a deep voice (...) so that the*

*mirror could reflect the person I've always been."*

**Gael:** *"I started to understand and recognize all this since I was a child, when I was about 6 or 7 years old, and I felt that I was very different. When talking to my psychologist, I began to understand that what I had experienced since I was a child was not part of me: the clothes were inappropriate, the way I had to act...And the way of thinking and the voice are also two elements that are part of your body as well."*

### Thematic Category: Journey

This category shows the narratives about the nuances of gender transition that are common in the subjects' speech.

**Valentina:** *"A long time after I came out as gay, I found myself thinking about my life, and I would look in the mirror and feel like something was missing from me. A while later, I met a trans woman and she made me wonder if I wasn't trans too."*

**Valentina:** *"Whenever I went to a clothing store, I went straight to the women's clothing department. When I was there, I looked at those women's clothes and thought everything was so beautiful, and I imagined myself dressed in them. So I found out about androgynous people and started buying women's clothes and accessories, but still not losing that male aspect."*

**Valentina:** *"One day I got home, took off all my clothes and cried a lot. As I felt like a woman, I decided to change all my men's clothes to women's clothes. So, I called my friends and asked them to each bring a piece of women's clothing and, in return, I gave them the clothes I had. I still kept the clothes I liked the most, but I ended up giving away almost all the clothes I had. I went through very difficult experiences to understand that I am a woman, that I feel like a woman and that nobody has the right to say otherwise."*

**Marcus:** *"In my opinion, being trans is more than a transformation, it is an adaptation of who we already are. I see myself as a man since I was 6 years old and I believe that we adapt to what we already are."*

**Marcus:** *"I started my transition process when I was 28, and then I started hormone treatment when I was 30-31 years old. So, I started hormone therapy 5 years ago, and I've been taking the treatment for 7 years now. Therefore, I spent 2 years being assisted by the multidisciplinary team for them to provide me with the medical report that approved the hormone therapy. Thankfully, with the changes, everything changes and we reach our goal, and the voice is*

one of those changes.”

**Gael:** “I have identified as a trans man for approximately 4-5 months now. It’s a new thing for me too, but I feel good wearing more male clothes. I really want to start the hormone therapy process, but first I need to do other treatments.”

**Gael:** “I want to (...), we look forward to the changes (...) I intend to undergo hormone therapy, and I do want to have my breasts removed but I’m very overweight and I’m undergoing treatment for hypothyroidism. I want to lose weight before starting the hormone transition process.”

**Gael:** “I believe hormone therapy would be my lifeline and hope to change many things, especially my voice. I have been reading books by trans people telling their stories step by step and it has been really empowering.”

### Thematic Category: Family

Family relationships constitute an important theme in the subjects’ speech. This topic includes several reports that may represent weaknesses and confrontations of the transsexual person in the dynamics of this relationship with the family.

**Valentina:** “My friends already knew that I was trans, but my family still didn’t, and the idea of telling my mother was what distressed me the most. My mother was angry and disappointed when she found out I liked men, just imagine if I told her I was trans.”

**Valentina:** “I spent many years of my life hiding and

I wanted to be younger and come out, but I didn’t do it because of my family. Now I’m 26 and I keep thinking that I could have used hormones to get breasts and have a more female body, but I didn’t because I didn’t want to hurt my family.”

**Valentina:** “I am my friend, my mother and father at the same time, since I have almost no contact with my family. A while ago my mother went with me to the doctor because I was feeling bad, but when they called me by my female name she got mad and left me alone. Today I only have my grandmother and I live with her, but there are many things that you prefer not to tell your grandmother.”

**Marcus:** “People who know me from now on don’t notice anything, but people who knew me before do. Some react positively and some don’t, like my family.”

**Marcus:** “My family respects me, but they don’t accept me and don’t call me by my name. My family knows who I am and, most of all, I know who I am.”

**Gael:** “My biggest concern has always been my family, once I had a very big rejection when I came out as homosexual. I was 16 years old when I came out, and I don’t want to go through the same issues that triggered the borderline again, so things are being worked on gradually.”

### Trans Woman Voice Questionnaire (TWVQ) and Beck Anxiety Inventory

The following table shows the results of the TWVQ referring to the three study subjects.

**Table 1.** Results related to the Trans Woman Voice Questionnaire (TWVQ)

	Total Score in the TWVQ	Currently, my voice is:	My ideal voice would sound:
Valentina	95	Very male	Gender neutral
Marcus	44	Very male	Very male
Gael	115	Very female	Very male

The minimum score in the TWVQ is 30, which represents the best satisfaction with vocal self-perception, while the maximum score is 120, which corresponds to dissatisfaction with vocal self-perception. The results obtained by Valentina (95 points) show dissatisfaction with her vocal self-perception. Regarding the global voice assessment, Valentina reports that she believes that her voice is “very male” and that she would like to have a “gender neutral” voice. Marcus had a significant

score (44 points) for feeling satisfied with his voice, which is in line with his report. It should be noted that the global voice assessment for Marcus indicates that the desire to have a male voice was possible, which was highlighted by the participant in his statement due to the use of hormones. Gael had a high score, which shows that his vocal self-perception is significantly negative (115 points). He reported that his current voice sounds very female, and that he would like to a very male voice.



Questions with more “usually or always” answers correspond to aspects of the voice and gender relationship, such as Question 17 - “My voice difficulties restrict my social life” or Question 28 - “It distresses me when I’m perceived as a man because of my voice.”

The results of applying the Beck Anxiety Inventory for the three study subjects are presented below.

**Table 2.** Results related to the Beck Anxiety Inventory.

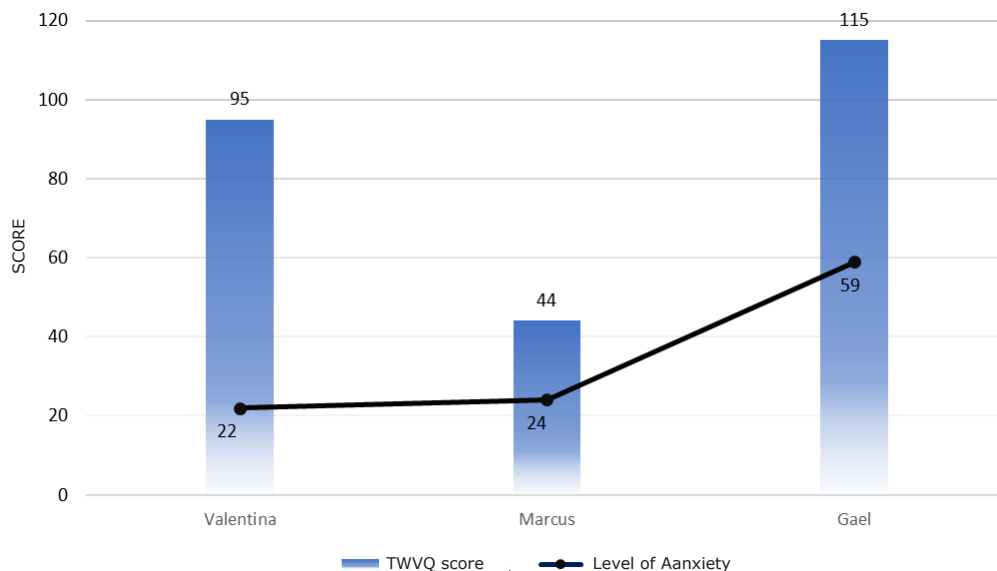
	Total Score	Anxiety Level
Valentina	22	Moderate
Marcus	24	Moderate
Gael	59	Severe

Valentina and Marcus had a moderate level of anxiety, obtaining 22 and 24 points, respectively. In turn, Gael had a significant result for the level of anxiety, consistent with the report presented, whose emotional symptoms were mentioned. The following excerpt reflects the result obtained (severe level of anxiety) by Gael in the face of communicative situations: *Just knowing that I’m going to have to talk (he refers to situations where he needs to use his voice) makes me start to sweat and shake all*

*over; you know? I have a crisis peak that starts just like that.*

It should be noted that the questions with the highest scores on the Beck Anxiety Scale, indicating that it was difficult to bear the symptom, were the following: 5. Fear of worst happening; 10. Nervous; and 11. Feeling of choking. The question with the lowest score (Not at all) refers to numbness or tingling symptoms (1. Numbness or tingling).

**Chart 1.** Graphic representation of the data obtained in the TWVQ and in the Beck Anxiety Inventory.



The following correlations were observed in the findings of the applied instruments: the self-perception of her voice is still not satisfactory for Valentina, considering her report and the score achieved on the TWVQ, with an indication of a moderate level of anxiety. In turn, Marcus also showed a moderate level of anxiety, but his vocal self-perception is satisfactory, as evidenced by the TWVQ scores (adapted) and in the free report. Finally, Gael obtained a significant score on the Beck Anxiety Inventory (severe level of anxiety) and intense vocal dissatisfaction, which is in line with his free report.

## Discussion

The study subjects highlighted that the voice is a fundamental attribute for the gender transition and for the social recognition they desire. Ferreira, Algodoal and Andrada e Silva<sup>13</sup> reported that the voice is a human manifestation articulated in the interrelationship of organic, psychological and social aspects. Based on these aspects, in addition to its sound potential to communicate verbal aspects, the voice also plays roles in the exercise of social gender roles. In this context, having a voice that corresponds to the biological sex (low voice for men or high voice for women) is like an established standard for exercising a social gender role<sup>14</sup>. The association between voice and gender can be understood as a “discursive product” based, both by common sense and in academic discourses, on two exclusive fields: male and female<sup>15</sup>. Therefore, the diversity of voices is generalized in interpretations (socially and culturally established) that recognize only biological males and females as “normal” human beings<sup>15</sup>.

However, voice is an important attribute for the assumed identity of transgender people, both for self-acceptance and for social reception.<sup>16</sup> Hence, the need for assessment instruments that favor the subject’s perception of their voice. Such an assessment can occur during the process of vocal therapy, pre and post-surgery or hormone therapy<sup>17</sup>.

Regarding the TWVQ, which is a questionnaire designed to assess the self-perception of transsexual women, previous research has shown that the instrument is also valid for transsexual men, as long as the necessary adaptations are made<sup>8</sup>. The scores achieved by Valentina and Gael on the TWVQ, 95 and 115 points respectively, point to

losses in relation to voice self-perception. There are previous studies that report that transsexual subjects experience anxiety/stress due to intense dissatisfaction with their voices or for not being recognized in their gender identity<sup>8</sup>. On the other hand, participant Marcus achieved satisfaction with his voice (44 points) throughout the hormone therapy process for gender transition.

It should be noted that the study subjects highlighted the vocal alteration caused by the use of hormones. In the case of transsexual men, the administered hormones generate perceptible changes in vocal production, which promotes a process similar to the vocal change characteristic of puberty<sup>18</sup>. Transgender women who undergo the hormone therapy process receive estrogen, while transgender men receive the hormone testosterone, in order to develop female and male characteristics, respectively<sup>19</sup>. As shown in the literature, hormone therapy produces significant changes in the vocal production of transsexual men<sup>6,8,19</sup>, as reported by Marcus.

On the other hand, the best results for changes in vocal production resulting from the administration of hormones in transsexual women occur when the hormonal intervention takes place before or close to the period of voice change<sup>20</sup>. However, it should be noted that speech-language pathology can help transsexual women in this process. Vocal therapy for transsexual women should aim at raising the fundamental frequency of the voice and increasing the frequency variation, in addition to other important parameters, such as resonance balance and improvement of communicative competence<sup>19</sup>.

Regarding vocal self-perception, Dornelas et al<sup>21</sup> investigated the impact of vocal self-perception on the quality of life of transgender people. This study, entitled “*Portas abertas - Saúde integral das pessoas trans: cuidar e acolher*” (Open doors - Integral health of trans people: caring and welcoming), was carried out in 2017 and included 17 transgender men and 10 transgender women at the beginning of health care at the Ambulatório Trans de Sergipe. The findings showed that the voice has a high impact on the lives of transsexual people, as follows: “vocal aspects play a role in the Transsexualization Process of building a new identity, either in self-acceptance or in the acceptance of the social environment, and the voice must be understood as an essential element in gender identification”<sup>21</sup>.

Among the findings of the aforementioned study, it is noteworthy that the effort for vocal production or negative voice adaptations can cause dysphonia<sup>21</sup>. In this sense, the voice is understood as an identity mark of gender perception<sup>22</sup>. Hence, the strategy of trying to model the voice or making vocal effort to approach a social category<sup>19</sup>. This can be noticed and is in line with Valentina and Gael's reports about vocal effort.

Dornelas et al<sup>21</sup> also report that the quality of life of transgender people is closely related to how they perceive their vocal alterations. The desire for a voice consistent with their gender identity is a matter of paramount importance in gender transition, as the way listeners perceive these people's voices has unique effects on the subjects.

Transgender people "tend to want a voice that fits their gender identity, considering that voice is often one of the aspects that most hinder the ability to impersonate the desired gender"<sup>23</sup>. There are other studies that investigate the voice of transgender people associated with vocal quality and fundamental frequency. However, research shows that both self-perception and the perception of listeners contribute to the transsexual person's satisfaction with their voice<sup>24</sup>.

Faced with a voice that does not match their gender identity, transgender people can avoid communication situations in order not to expose their voices<sup>6</sup>, as shown in Gael's report, who reported avoiding situations in which he needs to expose his voice. From this perspective, dissatisfaction with the voice in relation to gender can represent a barrier to communication for transsexual people and, thus, reflect on other levels of emotional and social life, such as access to studies and work.

Silva<sup>25</sup> states that, based on results elaborated in academic texts with reports and memories of trans people, there is a significant part of this population that is aware of their gender identity even in childhood. In this context, Valentina reported that her childhood memories remind her of people "correcting" her way of being.

It is worth mentioning that the "correction" attempts made by adults in relation to children's gender expression permeate the possibility of their children being seen as objects in society, as such conduct is divergent from the socially established normative standard. However, academic and interdisciplinary research on childhood and transgenderism is scarce – "a huge percentage of the

general population is unaware of the existence of transgender children or feels aversion to the idea"<sup>25</sup>.

Research participants highlighted that the perception of their own bodies in childhood was linked to the desire for their psychic realities. Rodríguez<sup>26</sup> reports that the cases of trans children make it possible to reflect on the "construction" of a body through desire or "the person's own psychic reality". In this sense, the queer movement allowed not only the legitimization of transgenderism in childhood, but also the questioning of the binary and phallogocentric order of culture, being a predecessor to the multiplication of cases of children and adolescents who receive support for transformations of a body that does not correspond to the identity by which they recognize themselves<sup>26</sup>.

Sampaio and Coelho<sup>27</sup>, in turn, argue that the classification attributes for men and women in the context of sexuality also result from a historical and social construction. In this context, subjects exist from a sexed body: this body must express how subjects articulate their sex and gender, such as clothes, body adornments and behaviors that express gender norms<sup>27</sup>.

The research subjects' reports include details about their family relationships. According to Silveira<sup>28</sup>, "not being a static or homogeneous entity, but a universe of differentiated relationships, the family is faced with these changes, imposing a constant struggle for preservation and transformation". Thus, the family represents a space for "transmission of values, beliefs and relationship models" in the process of forming the subject's identity. Therefore, the family contributes to the elaboration of notions of gender and social roles suitable for life in society and, in addition, to the propagation of prejudices<sup>29</sup>.

In turn, Galupo et al<sup>30</sup> point out that the bonds of friendship among transsexual subjects are highlighted and create a support network. This is in line with Valentina's report, who stated that her gender transition process was primarily supported by her network of friends.

It should be noted that the negative outcomes reported in other studies were not observed in the study participants. Rejection by the family, whether by members of the nuclear family or members of the extended family, is pointed out by the literature as a cause of serious consequences for transgender people, such as homelessness and the search for sustenance through prostitution<sup>29,30</sup>.

## Conclusion

The self-perceptions shared by the study subjects show that the voice plays a fundamental role in their expressions of gender and subjectivity. In this sense, vocal self-perception for transgender people seems to be significantly linked to psychosocial aspects.

Finally, it is of paramount importance to carry out speech-language pathology studies on the voice of transgender people from the perspective of the articulation between body and psyche, investigating the possible psychic and social impacts on the quality of life of these people.

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