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Vocal therapy for transgender people: case report

Vokalna terapija za transrodne osobe: prikaz slučaja

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ABSTRACT

Transgender people can engage in a number of procedures to deal with the incongruence between their physical gender and the one with which they identify. One of the experts involved in the process of gender transition is a speech-language pathologist (SLP), whose role is to collaborate with the client on the goal to develop vocal, language and communication behaviors that match the desired gender identity. This case report presents one such collaboration, which included voice and communication therapy for a male-to-female transgender person aimed at the voice feminization.

Keywords:

transgenderism
▪ male-to-female
▪ vocal and communication therapy

SAŽETAK

Transrodne osobe mogu se odlučiti na niz postupaka s ciljem smanjivanja osjećaja nesklada između roda pripisanog pri rođenju i onog s kojim se poistovjećuju. Jedan od stručnjaka uključenih u proces tranzicije je i logoped, čija je uloga u suradnji s klijentima raditi na razvijanju vokalnih, jezičnih i komunikacijskih obrazaca koji odgovaraju onima karakterističnima za željeni rod. Ovaj prikaz slučaja predstavlja jednu takvu suradnju koja je obuhvatila vokalnu i komunikacijsku terapiju za transrodnu ženu s ciljem feminizacije glasa.

Ključne riječi:

transrodnost
▪ trans žena
▪ vokalna i komunikacijska terapija

INTRODUCTION

Transgender people experience incongruence between their perceived gender and the one assigned at birth. Difficulties that can accompany that feeling of incongruence are referred to as gender dysphoria (DSM-V, 2013). The term transgender covers a wide spectrum of people who temporarily or permanently identify themselves as gender different than their assigned gender, as opposed to cisgender people, whose perceived and assigned gender are congruent.

If they prefer so, transgender people can go through the process of transition towards either female (Male-to-Female, MtF) or male (Female-to-Male, FtM) gender. Since the goal is to achieve outer presentation that will appropriately reflect one's inner perception of themselves and their gender, the process of transition is highly individualized. Therefore, a multidisciplinary team of experts is involved, most often including a psychiatrist/psychologist, an endocrinologist, a gynecologist, an otorhinolaryngologist, a urologist, a plastic surgeon and a speech-language pathologist (SLP) (Adler, Hirsch, Mordaunt, 2012). The SLP is involved due to the existing gender differences in voice, speech, language and communication. The goal of speech-language therapy for transgender people is to help them develop vocal and communication behaviors that are congruent with their specific perception of their own gender (Davies, Papp, Antoni, 2015).

The aim of this case report is to present vocal and communication therapy for transgender people through the example of a therapy conducted with a Male-to-Female transgender client at the Center for Clinical Practice and Education of the Faculty of Education and Rehabilitation Sciences at the University of Zagreb.

Vocal and communication therapy

Studies suggest that one of the most acknowledged aspects of speech-language therapy for transgender people is voice quality, especially fundamental frequency. Transgender people often report how their voice quality is the factor that could lead to unwanted gender perception (Pasricha, Dacakis, Oates, 2008). Because of the feeling that their voice "betrays" them (Van Borsel, De Cuypere, Van den Berghe, 2001), both MtF and FtM people rank vocal therapy as a high priority in their transition (Neumann, Welzel, Gonnerman, Wolfradt, 2002; Wollitzer, 1994) – as high as genital reconstruction surgery (Van Borsel, De Cuypere, de Rubens, Destaerke, 2000).

The most important goal of vocal therapy for transgender people, mentioned among experts and clients alike, is achieving fundamental frequency values that are in gender-appropriate range, or at least in gender-neutral range (Davies et al., 2015; Gelfer, Schofield, 2000; Günzburger, 1995; Gutierrez, 2019; Mount, Salmon, 1988; Pasricha et al., 2008; Ramon, 2013; Söderpalm, Larsson, Almquist, 2003; Van Borsel et al., 2000; Wollitzer, 1994).

Studies suggest that developing higher fundamental frequency values in MtF clients and lower fundamental frequency values in FtM clients lead to improved self-satisfaction with voice quality among transgender population (Dacakis, 2000), and desired gender-perception among

listeners (Gelfer, Schofield, 2000), since moderate-to-high and very high positive correlation between fundamental frequency and perceived femaleness or maleness have been found (Coleman, 1976; Van Borsel et al., 2001; Wollitzer, 1994).

Still, the male voice is not just a lower version of the female voice and vice versa, neither is the adaption of vocal pitch alone enough for wanted change in gender-appropriate perception of voice.

Aspects of vocal and speech production that may also significantly contribute to the development of gender-appropriate vocal and speech quality are resonance, intonation, intensity, breathiness, speech rate and articulation (Clark, 2016; Davies et al., 2015; de Bruin, Coerts, Greven, 2000; Hancock, Colton, Douglas, 2014; Kent, Read, 2002, as cited in Adler et al., 2012; Palmer, Dietsch, Searl, 2012; Söderpalm et al., 2003).

Studies carried out among cisgender population show that cis women have higher resonant frequencies (Carew, Dacakis, Oates, 2007), more variable intonation with higher percentage of ascending tones (Hancock, Colton, Douglas, 2014), lower vocal intensity and speech rate (Clark, 2016), increased breathiness (Mount, Salmon, 1988; Sawyer, 2019; Varga, Bonetti, 2016), and more precise articulation (Clark, 2016; Günzburger, 1995; Oates, Dacakis, 1983), while cis men have lower resonant frequencies, more monotonous intonation with higher percentage of descending tones, louder vocal intensity and higher speech rate.

Some of these findings have been proven through studies involving transgender participants whose gender was perceived as male or female by listeners according to the presence or absence of certain vocal behaviors (Carew et al., 2007; Free, Dacakis, 2007, as cited in Davies et al., 2015; Gelfer, Schofield, 2000; Günzburger, 1995; Hancock et al., 2014; Mount, Salmon, 1988; Palmer et al., 2012; Schwarz et al., 2017).

The aforementioned parameters of vocal production present only the vocal part of speech-language therapy for transgender clients. The other part is communication therapy that consists of adapting the targeted language and nonverbal behaviors.

Cis men and cis women differ in pragmatics, syntax and semantics, as well as in written and nonverbal communication. Cis women are more emotionally expressive and show support and involvement during conversation. They use nurturing phrases, sub-questions, longer pauses for another speaker and information about self-experience. They focus on affective meanings in conversation and have *involved* writing style, while cis men focus on referential meanings and have *informational* writing style.

Cis women are superior in both expressing and noticing, as well as understanding nonverbal cues (Adler et al., 2012). Therefore, vocal and communicational behaviors which dominate specific gender are often in focus of the gender transition. The combination of vocal and communication therapy offers a universal service and help in transition towards the wanted gender presentation, and in obtaining a desired, more comfortable place in the man-woman continuum.

METHOD

Client description

In March 2017, a 26-year-old Male-to-Female client diagnosed with gender dysphoria was admitted for initial speech-language pathology assessment at the Center for Clinical Practice and Education of the Faculty of Education and Rehabilitation Sciences at the University of Zagreb. In the case history collected by a psychiatrist and psychologist, numerous elements often found among transgender population were noted. Since kindergarten age, she felt different than other boys in her group, she hung out with girls more often, but she was not accepted by other children who mocked her. Secretly, she wore her mother's and cousin's clothes. Dysphoric feelings got more intense entering puberty, due to secondary sexual characteristics' development. In 2011, she revealed her feelings about gender dysphoria and her desire to live as a woman to her parents, who accepted that and it had a huge positive impact on her psychological and emotional status. On the other hand, she was abused by her grandmother and discriminated by her first psychiatrist because of gender dysphoria. Unfortunately, this is not surprising since transgender population still faces a lot of negative emotions and experiences within their families, among friends, colleagues, and in society in general, even by medical workers, who are supposed to act professionally. A survey conducted by Grant et al. (2011) showed that transgender people experience denial, verbal abuse and even physical attacks from health workers to various extents.

In 2014, the client was submitted to regular psychiatric therapy. She was diagnosed with gender dysphoria and sent to different experts due to further assessment. In the psychiatric report, her appearance and clothes were described as unisex and her gender identity as female, although, at the university she was attending, she still presented herself as male, except to few closest colleagues. Also, she sometimes wore female clothes and make-up to therapy sessions. In his report from 2015, the psychologist assessed her intellectual abilities as average or above average. The psychologist noted that the client's verbal self-referring and physical appearance were feminine, and that the client felt relief due to starting the process of transition. Psychologist advised regular psychiatric and psychological follow-up sessions in the following phases of transition, as well as the assessment of an endocrinologist, urologist, geneticist, hematologist and internist, according to the Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People (World Professional Association for Transgender Health, 2011).

The client was not referred to a speech-language therapist by any of the experts involved in the transition, but by another transgender person. This suggests that the SLP's role in the process of transition is still not recognized in Croatia, which is in agreement with reports from other countries: different authors point out that SLPs feel uncomfortable and incompetent about working with transgender population (Hancock, Haskin, 2015; Sawyer, Perry, Dobins-Scaramelli, 2014), and many transgender people simply do not know that SLP can be a member of an expert team involved in transition (Sawyer et al., 2014).

Data collected at the initial SLP's assessment included information about medical history, especially ear-nose-throat illnesses and voice disorders. Furthermore, it included information about the process of transition to that point in time, with emphasis on procedures that could impact vocal therapy, such as testosterone therapy for transgender men and face feminization operations for transgender women or other medications being used (Davies et al., 2015; Davies, Goldberg, 2006; de Bruin et al., 2000; Varga, Bonetti, 2016). Besides this information that is strictly connected to therapy outcomes, the SLP should gain perspective about things that are not directly in the vocal and communication domain but can still have an impact on client's motivation and overall success, such as their psychological and emotional status, social engagement, job, relationships, time management, economic and geographic factors (Davies et al., 2015). Therefore, this information was also collected.

Objective and subjective measures

The main part of the assessment is performance of objective and subjective tests used for gathering information about acoustic measures and voice quality, therapist's subjective perception and client's self-perception of voice and communication behaviors, as well as client's expectations and desires.

Initial acoustic assessment showed following results: F0=160 Hz, jitter=0.60%, shimmer=0.70 dB, HNR=15 Hz. Since cis male fundamental frequency values are usually in range between 80 and 175 Hz (Kreiman, Sidtis, 2013), this result shows how this client's fundamental frequency was at the upper values of that range, which facilitated the process of raising fundamental frequency.

For self-assessment, the Croatian version of the Transgender Voice Questionnaire (TVQ^{MtF}) was used (Davies, Johnston, 2015). This questionnaire investigates the relationship between voice and sense of one's gender identity, as well as its impact on everyday functioning. Davies et al. (2015) report its usefulness in the assessment of congruence between voice quality and perceived self-image, in context of placing oneself at a certain point on a man-woman spectrum. The TVQ^{MtF} was created after revision of the Transgender Self-Evaluation Questionnaire (TSEQ), the first questionnaire designed specifically for self-evaluation of voice for transgender population (Bultynck, Pas, Defreyne, Cosyns, T' Sjoen, 2019; Davies, Johnston, 2015). The TVQ^{MtF} contains 30 items that can be grouped into three domains: *anxiety and avoidance* (the appearance of feelings of anxiety and restriction in social life and work due to voice issues), *vocal identity* (the appearance of feeling less feminine than desired and the feeling of incongruence between physical appearance and voice due to voice quality), and *voice quality* (questions about the voice characteristics) (Bultynck et al., 2019). Every item is validated on the four-point Likert scale in the following manner: *never or rarely*=one point, *sometimes*=two points, *often*=three points, and *usually or always*=four points, which means that the total score can vary between 30 and 120. Higher scores reflect greater perception of voice-related problems and their impact on different areas of everyday life. The client scored 72 points on the TVQ^{MtF}, and the analysis of her answers revealed dissatisfaction with voice quality (namely pitch and pitch

range), as well as with the impact of voice quality on her own feeling of femininity and the reactions of others as well. At that point, she self-evaluated her current voice as gender neutral and her ideal one as somewhat female.

Therapy

The client was taken into therapy from May 2017 until June 2017 and again from October 2017 until February 2018, for three to four sessions per month.

The therapy began with education about vocal production and vocal hygiene. It is important to familiarize the client with the ways of how voice is produced, how genders differ in anatomy and physiology of the vocal tract and how those differences impact voice quality, so that the client can understand which therapy goals are going to be pursued and what amount of change is realistic (Adler et al., 2012; Clark, 2016; Davies et al., 2015). Moreover, the role of vocal hygiene cannot be sufficiently stressed, since one of the main therapy goals in vocal and communication therapy for transgender people is to develop and maintain voice production not in regular range. The SLP has to assure that clients continually use their voice in a light and relaxed manner, that they hold appropriate body posture and use abdominal breathing (Adler et al., 2012). Furthermore, therapy should be continued with vocal warm-up exercises, as another part of vocal hygiene, and with the development of self-monitoring ability that is essential in everyday generalization of learned vocal behaviors (Adler et al., 2012).

Resonance therapy (Behman, Haskell, 2013) represented the main part of vocal therapy. According to widely accepted and acknowledged differences between cis male and cis female resonance and using well-known resonance techniques, the therapy focused on changing chest resonance to head resonance, progressing hierarchically through following exercises:

- humming isolated nasals on single pitch (e.g. /m/);
- chanting C-V and C-V-C-V nasal-vocal combinations on single pitch (e.g. /mi/, /mi-mi/);
- production of words and word combinations (forward focus-humming) on both single pitch and with natural intonation
- repetitions of short sentences, gradually raising the number of words, on both single pitch and with natural intonation;
- reading with natural intonation;
- simple, structured conversation (like “describe this room” and similar tasks);
- more complex conversation (about personal issues, such as job and education);
- conversation with a stressed emotional component (some personal experience).

After every session, the client got instructions how to exercise at home.

In February 2018, the self-evaluation questionnaire TVQ^{MtF} and acoustic measurements were implemented again, with the purpose of progress evaluation. There was significant increase in fundamental frequency (F0=220 Hz) while other acoustic values remained within the reference values: jitter=0.60%, shimmer=0.53 dB, HNR=16 Hz. The

acoustic analysis was performed using the PRAAT program (Boersma and Weenink, 2020).

Loudness during spontaneous speech and reading was 70 dB. The client scored 58 points on the TVQ^{MtF} and marked her current voice as somewhat female, which both suggested better self-perception of her voice and the reduction of the perceived impact of her voice quality on everyday life. She even reported that during phone calls unknown people addressed her as woman, and phone calls are often one of the greatest problems when it comes to desired gender perception.

Vocal therapy was paused due to nose and vocal fold operation in April 2018. The operation included laser-assisted voice adjustment (LAVA), thyroplasty and septum and nasal pyramid reconstruction. Surgical and hormone therapy are two additional options for achieving desired values of fundamental frequency in transgender population. Although some studies report their efficiency (Bultynck et al., 2019; Cler, McKenna, Dahl, Stepp, 2019; Davies et al., 2015; Van Borsel et al., 2000), experts are warning about the possibility of their negative impact on voice quality. Also, as mentioned earlier, adaption of vocal pitch is not entirely sufficient for gaining gender appropriate voice, not to mention gender appropriate language and nonverbal communication behaviors. For that reason, when discussing these options, experts stress the importance of additional vocal and communication therapy, since it represents the only option that offers a comprehensive approach in the development of gender appropriate vocal, language and communication behaviors.

Hormone therapy is one of the first steps in the process of gender transition, and in FtM persons it partially facilitates lowering of the fundamental frequency, which explains a much lesser number of FtM clients engaged in vocal and communication therapy in comparison with MtF clients. Therefore, there is an evident disproportion in the number of studies and therapy activities addressing voice and communication issues of transgender women on one hand, and transgender men on the other.

Follow-up sessions continued between October 2018 and December 2018, once per month. The last evaluation was performed in October 2018. The final assessment served to compare the last measured acoustic values with the initial ones in order to make final evaluation of the therapy outcomes, i.e. to inspect how close these acoustic values came to the desired ones, set jointly at the beginning of the therapy by the SLP (based on the professional opinion) and client (based on her expectations and possibilities).

Final assessment showed that the fundamental frequency during prolonged phonation was 218 Hz, while during spontaneous speech and reading it was 190 Hz. The client was satisfied with the pitch and quality of her voice, which sounded as female to both the SLP and the client. The client was discharged with the instructions for maintaining vocal quality, especially abdominal breathing, as well as the instruction to schedule a follow-up session if necessary.

DISCUSSION

In this case report, basic elements of SLP therapy for transgender people are presented. The therapy focused primarily on raising fundamental frequency, and on resonance and intonation feminization, since these three aspects of vocal quality are reported to have the greatest impact on gender perception. The client was educated about the importance of maintaining vocal hygiene and trained to develop the ability of self-monitoring through auditory-feedback. Objective and subjective voice and speech assessment was carried out initially, and was repeated several times during the course of therapy, in order to monitor the progress and to evaluate whether the outcomes are satisfactory or not, i.e. to decide about the ending of the therapy. After about 30 sessions, the client was satisfied with her voice, which was regularly perceived as female by other people by that time. This is an important fact to consider when deciding about the ending of the therapy. It is important to establish whether or not the transgender client is satisfied with their voice and whether or not it is perceived as a voice belonging to the desired gender by strangers.

On the other hand, the therapy was insufficient in the adaptation of language and communication behaviors, considering that it focused mostly on particular characteristics of the voice. Also, it was conducted entirely individually. Vocal and communication therapy for transgender people is usually individual, due to respecting high level of individualization of the process of gender transition. Still, there is some evidence that group therapy, when combined with individual therapy, can be beneficial (Adler et al., 2012; Mills, Stoneham, Davies, 2019). In group therapy, clients can benefit from exchanging experiences with other transgender people, as well as from their support and by offering support to other members of the group, by discussing therapy processes and techniques and by practicing vocal and communication behaviors, since these types of groups serve as safe settings. In this case, forming a group of transgender clients was not an option, because cases like these are still rarely seen in SLP clinics in Croatia due to the clients fear of being stigmatized. Also, a very small number of experts are specialized to work with this population. However, judging by the results of this case report, SLPs in Croatia should be more willing to investigate the knowledge of the experienced minority in this field of expertise in order to be more capable to work with the transgender population, since their role in the process is indispensable and since clinical possibilities are obviously considerable in terms of positive therapy outcomes.

CONCLUSION

Vocal therapy can have a significant positive impact on matching transgender client's perceived gender with their outer appearance. Adaptation of vocal quality, based on noticed voice differences between genders, leads to an increased self-feeling of femininity/masculinity, the desired gender perception by other people and improved quality of life. This case report is a positive example of progress in accepting and destigmatizing transgender population, as well

as in acknowledging their needs and expanding treatment options in order to offer them overall support in accomplishing congruence between their physical appearance and inner self-image.

Besides gaining theoretical knowledge, it is important to continually improve practice when it comes to providing therapy for transgender population. A lot of transgender people still do not know that SLPs should be involved in the process of transition as members of a multidisciplinary team, and a lot of SLPs feel uncomfortable working with this population due to feelings of incompetence and lack of knowledge and experience. However, this case report shows that SLPs can make noticeable clinical impact on lives of transgender clients and serves as the proof of how valuable their input can be in the process of gender transition. Therefore, SLPs need to work on informing the transgender population about their services, as well as invest in their further education which may reduce the feeling of incompetence in this field.

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