Original Article

Artigo Original

Stage of readiness of patients with behavioral dysphonia in pre and post-group voice therapy assessments

Estágio de prontidão de pacientes com disfonia comportamental pré e pós-terapia de voz de grupo

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Keywords

Voice
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ABSTRACT

Purpose: To verify the efficacy of group voice therapy in the stage of readiness and identify which items of the URICA-Voice range are more sensitive to post-therapy change in patients with behavioral dysphonia. **Methods:** An intervention study was conducted on 49 patients with behavioral dysphonia. An eclectic approach to group therapy was implemented over eight sessions, the first and last sessions consisting of assessments. The URICA-Voice range was used to evaluate the stage of readiness at pre- and post-therapy assessments. A descriptive and inferential statistical analysis was implemented for the results. **Results:** Most participants were female, did not make professional use of voice, and had membranous vocal fold lesions. Most of them were in the Contemplation stage at in both moments, pre- and post-therapy. There was no significant change in the comparison of pre- and post-therapy scores. The majority of patients showed a reduction in the stage of readiness and some advanced to a higher stage. In the comparison of URICA-V range items, seven questions had equal or inferior responses in the post-therapy assessment. **Conclusion:** There was no statistical difference when comparing the pre- and post-therapy total average score of the URICA-Voice range. There were significant changes in the stage of readiness of patients in pre- and post-group speech therapy assessments.

Descritores

Voz
Disfonia
Fonoterapia
Reabilitação
Motivação
Processos Grupais

RESUMO

Objetivo: Verificar a efetividade da terapia de grupo no estágio de prontidão de pacientes com disfonia comportamental, bem como identificar que itens da Escala URICA-Voz são mais sensíveis a mudanças pós-terapia de grupo em pacientes com disfonia comportamental. **Método:** Trata-se de um estudo de intervenção realizado com 49 pacientes com disfonia comportamental. A terapia de grupo ocorreu em oito sessões, sendo a primeira e a última de avaliação e as outras seis terapêuticas, com abordagem eclética. A escala URICA-Voz foi utilizada para avaliar o estágio de prontidão em que o paciente se encontra nos momentos pré e pós-terapia de grupo para voz. Foi realizada uma análise estatística descritiva e inferencial para a análise dos resultados. **Resultados:** A maioria dos pacientes que participaram deste estudo era do gênero feminino, não faziam uso profissional da voz e tinham lesão membranosa da prega vocal. A maior parte estava no estágio de Contemplação tanto no momento pré quanto pós-terapia. Houve mudança significativa na comparação do pré e pós-terapia, a maioria dos pacientes apresentou redução no estágio de prontidão e poucos avançaram para um estágio maior. Na comparação dos itens da Escala URICA-V, sete questões apresentaram respostas iguais ou inferiores no momento pós-terapia. **Conclusão:** Não houve diferença estatística ao se comparar as médias do escore total URICA-V no pré e pós-terapia de grupo. Houve mudanças significativas dos estágios de prontidão dos pacientes nos momentos pré e pós-terapia fonoaudiológica de grupo. Sete itens da URICA-V tiveram número igual ou menor no momento pós-intervenção entre os pacientes avaliados.

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INTRODUCTION

Based on the medical curative model, speech therapy has long been known for its individual character. The therapeutic option is derived from a view from medicine that believes pathologies are forms of deviations and the treatment clinic is a space of "cure"[1]. Group therapy is an intervention that was carried out in the 1980s, initially motivated by the appointment of the speech therapist in the Public Health sector, when the preventive aspect came to be appreciated. Its use is still widespread in speech therapy[2].

The group speech therapy is an effective strategy that reveals a unique relationship that brings out emotions, disagreements, beliefs, complicity with pairs and changes in attitudes marked by the possibility of reflection provided by this mode of intervention[2].

Studies show that group therapy offers a significant contribution to the allocation of resources in health care, favors better time management, decreases waiting time for the health service in public service attendance, and is more cost effective when compared to individual therapy[3,4].

An individual can present changes in their voice according to the social contexts in which they are present: the degree of identification; the social position; the personality of the other and the psycho-emotional aspects that involve the moment of interaction[5]. When there is a dysphonia, that is, a deviated voice, behavioral changes need to be incorporated, especially if dysphonia is of behavioral origin. This process will depend on the active participation of the patient[6].

One of the factors key to the success of speech therapy is patient adherence to treatment, which is not a mechanical process easily obtained. On the contrary, it is a factor that deserves special attention and depends not only on the patient, but also on the therapist[7]. It is described in the literature[8] that adherence to treatment is a multifactorial process, where there is a partnership between caregivers and the individual they care for. It concerns the frequency, constancy, and perseverance in relation to care.

Adherence to treatment is a significant item, relevant to therapeutic success and represents a challenge for patients and professionals involved. Therefore, the establishment of the therapist-patient bond is a structuring and consolidation factor of the process, which is why it must be considered in order to be effective[8].

A study carried out with the objective of studying the possible factors associated with adherence to speech and language pathology treatment in teachers showed that the number of absences at sessions, a factor related to the time of treatment, and dysfunction of the organicfunctional type, aspect that refers to the clinical condition, are related to the abandonment of voice therapy[9].

Previous research has discussed patient adherence to the most diverse types of treatments[8]. In Speech Therapy, especially in the area of voice, there are few references related to this type of study[10-13], despite it being a matter of extreme importance, considering that vocal therapy depends on the change in an individual's behavior and, therefore, on their active participation throughout the therapeutic process, that is, the patient's readiness stage.

Faced with a need to better understand behavioral changes, the Transtheoretical Model (TTM) emerged. This model aims to observe the patient's readiness to the change, in order to verify where the patient is at in this cycle[14]. It is quite often used for longitudinal treatments that require changes in health behavior and occur in the form of stages, that is, in a procedural way and not abruptly, for example with health programs, such as physical exercise, smoking and diet[10].

Based on this model, the University of Rhode Island Change Assessment (URICA) protocol was created and implemented to verify the stages of patient readiness and motivation to different types of therapies. This instrument was adapted and validated for Brazilian Portuguese patients and renamed URICA-Voice. It was aimed at application in individuals referred to vocal therapy, with similar characteristics to the original protocol, but focused on dysphonic patients[15].

The URICA-Voice has four stages of change: pre-contemplation – the individual is unaware there is a problem to be faced; contemplation – the individual seriously considers the possibility of confronting the problem, but no effective effort is made to do so; action - attempts for change are evident; and maintenance – in the absence of relapses, continuous effort is made on the part of the individual.

Identifying what stage the patient is at allows the therapist to better understand their needs, and investigate which factors positively or negatively interfere with their adherence to treatment. The understanding of this data enables a better therapeutic conduct and facilitates the development of strategies that make the patient feel more motivated[16].

From this perspective, it was possible to define some problems to be answered: Can group speech therapy influence the readiness stage of patients with behavioral dysphonia? Is there an increase in the readiness stage of patients with behavioral dysphonia post-speech therapy group? Which URICA-Voice questionnaire items are most sensitive to post-group therapy changes?

It is believed that group therapy may be a facilitating strategy in ensuring adherence to therapy, in order to provide positive gains in the rehabilitation process and changes in vocal behavior.

Thus, the objective of this research was to verify the efficacy of group voice therapy in the readiness stage in patients with behavioral dysphonia and to identify which URICA-Voice questionnaire items are more sensitive to post-group therapy changes in patients with behavioral dysphonia.

METHODS

This research is an intervention study that utilizes descriptive, analytical, quantitative, and field research. It was performed in a Laboratório Integrado de Estudos da Voz (LIEV), at the Department of Speech and Language, Universidade Federal da Paraiba (UFPB), between May 2014 and March 2016. The project

was evaluated and authorized by the Research Ethics Committee of the Health Sciences Center of a Higher Education Institution (HEI), through protocol nº 383.061/2013.

The sample consisted of patients seeking care in the LIEV. These volunteers were referred to group care and met the following eligibility criteria determined by this study: Presenting behavioral dysphonia; aged between 18 and 59 years old; presenting an otorhinolaryngological report; the absence of co-morbidity that affects cognition, communication, and voice; no previous history of speech-language therapy for voice disorder; not presenting greater than two faults and/or withdrawals during the therapeutic process; and a response to the self-assessment tool selected for this study, applied in both evaluation and re-evaluation.

The population was initially constituted by 94 patients, who formed 15 groups, with an average of 6 participants each. 24 patients withdrew and 70 completed the therapeutic process, which, after applying the eligibility criteria, totaled 49 participants.

Initially, a screening was done for the collection of personal data, such as age, gender, professional voice use, and laryngeal diagnosis divided into the following categories[17]: absence of laryngeal lesion, glottic cleft with no organic or neurological cause and lesion in the membranous portion of the vocal folds. After obtaining this data, the URICA-Voice questionnaire was applied.

The original version of the University of Rhode Island Change Assessment questionnaire (URICA) was designed to measure the readiness dimensions for the change in individuals who undergo to health treatments[14] and was adapted for the voice area[15], containing 32 items. The URICA-Voice questionnaire is a self-assessment tool that is designed to assess the stage of readiness in which the patient is undergoing treatment of the voice[15].

The URICA-Voice questionnaire items are divided into four groups of eight statements, corresponding to the four major cycles of change: pre-contemplation; contemplation; action; and maintenance. The questions pertaining to each of these stages are: pre-contemplation: 1, 5, 11, 13, 23, 26, 29 and 31; contemplation: 2, 4, 8, 12, 15, 19,21 and 24; action: 3, 7, 10, 14, 17, 20, 25 and 30; and maintenance: 6, 9, 16, 18, 22, 27, 28 and 32. For each item, possibilities of five-point *Likert*-scale responses are presented, in which the individual can select one of the following responses: "I totally disagree," "I disagree," "I do not know," "I agree," and "I totally agree"[14].

The readiness score is important to identify whether or not the individual is at the appropriate stage of the change cycle to undergo the proposed intervention. In order to obtain the total score, the following formula is applied: (Average of C + Average of A + Average of M) - Average of PC. The values that define these stages are: 8 or lower - individuals in the pre-contemplation phase; 8-11 - individuals in the contemplation phase; 11-14 - individuals who are prepared to take action in the face of the problem, and 15 and above refer to individuals in the maintenance stage[15]. In the validation study, the conclusion was that the dysphonic patients were predominantly in the contemplation stage.

The data collection in this study occurred in two stages: pre and post-group therapy. Participants were informed about the nature of the study and then, according to their interest, signed the Terms of Free and Informed Consent, thus allowing their participation in the study. Then, the URICA-Voice questionnaire was applied.

The therapy used was of eclectic approach[18], with combined direct and indirect therapy, associating bodywork, glottal source, resonance and pneumophonic coordination with knowledge of vocal hygiene and communicative attitude. The therapy was administered by the same therapist from the beginning to the end of the eight sessions.

Patients attended eight therapy sessions in total, with the first and the last allocated for the application of the self-assessment tool. The other six sessions occurred on a weekly basis and each session lasted 90 minutes on average. The sessions addressed the following themes: Anatomophysiology of vocal production and voice in the life cycle; Myths and truths about the voice (vocal health); Vocal psychodynamics; Phonoarticulatory organs and pneumophonoarticulatory coordination; Laryngeal pathologies and; Non-verbal communication and expressiveness. At the end of each session vocal exercises were performed. Patients were also encouraged to complete these exercises at home and provided with instructions for doing so. The Chart 1 describes the activities that were performed during the therapeutic sessions.

For the analysis of the data, was performed, initially, a descriptive statistical analysis with the objective of verifying the frequency, average and standard deviation of the studied variables.

Subsequently, an inferential statistical analysis was performed, using the Student t-parametric test for paired data, to facilitate a comparison of the averages between the pre and post-therapy moments. Afterwards, the Wilcoxon test was performed to analyze the modification of the pre and post-therapy group readiness stage. After the sessions had finished, the same test was performed once again to compare the change in URICA-Voice questionnaire responses between the pre- and post-therapy stages.

The differences were considered statistically significant at $p \leq 0.05$. The statistical analysis was accomplished through the software Statistical Package for Social Sciences (SPSS), version 20.0.

RESULTS

Eight therapeutic groups were created with an average of six patients in each. After considering the eligibility criteria, 49 individuals of both genders, with an average age of 43.9 (±15.75), and a diagnosis of behavioral dysphonia participated in the study. These patients presented an average of 1.1 (± 0.89) day absences.

Chart 1. Description of the activities performed in group therapy on patients with behavioral dysphonia

Session	Intervention	Instrument
1	Evaluation	Screening and application of URICA-Voice
2	Indirect	**Therapeutic Interaction:** Presentation Dynamics **Increased Knowledge:** Anatomophysiology of vocal production, voice in the life cycle
	Direct	**Respiratory Intervention:** Respiratory fitness **Respiratory Support and Vocal Function:** Maximum Phonation Time (MPT)
3	Indirect	**Pedagogical Intervention; Therapeutic Interaction:** Myths and truths about the Voice
	Direct	**Respiratory Intervention:** Respiratory fitness **Respiratory Support and Vocal Function:** MPT **Intervention - Auditory; Vocal function; Skeletal muscle; Somatosensory; Respiratory:** Stretching / relaxation of the cervical region and scapular girdle; Header fricative technique with head lateralization
4	Indirect	**Intervention Counseling; Increase in Knowledge:** Vocal Psychodynamics, Voice and emotion
	Direct	**Respiratory Intervention:** Respiratory fitness **Respiratory Support and Vocal Function:** MPT **Intervention - Auditory; Vocal function; Skeletal muscle; Somatosensory;** **Respiratory:** Stretching / relaxation of the cervical region and scapular girdle; Header fricative technique with head lateralization; Semi occluded vocal tract technique with high resistance tube
5	Indirect	**Pedagogical Intervention:** Phonoarticulatory Organs and Pneumofonoarticulatory Coordination
	Direct	**Respiratory Intervention:** Respiratory fitness **Respiratory Support and Vocal Function:** MPT **Intervention - Auditory; Vocal function; Skeletal muscle; Somatosensory;** **Respiratory:** Stretching / relaxation of the cervical region and scapular girdle; Header fricative technique with head lateralization; Semi occluded vocal tract technique with high resistance tube **Musculoskeletal - Orofacial, Somatosensory Manipulation:** Myofunctional exercises for structures of the stomatognathic system
6	Indirect	**Therapeutic Interaction; Increased Knowledge:** Laryngeal Diseases
	Direct	**Respiratory Intervention:** Respiratory fitness **Respiratory Support and Vocal Function:** MPT **Intervention - Auditory; Vocalfunction; Skeletalmuscle; Somatosensory;** **Respiratory:** Stretching / relaxation of the cervical region and scapular girdle; Header fricative technique with head lateralization; Semi occluded vocal tract technique with high resistance tube; Technique of tongue rotation associated with nasal sound **Musculoskeletal - Orofacial, Somatosensory Manipulation:** Myofunctional exercises for structures of the stomatognathic system
7	Indirect	**Intervention Counseling; Pedagogical; Therapeutic interaction:** Non-verbal communication and expressiveness
	Direct	**Respiratory Intervention:** Respiratory fitness **Respiratory Support and Vocal Function:** MPT **Intervention - Auditory; Vocalfunction; Skeletalmuscle; Somatosensory;** **Respiratory:** Stretching / relaxation of the cervical region and scapular girdle; Header fricative technique with head lateralization; Semi occluded vocal tract technique with high resistance tube; Technique of tongue rotation associated with nasal sound **Musculoskeletal - Orofacial, Somatosensory Manipulation:** Myofunctional exercises for structures of the stomatognathic system. Overarticulation technique
8	**Revaluation**	**Screening and application of URICA-Voice**

Table 1. Distribution of participants regarding gender, professional voice use and laryngeal diagnosis

Variable	n	%
Gender		
Female	40	81.6
Male	9	18.4
Vocal Professional		
No	31	63.3
Yes	18	36.7
Diagnosis		
Lesion in the membranous portion of the vocal fold	22	44.9
Glottic cleft without organic or neurological cause	14	28.6
Normal Larynx	13	26.5
Total	**49**	**100**

Table 1 shows the absolute and percentage values of the variables: gender, professional voice use, and laryngeal diagnosis of the individuals.

There was a higher prevalence of females (81.6%; n=40) than males (18.4%; n=9) and more individuals who did not use their voices professionally (63.3%; n=31) compared to those who did (36.7%; n=18). Regarding laryngeal diagnosis, it was observed that a majority of the sample (44.9%; n=22) had some type of lesion in the membranous portion of the vocal fold.

The data in Table 2 demonstrates that the average URICA-Voice total score was 9.96 (±1.3) at pre-therapy and 9.73 (±1.5) at post-therapy. There was no statistical difference when comparing the averages of the URICA-Voice total score of the pre and post-group therapy stages.

Table 2. Comparison of the scores in the readiness stages to the vocal therapy of the URICA-Voice questionnaire pre- and post-therapy group of patients with behavioral dysphonia

Stage	Pre-therapy		Post-therapy		p-value
	Average	Standard deviation	Average	Standard deviation	
Total Score	9.967	1.349	9.737	1.511	0.343
Pre-contemplation	2.155	0.526	2.051	0.479	0.225
Contemplation	4.298	0.413	4.11	0.573	0.029*
Action	4.118	0.529	4.163	0.448	0.566
Maintenance	3.716	0.433	3.55	0.57	0.057

Paired Student's t Statistical Test; *Significance of 0.05

Table 3. Analysis of the modification of the pre and post-therapy readiness stage of patients with behavioral dysphonia

Stage	Pre-therapy (%)		Post-therapy (%)	
Pre-contemplation	8 (16.3)		14 (28.6)	
Contemplation	35 (71.5)		33 (67.3)	
Action	6 (12.2)		2 (4.1)	
Maintenance	0 (0.0)		0 (0.0)	
Total	49 (100.0)		49 (100.0)	
Change of stage	**Post < Pre (n)**	**Post> Pre (n)**	**Post = Pre (n)**	**p-value**
	16 (32.7%)	6 (12.2%)	27 (55.1%)	0.033*

Wilcoxon test (test of signals) for comparison of ordinal variables; *Significance of 0.05

Table 4. Analysis of the modification of URICA-Voice items by comparison of pre and post-therapy responses of patients with behavioral dysphonia

	URICA-Voice QUESTIONNAIRE ITEMS	Post < Pre (n)	Post > Pre (n)	Post = Pre (n)	p-value
03	My voice problem bothers me and I'm trying to solve it	13	4	17	0.04*
16	I can not keep my voice "good" and I want to avoid a new problem	17	0	17	<0.001*
17	Although my voice is not good all the time, I am dedicating myself to improve it	11	3	20	0.033*
19	I would like to know more how to improve my voice	11	3	20	0.025*
21	Maybe a speech therapist or some treatment can help resolve my voice problem	11	4	19	0.04*
24	I hope someone helps me improve my voice.	14	1	19	0.001*
28	It's frustrating, but I feel my voice getting worse again	27	3	4	<0.001*

Wilcoxon test (test of signals) for comparison of ordinal variables; *Significance of 0.05

Most patients were in the contemplation stage both at the pre and post-therapy stages. There was a significant reduction in the average of the contemplation stage between the pre and post-therapy stages.

Table 3 shows the absolute and percentage values of the participants' distribution at each stage of pre and post-therapy readiness, in addition to changes in the readiness stage that occurred from one stage to another. An increase was observed in the number of patients who were in the pre-contemplation stage, from 16.3% (n=8) to 28.6% (n=14). There was a statistically significant change (p=0.033) in the stages of readiness by patients in the pre and post-speech therapy group. As per the data in the Table 3, it was observed that 32.7% of the patients presented a decrease in the readiness stage (post < pre) at the post-therapy moment.

Table 4 shows the modification of URICA-Voice questionnaire items by comparison of the responses given by the patients in the pre- and post-therapy stages. The items on the questionnaire that showed the most significant change in the responses between the two stages were: 3, 16, 17, 19, 21, 24, and 28. In each of these questions, post-therapy responses had a number equal to or significantly less than the pre-therapy stage among patients with behavioral dysphonia.

DISCUSSION

This study, utilized an eclectic therapeutic approach, combining direct and indirect vocal therapy. A review of studies[19] with clinical trials has shown that vocal therapy is most effective when performed in combination for intervention.

Several studies confirm the importance of group work and show studies in the Voice area with diverse types of groups, for example: teachers, elderly people, and children among others[4,20,21]. A recently published literature review examined group vocal therapy and its effects in patients with dysphonia[3]. After considering their limitations and suggestions, the authors found most of the selected studies indicated group vocal therapy

to be effective at all ages, and not only promoted vocal health, but also prevented dysphonia[3].

Unfortunately, there are few studies, in the literature, that have evaluated the patient's stage of readiness to speech therapy in the voice area[10,15,22]. Furthermore, there was no previous research into the efficacy of group therapy.

When a dysphonic patient is referred to the speech therapy service, the therapist expects the patient to adhere to the given guidelines. These include the daily performance of voice exercises, a more balanced vocal production, and the elimination of abusive vocal behaviors[7], especially in patients with behavioral dysphonia, in which these changes are essential for the maintenance of the gains at therapy. Such patient compliance or readiness for treatment may relate to various external and internal individual factors such as: age; gender; duration of therapy and need for changes in the patient's lifestyle with treatment[8].

The majority of the patients that participated in this study were women with dysphonia and a predominance of membranous vocal fold lesion, who did not use their voice professionally. Previous research has identified that the female population is more vulnerable to dysphonia due to the anatomical aspects characteristic of the genus[23].

With regard to the participants occupational environments, most were not voice professionals, that is, they did not use their voice as a work instrument. The demand for voice rehabilitation is related to the intensity with which the voice affects their quality of life and daily tasks and not only to the negative consequences in the workday[17].

Regarding the diagnostic group, the present study demonstrated the highest percentage of lesions in the membranous portion of the vocal fold, with nodules, cysts, and polyps present in the vocal folds. This data can be justified by the difficulty of approaching the vocal folds due to the presence of mass lesions in the closed phase of the glottic cycle, that causes an increase in vocal effort and roughness and can generate an unpleasant proprioceptive and auditory sensation in the individual, that motivates their search for the speech therapy for voice[24].

It was verified that the majority of the patients of this study presented in the stage of readiness in contemplation at the pre-therapy moment. At this stage, the individual begins to admit that there is a problem and intends to initiate a change, but nothing concrete is accomplished[25]. Similar results were found by a study[14] that found that most of the individuals were between the pre-contemplation and contemplation phases, and could not assume attitudes to face their problem. It is possible that these individuals arrived at the clinic at this stage because they were referred to the vocal therapy by their doctor, unaware of the cause of their vocal alteration and oblivious of the need to change their voice-related behavior[13].

A more recent study analyzed the association between self-assessment and the motivational stage of the dysphonic patient for vocal therapy. A total of 151 patients, ranging from 18 to 65 years old, with vocal complaints and voice disorders participated in this study. Four self-assessment protocols were applied just before the start of therapy: the Voice Quality of Life Questionnaire (VQL), the Vocal Disadvantage Index (VDI), the Vocal Symptom Scale (VSS) and the URICA-Voice questionnaire. The majority of patients were in the contemplation stage. This study suggested the existence of an association between the other instruments of vocal self-assessment and the motivation for vocal therapy. Patients who presented worse voice related quality of life, greater voice disadvantage and a larger frequency of vocal symptoms were at the most advanced motivational stages for vocal therapy[13].

The data from the inferential analysis of this study did not show a statistically significant difference in the average of URICA-Voice total when comparing the pre-therapy with the post-therapy group stage. The only statistical difference was the reduction of patients in the contemplation stage. This may be due to factors such as the duration of the proposed treatment[18]; patient motivation; commitment; vocal self-perception; personality of the therapist[6]; exercise learning; self-regulation from the patient and a good relationship with the therapist[10].

Studies have reported that group work reveals itself as a place for reflections, so that each one, within its limitations and possibilities, makes (re)significations about its problems[2,8]. Therefore, group therapy gives the opportunity for patients to become more aware of their voice problems and discuss these issues post-therapy. A comparative study with the individual and group therapeutic modalities showed that group therapy is more effective in helping the patient to increase coping strategies for dysphonia, which are defined as behavioral change[26].

The majority of participants (55.1%) did not change the post-group therapy readiness stage, 32.7% reduced the readiness stage, while only 12.2% improved. A similar study[12] carried out with the URICA-Voice questionnaire reported that there was no gain in either the individual or group speech therapy modality in relation to the readines stages when the pre- and post-therapy moments were compared, and proposed to analyze whether the protocol used is sensitive enough to verify these changes in the readiness stage to the treatment, and in consequent changes in behavior post-speech therapy intervention.

Thus, comparing the responses of the URICA-Voice questionnaire pre- and post-therapy, and it was observed that seven questions among the 32 contained in the questionnaire did not change or decrease the value at the post-therapy.

In principle, it is expected that the patient will present higher responses in post-therapy, since the interpretation of the URICA-Voice questionnaire shows that the higher the total score, the greater the readiness stage. However, when analyzing these seven items qualitatively, it is believed that they no longer make sense to the patient who improved at their therapeutic process. For example, item 19 says, "I would like to know more about how to improve my voice," and for this patient, who went through group therapy and received over the course of six therapy sessions, voice guidance and specific exercises, it does not make sense to agree with this assertion at the post-therapy stage, whereas in pre-therapy it probably

does. Similarly, with the item 24, they state, "I am hopeful that someone will help me improve my voice." The patient who agrees with this statement at the pre-therapy stage probably will not agree to this post-therapy, as they have already been helped and the problems may be solved or reduced.

Disagreeing with these issues causes the value of responses to fall and, consequently, the readiness stage to the treatment appears to be reduced. It is worth emphasizing the importance of carrying out more studies with this instrument, as it is believed that the URICA-Voice questionnaire is an important tool to measure the readiness stage prior to the patient's treatment, yet lacks the sensitivity to be used in longitudinal investigations, for monitoring or verification of the treatment efficacy. It may be possible to carry out studies that allow another way of calculating or applying differential analysis of this questionnaire, such as the Item Response Theory, a more recent theory to analyze in order to bring more accuracy, sensitivity, and specificity to the instruments.

Since URICA-Voice aims to measure the patient's readiness stage, it is important to note that the results of this study do not correspond to what is observed in clinical practice, where it is observed that when an indirect therapeutic approach is used, the patient tends to feel more motivated for vocal therapy and performs speech therapy exercises in the recommended way whilst eliminating habits that are harmful to vocal health.

However, stands out the importance of the applying this instrument in the initial moment of the therapeutic process is emphasized, considering that the majority of voice problems depend on the patient's ability to perform behavior changes, besides demanding their readiness to initiate this process[15].

CONCLUSION

There was no statistical difference when comparing the averages of the total URICA-Voice score between the pre and post-group therapy stages. There was a significant change in the contemplation readiness stage by patients in both pre and post-speech therapy group moments. Seven items of the URICA-Voice questionnaire had, at the post-therapy, an equal or lower number than at the pre-therapy stage among patients with behavioral dysphonia.

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Author contributions

All the authors of this research (BOIC, POCS, RSAP, HFS, AAFA) Helped to build and develop the study. It should be noted that BOIC was particularly involved in collecting, tabulating, interpreting data and writing the article; POCS and HFS, in the analysis and interpretation of the data and in the final writing of the article; RSAP, in the methodological direction of the study and in the final essay of the article; and AAFA, in the design, study design, orientation and final writing of the article.