



Theater game for oral communication of persons with Parkinson's disease: Proposal for speech-language intervention

Jogos teatrais para comunicação oral de pessoas com doença de Parkinson: Proposta de intervenção fonoaudiológica

Juegos teatrales para comunicación oral en personas con enfermedad de parkinson: Propuesta de intervención en fonoaudiología

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Abstract

For the treatment of people with Parkinson's disease, the possibility to incorporate the therapeutic procedures of other areas has been demonstrated in the literature with use of theatrical activities. This paper aims to suggest a proposal for speech therapy with the use of Theatrical Games to work with voice, speech and expression of people with Parkinson's disease. The activity script suggests performing vocal techniques and theater games, which aim to stimulate oral communication, interpersonal relations among members of group therapy and the use of voice in their family and social environments. In addition to considering the theatrical practice as a mobilizer and of integration of human skills, in group activities communication promotes the exchange of information, experiences and emotions that can generate motivation to health care and finding of coping strategies to deal with the neurological disease.

Keywords: *Voice; Speech; Communication; Parkinson Disease.*

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Resumo

Para o tratamento de pessoas com Doença de Parkinson, a possibilidade de o espaço terapêutico incorporar procedimentos de outras áreas tem sido evidenciada na literatura, inclusive com uso de atividades teatrais. O presente trabalho tem por objetivo apresentar uma proposta de intervenção fonoaudiológica com utilização de Jogos Teatrais para o trabalho com voz, fala e expressividade de pessoas com Doença de Parkinson. O roteiro de atividades sugere realização de técnicas vocais e de jogos teatrais, que pretendem promover a comunicação oral, as relações interpessoais entre os integrantes do grupo terapêutico e o uso da voz em seus ambientes familiar e social. Além de considerar a prática teatral como mobilizadora e de integração entre aptidões humanas, nas atividades de grupo a comunicação favorece a troca de informações, experiências e emoções que podem gerar motivação para cuidados com a saúde e descoberta de estratégias de enfrentamento para lidar com a doença neurológica.

Palavras-chave: Voz; Fala; Comunicação; Doença de Parkinson.

Resumen

Para el tratamiento de las personas con la enfermedad de Parkinson, la posibilidad de incorporar los procedimientos terapéuticos de otras áreas se ha demostrado en la literatura, incluso con el uso de las actividades teatrales. Este trabajo tiene como objetivo proponer una propuesta de terapia del habla con el uso de juegos teatrales para trabajar con la voz, el habla y la expresión de las personas con la enfermedad de Parkinson. El guión actividad sugiere la realización de técnicas vocales y juegos teatrales que tienen como objetivo estimular no sólo los parámetros de la voz y del habla que facilitan la comunicación oral, sino también las relaciones interpersonales entre los miembros de la terapia de grupo y el uso de la voz en su familia y entorno social. Además de considerar la práctica teatral como una movilización y la integración de las capacidades humanas, la actividad terapéutica de comunicación en grupo promueve el intercambio de información, experiencias y emociones que pueden generar motivación para el cuidado de la salud y la búsqueda de estrategias para hacer frente a afrontar enfermedad neurológica.

Palabras claves: Voz; Habla; Comunicación; Enfermedad de Parkinson.

Introduction

Theater practice allows individuals to put themselves in other people's shoes, expanding their mindset through the incorporation of new perspectives¹, allowing them to rebuild interpersonal relations, in addition to favoring the personal development of the individual². As a collective art and means of expression of gesture and voice, the Theater can also provide opportunities so that the subject may be able to experience new feelings³.

In the last decade in Brazil, there are reports on the literature⁴ with respect to the benefits of the use of theatrical workshops reflecting on the communication skills of individuals with neurological changes; The use of workshops involving improvisation exercises and Theater Games for people with aphasia, conducted by a researcher with academic background in the Art field⁴, allowed the conclusion that these activities have provided an improvement in oral communicative

ability for the individuals who participated in the research, in addition to the motivation and personal interaction aspects.

In subjects with Parkinson's disease (PD), an international pilot-study reported the effectiveness of Theater in the treatment of motor and non-motor symptoms. The benefits of theatrical activities in the motor aspects, as well as in the functional independence in daily life and also improvements in the level of depression, cognition, sociability and communication were reported following the application of a therapeutic methodology that used Theater associated with motor activities⁵.

Although Theater Games have not been thoughtfully designed for therapeutic use, since they originate from the education field, they proved to be facilitators in the therapeutic process of voice, speech and expressiveness of people with Parkinson's disease, thus allowing the socialization, the use of the voice as a resource for the expression of ideas and emotions, and the identification of the

required adjustments for dental prostheses with the aim of facilitating the articulation and overcoming challenges^{6,7}.

Theater games are situations to improvise in which a situation is required, from the definition of the rules and also from the need for a concentration point, which is equivalent to a *Focus*. This concentration point is related to the involvement with the problem to be solved⁸. There are three other basic elements that also compose the Theater Games system: *Where*, *Who* and *What*. These terms replace the following theatrical terms: “scenario”, “character” and “action scene”. It is noteworthy that, even using the word in these activities, it cannot replace the physical action, since the players must demonstrate the *Where* by manipulating objects⁸.

The oral communication of people with PD, known mostly as Hypokinetic Dysarthria⁹, presents characteristics such as: articulatory imprecision, breathiness, restricted pitch and loudness, roughness, variable speech speed and inappropriate breaks during the speech¹⁰⁻¹².

The symptoms of the disease progress are variable, as patients may remain many years with the same symptoms and slightly disabled, while others present a faster progression. With the therapeutic resources available, in most cases, it is possible to maintain the patient in clinical conditions allowing an almost ideal quality of life for long periods, although a cure has yet been found¹³.

The inclusion of Theater Games can facilitate a speech language therapy approach in which the physiological training can be associated to the relational and dialogism context of the patient with PD. Therefore, it is believed that patients can experience situations similar to the daily life and they can understand the use of the voice and speech, since a therapeutic method in this direction favors the communicative skills due to its wide range of possibilities of verbal and non-verbal expression⁷.

The voice therapy procedures established in the literature¹⁴⁻¹⁶ guide academics in the final phase of the course and Speech Language Pathologists in the construction of therapeutic strategies. The aim in the development of these strategies is to provide the best vocal responses immediately, where positive results can be revealed in the session and can be easily incorporated into the daily life of patients.

Different artistic activities can even be introduced as therapeutic intervention strategies, allowing the communication between therapist and

patient, in addition to improving the quality of life of the subject assisted^{17,18}.

The needs of health service users are presented from the interpretation that these subjects have with respect to what health and disease mean, in addition to being influenced by biological, social, psychological and economic factors¹⁹. Thus, concerning patients with PD, an approach that does not contextualizes procedures to the complaints referred to by patients can make it more difficult the path taken in overcoming their difficulties. In view of this, there is a need to broaden the therapeutic possibilities².

Based on these observations, this paper aims to suggest a proposal for speech therapy with the use of Theatrical Games to work with voice, speech and expression of people with Parkinson's disease.

Methods

This theoretical nature study was developed considering the possibility of conducting activities in subjects in 1 to 3 stages of Parkinson's disease according to the definition established in the Hoehn and Yahr Scale²⁰, since in these stages the tremor evolves from mild to moderate and impairment of gait and balance is still at its initial stage. Several exercises of this proposal would not apply in stages with a more pronounced motor impairment, as stages 4 and 5, for example. It would be necessary to select more targeted activities by considering the specificities of patients in these stages of PD.

The development of steps also considered the implementation of this speech language therapy intervention proposal in groups, with only speech language pathologist monitoring a maximum of five participants; in a large, clean and airy room; with basic support resources, such as mirrors, chairs and audiovisual material.

With regard to working time, the proposal suggests a total of ten meetings, which includes two meetings every week lasting 01h30min each, totaling 13 hours. This way, it is believed that the activity may last long enough for all participants of the group, in addition to offer a break to rest interval between activities. It should also be highlighted the time that the therapist must devote to welcome the participants at the beginning of each meeting, likewise it is necessary a time to talk at the end, so that each participant can share with the

group their impressions after the participation in the suggested activities.

For observation purposes, before starting the meetings with the group of subjects with PD, initially, it is necessary to register information about the participant of the group in a case history data sheet that can gather mainly data concerning identification, contact, age in which the disease was diagnosed, for how long they have the disease, medication used, treatments and impacts that the speech changes had in the life of that person.

The communication of the participants must be recorded by means of connect speech recordings at the beginning and at the end of the 10 meetings to investigate if any change has occurred. The speech language pathologists must write their impressions on the parameters found in the speech of a person with hypokinetic dysarthria.

As a strategy to use an instrument already known in the Speech-Language Pathology and also an instrument that is the trigger for the oral speech, it is suggested, respectively, the phrases of CAPE-V²¹ and images that represent topics known by the individual, such as family, well-known places of their cities, day-to-day activities, etc. Among the options of images, the subject should choose only one and make a comment on what the image reminds him/her.

The possibility of the subject to choose the images is a facilitator resource so that the subject can demonstrate the communicative intention during the speech, which is an action closer to what can be experienced in their day to day.

Influences to construction of the script for the Therapy Proposal

The literature presents five bases that guide the speech language pathologist for the evaluation of people with oral communication impairment due to neurological changes. These bases that work in harmony through the integrity of the peripheral

musculoskeletal system of speech are: respiration, phonation, articulation, resonance and prosody²².

According to this, the activities can be grouped together in order to promote, in the individual with Parkinson's Disease, the exercise on points that are compromised in their communication, while exploiting the potential of the ability that the subject still has.

These ideas corroborate with the statement that the important thing is not to work with the disease, but with the health that still remains in each individual, no matter how affected the individual is, and that this healthy part must be strengthened, so that it can have a greater importance in the life of this subject²³. This concept was presented by the stage director and theatrical researcher after an experience using theater games in the mental health field²³.

Primary objectives of the Intervention Proposal

The intervention proposal consists in conducting vocal techniques and Theater Games that intend to stimulate: greater respiratory support; pneumophonoarticulatory coordination (CPFA); expand vocal modulation; increase vocal intensity; vocal projection; body expressiveness; integration between gestures and voice; interpersonal relations between the members of the group and the therapeutic use of voice in their family and social environments.

The techniques and Theater Games were organized in the light of vocal techniques recommended for the Speech Language Pathology^{14,15} and also from concepts and activities used in Theater Games^{24,25}. The objectives are based on the original proposals cited by these references, combined with new suggestions indicated by the authors of this paper. The more impacted motor bases in each activity are also indicated in Table 1.

Table 1. Theater Game, original purpose, description of original activity, speech language therapy objectives intended, main motor bases involved and activity adaptation possibilities of the activity to work with voice, speech and expressiveness of people with Parkinson's Disease.

THEATER GAME	ORIGINAL PURPOSE	ACTIVITY DESCRIPTION	SPEECH LANGUAGE THERAPY OBJECTIVES	MOTOR BASE(S)	ACTIVITY ADAPTATION POSSIBILITY
Slow motion / Catch and freeze ²⁴	Explore movement and physical expression	The first catcher is indicated. Everyone must run around, look, crouch down, etc., in slow motion. When the catcher catches another player, the first catcher must freeze. Then the new catcher must catch another player. The activity follows until all participants are frozen	Promote body awareness Explore movement and body expression improve CPFA	Breathing Phonation Articulation Resonance	The exercise provides a more fluid movement and with body awareness. The inclusion of facilitator sounds, such as vowels, fricative sounds and yawning allows emissions to last longer, which are influenced by the training of the respiratory capacity during the integration between voice and movement.
Relay race with objects ²⁴	Mobilize the physical system	Two groups lined up side by side. The first person of each group has an object in his/her hand and he/she must run until the point established, touch the point and then pass the object to the next player	Explore movement and body expression improve CPFA	Breathing Phonation Articulation Resonance	According to the physical limitations, the activity may be done by walking fast. The inclusion of facilitator sounds, such as vowels and fricative sounds during the fast walking allows emissions resulting from the training of the respiratory capacity through the integration between voice and movement.
Fast numbers ²⁴	Help participants to focus on a problem	The participants should form a semicircle and assign a number to each one. Player number 1 must say the number of another player. The player number that was called must immediately respond by saying another number. The participant who fails, by calling a number before been called, must go to the end of the semicircle.	Explore movement and body expression improve CPFA	Breathing Articulation Resonance	After assigning a number to each player, the activity can be performed during a walk through the space and varying the speed. To the extent that the speech shows to be fast or slow, the participant experiences CPFA in different situations of movement
Knot ²⁴	Mobilize the physical system	The group should form a circle by holding hands. Then a player goes under the hands of two members on the opposite side of the circle. Those who stayed on the edge must go through another point of the circle to form a knot. The group plays out from this position, while holding their hands, to return to the initial position	Promote body awareness Explore movement and body expression	Breathing	To the extent that it may be associated with the inspiration and expiration, during the search for a movement to change the position, the exercise provides movement fluidity and also body awareness.
The orchestra and the conductor ²⁵	Listen to everything you hear	Everyone at the group must make a rhythmic and melodic sound. The participant who plays the conductor must listen to them. Other participants must make the sound repeatedly, when the conductor makes a gesture or says a word. Otherwise, the participant must remain in silence. The conductor can create sounds with different rhythms and melodies	improve CPFA Improve glottal closure Create vocal sounds with different rhythms and melodies Promote vocal expressiveness when creating sounds of different speeds, lengths, intensities and timbres associating with body movements	Breathing Phonation Articulation Resonance Modulation	Players can make different sounds associated with a representative gesture (e.g., treble sound and hands up, high intensity sound and shakes their own hands, etc.)



THEATER GAME	ORIGINAL PURPOSE	ACTIVITY DESCRIPTION	SPEECH LANGUAGE THERAPY OBJECTIVES	MOTOR BASE(S)	ACTIVITY ADAPTATION POSSIBILITY
Ritual sounds ²⁵	Listen to everything you hear	A group must make sounds related to a specific ritual (e.g., waking in the morning, a classroom, a work in a factory, etc.), while the other group must make the movements related as if they were the image.	<p>Explore movement and body expression</p> <p>Create vocal sounds with different rhythms and melodies</p> <p>Promote vocal expressiveness when creating sounds of different speeds, lengths, intensities and timbres associating with body movements.</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p> <p>Resonance</p> <p>Modulation</p>	There is also the possibility of the participants themselves to make the sound and the movements of this particular ritual
Spacewalks no. 3: skeleton ²⁴	To physically feel the body	The participants of the game must walk through the space, paying attention to the movement of the skeleton (bones and joints)	<p>Promote body awareness</p> <p>Explore movement and body expression</p>	<p>Breathing</p>	The movements can be associated with deep inspiration and expiration controlling the air outlet. Movements of shoulders, arms and hands may be performed during this walk as the players realize what bones and joints are moving.
Rhythmic movement ²⁴	Find a natural body movement	The instructor must say the name of an object (e.g. train). Each player immediately makes a move that is related to the object in their opinion. When the movements are rhythmical and fluent, everyone can move around through the game area	<p>Promote body awareness</p> <p>Explore movement and body expression</p> <p>Stimulate phonatory stability</p>	<p>Breathing</p> <p>Phonation</p> <p>Modulation</p>	After realizing that the group is able to perform the movements in a rhythmic and fluent way, the instructor may request to all perform the movements including some fricative sound: first a thud and then a fricative sound.
Showing Where without objects ²⁴	Find different ways to indicate the scenario	Working in pairs or trios, the players must agree on WHERE, WHO and WHAT. The players must show WHERE without handling objects (e.g. tourists on the corner of a city)	<p>Promote body awareness</p> <p>Explore movement and body expression</p> <p>Stimulate phonatory stability</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p>	Each movement can be associated to the emission of a fricative sound selected by the player.
A, E, I, O, U ²⁵	Control breathing	A participant is placed in front of another one and emits the sounds of the vowels A, E, I, O, U. It must have a change in the voice volume according to the distance between them. The further they are the higher must be the voice volume.	<p>Stimulate phonatory stability</p> <p>improve CPFA</p> <p>Improve vocal projection</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p> <p>Resonance</p> <p>Modulation</p>	Participants can get closer and move away slower or faster to foster the mastery over the vocal adjustments required for vocal projection in different spaces.
Vocal sound effects ²⁴	Create an environment using sounds	The group of players must decide on WHERE and then they must go together to a microphone to produce the sounds. There is no physical action on stage.	<p>Improve vocal projection</p> <p>Promote vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p> <p>Resonance</p> <p>Modulation</p>	The activity should be performed without microphone and the players who perform the sounds should be away from the other group.



THEATER GAME	ORIGINAL PURPOSE	ACTIVITY DESCRIPTION	SPEECH LANGUAGE THERAPY OBJECTIVES	MOTOR BASE(S)	ACTIVITY ADAPTATION POSSIBILITY
Rhythm and movement circle ²⁵	Listen to everything you hear	All must form a circle, and then one person goes to the center of the circle and performs a movement associated to a sound. Others must repeat exactly what was performed. Then another player must go to the center of the circle and successively the activity shall go on until all have the experience of indicating a movement and a sound to others.	Promote body awareness Explore movement and body expression Explore vocal modulation	Breathing Phonation Articulation Resonance Modulation	
Grammelot - Introduction ²⁴	Introduce the possibilities of non-verbal communication	The members of the group should hold a conversation with the partner who is next to them, as if they were talking in an unknown language and they should follow the conversation as if it made perfect sense.	Increase voice loudness, projection, strength and articulatory precision Raising awareness of voice use in different spaces between interlocutors Explore vocal modulation	Breathing Phonation Articulation Resonance Modulation	After realizing that the group can handle the activity, ask them to change the conversation by including fast communicative moments, quick in the invented language, directed to players who are further away from them (e.g. small calls, quick questions, etc.)
Extended sound ²⁴	Intensify and extend the theatrical experience, showing that dialogue occupies a space.	Two or more players seated at a distance, one sends the sound to the other.	Increase voice loudness, projection, strength and articulatory precision Stimulate phonatory stability Raising awareness of voice use in different spaces between interlocutors Explore vocal modulation	Breathing Phonation Resonance Articulation Modulation	Ask for different speeds and intensities in the voice when sending the sound.
Mirrored speech ²⁴	Follow each other verbally, creating a dialogue.	Working in pairs, with one facing each other, one player should initiate the conversation talking out loud. Then, the other player should reflect out loud what the first player said exactly as it was said.	Stimulate phonatory stability Raising awareness of voice use in different spaces between interlocutors Explore vocal modulation	Breathing Phonation Articulation Resonance Modulation	
Spacewalks: Blind ²⁴	Develop sensory awareness	Players must agree on WHERE, WHO, and WHAT and prepare the game area with real objects. They must be blindfolded and they must act as if they could see.	Develop sensory awareness Explore movement and body expression	Breathing	Instructor should place chairs in the game area, ask players to walk blindfolded and when they find the chairs they should perform movements of everyday tasks (e.g. breakfast, write a letter, use the computer, etc.)





THEATER GAME	ORIGINAL PURPOSE	ACTIVITY DESCRIPTION	SPEECH LANGUAGE THERAPY OBJECTIVES	MOTOR BASE(S)	ACTIVITY ADAPTATION POSSIBILITY
It's heavier when it's full ²⁴	Find possibilities of theatrical props using objects in the game area	In a group, all should decide on which containers can be emptied, filled and emptied again. Two or three players can get the objects together. Examples such as picking apples, filling a treasure chest, carrying water	Develop sensory awareness Explore movement and body expression Promote vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres associated with body movements Introduce the possibility of non-verbal communication	Breathing Phonation Modulation	Ask players to associate the action to carry the imaginary object in the container to a corresponding sound, i.e., carrying a "heavy box" (imaginary) emitting sounds of effort, for example.
Peruvian ball game ²⁵	Listen to everything you hear	Each participant should imagine to have a ball, then the participant start the game by throwing that ball and making with the voice the sound produced by the ball during the activity. Instructor should indicate that each player must pick a partner and the activity is conducted between those players. When they hear the sentence "change the balls!", they must seek for new players and continue the game.	Explore movement and body expression Promote vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres associated with body movements Introduce the possibility of non-verbal communication Improve glottal adduction and sphincter action of the larynx	Breathing Phonation Articulation Modulation	Instructor may request to include monosyllabic or disyllabic sounds in the game (whether plosive or vibrant)
To touch and be touched / To see and be seen ²⁴	Create sensory awareness	Players are asked to walk freely through the space and to touch the objects. When they realize the object, they object can touch them.	Develop sensory awareness Explore movement and body expression Stimulate vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres associated with body movements	Breathing Phonation Articulation Resonance Modulation	The objects of the game area can be the players themselves. The instructor can reduce the game area and have everyone walking without shifting away from each other. As they touch each other bodies, players may be asked to create different sounds
Grammelot – Portuguese ²⁴	Create a moment of imbalance	Groups of two or three players and the instructor. Participants should pick a topic and start talking. The instructor then indicates "Grammelot!", and the group continues the conversation in an unknown language, fluently, until the instructor indicates again "Portuguese!", and then they should resume the conversation using their original language.	improve CPFA Explore vocal modulation Improve oral resonance	Breathing Articulation Resonance Modulation	



THEATER GAME	ORIGINAL PURPOSE	ACTIVITY DESCRIPTION	SPEECH LANGUAGE THERAPY OBJECTIVES	MOTOR BASE(S)	ACTIVITY ADAPTATION POSSIBILITY
Mirror with sounds ²⁴	Communicate orally, but not verbally	Working in pairs, with one facing each other, one player should initiate by making sounds. The other player should reflect that sound. When the instructor says "change!", players must change their roles.	<p>Improve glottal adduction</p> <p>Stimulate vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres associated with body movements</p> <p>Explore vocal modulation</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p> <p>Resonance</p> <p>Modulation</p>	Ask players to create vocal melodies as if they were inventing excerpts of romantic music, jazz, rock, etc.
Syllables sung ²⁴	Give players a new sense to the spoken word	<p>Players sit in a circle, but one of them should leave the room. The others should choose a word and the syllables of this word are distributed so that each player gets only one syllable. Then the group should select a familiar melody (e.g.: happy birthday to you)</p> <p>Then all must sing the melody at the same time, while articulating only the syllable assigned to each one. The player who left the room then returns to the room and should find out the word chosen by the group by listening to the melody</p>	<p>improve CPFA</p> <p>Explore vocal modulation</p> <p>Increase vocal projection</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p> <p>Resonance</p> <p>Modulation</p>	
Mask rotation ²⁵	Develop the ability of observation by visual dialogue between two or more people	A small group should talk, move around and observe each other for a few minutes. Then the instructor should say the name of one participant and the others begin to imitate the mask of the participant selected. Then, the instructor should say the name of another player and everyone changes to mimic the mask of the new player selected.	<p>Stimulate communicative intention through facial movements</p> <p>Encourage oral communication between participants</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p> <p>Resonance</p> <p>Modulation</p>	Ask the group to hold a conversation using the mask being imitated. Each participant may initially emit the sound of one vowel during the facial movement being performed, and with this specific sound the participant should establish a conversation with another participant. Players can also say words maintaining the same mask
Radio ²⁴	Learning to select what will help the audience to experience the story through hearing	Three or more players decide on the WHO. Each participant makes a list of characteristics that he/she needs to communicate through sound: age, weight, attitude, etc., and the scene is improvised with only the voice and sound effects. The audience should note the characteristics that they notice on it. When the game ends the lists are compared.	<p>improve CPFA</p> <p>Stimulate vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres</p> <p>Encourage oral communication between participants</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p> <p>Resonance</p> <p>Modulation</p>	While one or two players demonstrate the WHO, ask for the rest of the group to emphasize the WHERE also through sound creations.
Building a story ²⁴	Listen to and understand the words of a story with full perception	With the group sitting in a circle, the instructor should choose a player who will begin the story, whether it's a known or invented story. At any time, the instructor should point to a new player so the new player can continue from where the last player stopped	<p>Raising awareness of voice use in different spaces between interlocutors</p> <p>improve CPFA</p> <p>Increase voice loudness, projection, strength and articulatory precision</p> <p>Encourage oral communication between participants</p>	<p>Breathing</p> <p>Phonation</p> <p>Articulation</p> <p>Resonance</p> <p>Modulation</p>	



Table 2. Script meetings for the proposed speech language therapy intervention for people with Parkinson's disease.

1st Meeting	2nd Meeting	3rd Meeting	4th Meeting
<p>Objectives:</p> <ul style="list-style-type: none"> • Get information about voice, speech and expressiveness of the workshop participants. <p>Strategies:</p> <ul style="list-style-type: none"> • Connected speech recording to observe the main characteristics that are affected in the hypokinetic dysarthrophonia. Use the sentences of CAPE-V and images that represent topics that are well known by the individual. 	<p>Objectives:</p> <ul style="list-style-type: none"> • Raise awareness about the health care that promote communication • Promote body awareness • Explore movement and body expression • Improve glottal closure • Improve CPFA <p>Rationale: It is important to learn about the operation of the own body and how much health care is important for communicative activity. The exchange of information makes it easier for patients to join the treatment and provides greater chances of success.</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Conversation about health care and strategies that foster verbal communication • Explanation on anatomy and physiology of the vocal production • Body movements technique associated with the emission of facilitator sounds¹⁵ • Fricative sound technique¹⁵ • Head direction change technique with sound¹⁵ • Slow motion / Catch and freeze²⁴ 	<p>Objectives:</p> <ul style="list-style-type: none"> • Promote body awareness • Explore movement and body expression • Improve glottal closure • Improve CPFA <p>Rationale: The work with the patient breathing makes it easier to find wellbeing and relaxation sensations, in addition to being a preparatory condition in more active works for communication, allowing greater resistance to speech and voice use in high intensity.</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Body movements technique associated with the emission of facilitator sounds¹⁵ • Slow motion²⁴ • Relay race with objects²⁴ • Fricative sound technique¹⁵ • Head direction change technique with sound¹⁵ • Fast numbers²⁴ 	<p>Objectives:</p> <ul style="list-style-type: none"> • Promote body awareness • Improve glottal closure • Improve CPFA • Create vocal sounds with different rhythms and melodies • Stimulate vocal expressiveness when creating sounds of different speeds, lengths, intensities and timbres associating with body movements <p>Rationale: The effective use of breathing to create sounds allows people to know and to expand their vocal potential and also to understand that the use of voice associated to the movement brings better possibilities to express their communicative intentions</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Knot²⁴ • Slow motion / Catch and freeze²⁴ • Fricative sound technique¹⁵ • Head direction change technique with sound¹⁵ • The orchestra and the conductor²⁵ • Ritual sounds²⁵
5th Meeting	6th Meeting	7th Meeting	
<p>Objectives:</p> <ul style="list-style-type: none"> • Promote body awareness • Explore movement and body expression • Stimulate phonatory stability • Improve phono-articulatory standard • Improve vocal projection • Promote vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres • Improve glottal adduction and sphincter action of the larynx <p>Rationale: The progress of the findings about which sounds the patient is able to perform raises the need of phonoarticulatory training for the effective use of this loudness in speech. In addition, it is necessary to work with the adductor muscles of the larynx, since it is important to consider that deficiencies of the glottal source impact on impaired swallowing in people with Parkinson's disease.</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Spacewalks no. 3: skeleton²⁴ • Rhythmic movement²⁴ • Showing Where without objects²⁴ • A, E, I, O, U²⁵ • Vocal sound effects²⁴ • Effort technique (thrust)¹⁵ 	<p>Objectives:</p> <ul style="list-style-type: none"> • Promote body awareness • Explore movement and body expression • Increase voice loudness, projection, strength and articulatory precision • Reduce nasality voice • Stimulate phonatory stability • Raising awareness of voice use in different spaces between interlocutors • Explore vocal modulation <p>Rationale: By integrating verbal and body expression it is possible that the patient make a better use of communication. The mastery in the use of sounds enables the practice of vocal modulations to show different communicative intentions in the speech (e.g.: questioning, denial, affirmation, surprise, order).</p> <p>Strategies:</p> <ul style="list-style-type: none"> • Rhythm and movement circle²⁵ • Over articulation technique¹⁵ • Vibrant sounds technique¹⁵ • Grammelot – Introduction²⁴ • Extended sound²⁴ • Mirrored speech²⁴ 	<p>Objectives:</p> <ul style="list-style-type: none"> • Develop sensory awareness • Explore movement and body expression • Stimulate communicative intention through facial movements • Improve CPFA • Improve oral resonance • Improve glottal adduction • Promote vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres associated with body movements • Explore vocal modulation • Increase vocal projection <p>Rationale: To the extent that patients have a greater awareness of the use of their voice integrated to the movement, activities that allow a greater participation of the group can be performed, since all participants are able to experience the skills worked.</p> <p>Strategies:</p> <ul style="list-style-type: none"> • To touch and be touched / To see and be seen²⁴ • Vibrant sounds technique¹⁵ • Plosive sounds technique¹⁵ • Grammelot – Portuguese²⁴ • Peruvian ball game²⁵ • Mirror with sounds²⁴ • Syllables sung²⁴ • Phrasal pronounced exercises¹⁴ 	

8th Meeting	9th Meeting	10th Meeting
<p>Objectives:</p> <ul style="list-style-type: none">• Explore movement and body expression• Promote body awareness• Develop sensory awareness• Expand vocal tract• Improve glottal closure• Raising awareness of voice use in different spaces between interlocutors• improve CPFA• Promote vocal expressiveness when creating sounds of different lengths, tones, intensities and timbres• Intensify oral communication between participants <p>Rationale: Activities that include the use of the spoken word are triggers for oral speech not only in a therapeutic context, but also in the family and social spheres. The ongoing practice of techniques for phonatory stability involves the activity of adductor muscles of the larynx, thus reducing the damage risks swallowing.</p> <p>Strategies:</p> <ul style="list-style-type: none">• Body movements associated with the emission of facilitator sounds¹⁵• To touch and be touched / To see and be seen²⁴• Glottal firmness technique¹⁵• Extended sound²⁴• Vibrant sounds technique¹⁵• Vocal sound effects²⁴• Radio²⁴	<p>Objectives:</p> <ul style="list-style-type: none">• Explore movement and body expression• Promote body awareness• Promote self-perception of body movement• Expand vocal tract• Improve glottal closure• Raising awareness of voice use in different spaces between interlocutors• improve CPFA• Increase voice loudness, projection, strength and articulatory precision• Intensify oral communication between participants <p>Rationale: The exercise of voice-movement association, of emission with phonatory stability and with contextualized phonoarticulatory training (e.g.: spontaneous conversation or story creation) allows the therapist to observe the strategies used by the patient during a communication with the interlocutor.</p> <p>Strategies:</p> <ul style="list-style-type: none">• Body movements technique associated with the emission of facilitator sounds¹⁵• Rhythm and movement circle²⁵• Glottal firmness technique¹⁵• Extended sound²⁴• Vibrant sounds technique¹⁵• Over articulation technique¹⁵• Building a story²⁴	<p>Objectives:</p> <ul style="list-style-type: none">• Get information about voice, speech and expressiveness of people with Parkinson's disease <p>Rationale: When concluding a speech language pathology intervention it is necessary to investigate if some complaints related to communication still remains, which skills have been enhanced and which skills still need to be worked with.</p> <p>Strategies:</p> <ul style="list-style-type: none">• Connected speech recording to record if there was a change of the main characteristics that are affected in the hypokinetic dysarthrophonia. Use the same phrases and images of the first meeting.

Conclusion

The possibility of performing group therapy was referred by speech language pathologists as a positive strategy in the treatment for dysphonias²⁶. The dynamics of the group activity makes it possible to professionals to reflect on the treatment model, as well as providing assistance to the large demand of patients, and also on how to leverage this intervention mode²⁶.

The group therapy was started in the speech language pathology to supply a large demand of patients on waiting lists in public health, and it was heavily criticized. However, it was discovered later that this strategy of speech therapy approach has as its greatest foundation to make sure that the communication occurs in social, in the intersubjective relationship, and therefore the group becomes the perfect place for the communication.

The development of a space for diversities allows an interactive dynamics between the socio-historical characteristics of each subject, and thereby, each subject is transformed in the group, while the subject is also transformed by it²⁶. The group also promotes the diversity of experiences

and shared knowledge in the sessions, thus decreasing the isolation, burden and anxiety created by the pathology around the subjects and their families²⁷.

In a group of people with Parkinson's disease who participated in a complementary approach in Art therapy with clay, it was observed that given the opportunity to create, followed by a verbal discussion about their material, subjects have the conditions that allow them to become physically involved with the group and that also help them to create personal reactions to use more the visual contact mode and to strengthen their means of communication²⁸.

The verbal discussion about the activity is also present in the methodology of Theater Games. It is the moment of individual and collective reflection, in which participants are invited to speak about their own performance and about the role of their partners⁷.

The tables presented in this paper provide the relationship between forms of vocal practices of theatrical and speech area. Although they are different development fields, i.e. artistic and health developments, the integration between them occurs as they involve the communication with the

possibility to promote greater respiratory support, greater presence of intonation in speech, articulatory precision, increase of vocal intensity, greater vocal projection, body expressiveness, fluidity in oral speech and integration between gestures and voice.

The practice of communicative skills, vocal and gestural expression, and it can help people with DP in different contexts of their life: family, professional and social.

In this way, we can infer that when creating an activity involving loudness and movement, in a work integrated to contexts concerning the use of speech, patients are aware of the self-knowledge conditions about the potential of their body, and of how to make use of them in the communicative situations in their daily lives.

Considering the theater practice as a mobilizing and integrative force between human skills, such as motor skills, cognition, emotions, and sensory perception²⁹, the proposal of new forms of speech language intervention using Theater Games allows to use organic structures involved in the speech articulation and in the body expressiveness, in activities that encourage subjects to recognize themselves in the communicative attitude. In the Theater an actor uses his moves and carries out physical actions, establishing a *shared action space* with the Audience, in daily life the performance of actions provides the same *shared action space* condition when two people interact³⁰.

In addition, through a collective activity, the dialogue fosters the exchange of information, experiences and emotions that may generate motivation for health care and to the discovery of strategies to deal with neurological diseases and their implications in the speech and language.

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