SPEECH THERAPY IN HIPPOTHERAPY

Atuação fonoaudiológica na equoterapia

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ABSTRACT

Purpose: describe the training of audiologists who work in hippotherapy and the outline of speech therapy contribution in the suggested area. **Methods:** this is a cross-prospective research, performed by submitting a questionnaire to speech therapists who work with hippotherapy in centers accredited by ANDE – Brazil, in the State of São Paulo. As criteria for inclusion in the research, speech therapists should have attended any hippotherapy specific course and have at least a year of working experience in the area. The results were presented by descriptive analysis, divided into 13 frames according to the submitted questions. **Results:** there were 47 hippotherapy centers registered. All the centers were contacted by telephone and among them14 had no speech therapist on their staff, 22 non-respondents, 11 questionnaires were sent, and 06 questionnaires were answered. **Conclusion:** the group of professionals indicated that the role of speech therapists in the hippotherapy team, besides working directly with the practitioner, involves treatment planning, clarification, demonstration and proving the importance of speech therapy for the team and providing guidance to the family of the practioner. However, we have found that there is no theoretical basis and procedures considered standard practice for speech therapy in hippotherapy.

KEYWORDS: Equine-Assisted Therapy; Speech, Language and Hearing Sciences; Stomatognathic System

INTRODUCTION

Hippotherapy "is a therapeutic and educational method that uses the horse within an interdisciplinary approach, in healthcare, education and horseback riding, in order to achieve the biopsychosocial development of people who have disabilities and/or special needs". It uses the horse to promote physical, psychological and educational benefits[1,2].

Notwithstanding its existence for many years, the spread of hippotherapy in Brazil started in the early 70's, with the pioneers of this work founding the National Hippotherapy Association (ANDE – Brazil), headquartered in Brasília, DF[3], accredited by the Federal Medical Council both as a therapeutic method, in a plenary session held on April 9, 1997, by means of Opinion 06/97, and as an educational method by the Special Education Division of the Education Secretariat of the Federal District, an institution convened with ANDE – Brazil.

Hippotherapy proposes an activity requiring the participation of the entire body, thus contributing to develop strength, muscle tone, flexibility, relaxation, body awareness as well as enhanced motor skills and balance. Interaction with the horse, including first contacts, the act of riding and final handling, develops new ways of socialization, self-confidence and self-esteem[1].

There are many horse-related stimuli. Its environment is natural and different from the urban area. There is a wealth of proprioceptive and kinesthetic information, body position sensations and movements during the physical contact between the practitioner and the animal[4].

The horse has three natural gaits: walk, trot and gallop.

- Walk is a regular, rhythmic and even gait, being that the reason why it is the most adequate for hippotherapy. Walk is a gait during which the horse performs and conveys a series of sequenced and simultaneous movements to the practitioner, which results in a three-dimensional movement

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– the vertical axis (an up and down movement); frontal plane (right and left movement) and sagittal plane (forward and backward movement) – which is performed through a small twist of the practitioner's hip, caused by the horse's back side inflections[2].

- Trot and gallop are paced movements, i.e., between one gait and the following one, the horse does not touch the ground – trot (one suspension time) and gallop (two suspension times). Movements are more sudden and fast, what demands more strength from the practitioner in order to emule the animal's movements – therefore, such gaits can only be used with pre-sportive stage practitioners with good motor skills[2].

Hippotherapy is applied by means of individualized programs organized according to the practitioner's needs and potentials and in line with the program purpose.

According to a particular study, the objectives to be achieved have two foci: the first one, with specifically therapeutic goals, uses techniques mainly focused on physical and/or mental rehabilitation; the second one, with educational and/or social purposes, applies pedagogical techniques along with therapeutic ones, towards integration or socio-familiar integration[5].

Speech acquisition delays and global cognitive development are often caused by environmental factors, lack of adequate stimulation or the presence of related sensory problems[6].

In many of such cases, orofacial motricity changes may exist. Since hippotherapy influences people as a whole, the effect on systems of the entire body can be deep. This new modality of treatment in speech treatment emerges as a perspective to the language development work, cognitive aspects and stomatognathic functions[7].

The objective of this research has been to describe the education of speech therapists working with hippotherapy and the outlines of speech therapy intervention in the area proposed by them.

METHODS

The project was approved by the CEFAC Research Ethics Committee under number 005/09 in a meeting held on 9/9/2009.

This is a prospective cross-sectional research conducted with speech therapists working with hippotherapy in centers registered with ANDE – Brazil in the State of São Paulo. As a requirement to be included in the research, speech therapists invited to participate should have attended any particular hippotherapy course and have at least one-year work experience in the area.

After acessing the website of ANDE – Brazil and locating all registered hippotherapy centers in the State of São Paulo, a telephone contact was made in order to explain the work objectives. Any speech therapist who agreed to take part in the research received a questionnaire by e-mail, which should be answered within 7 days and sent back to researchers' e-mail addresses.

In those centers where such telephone contact was not possible, the e-mail contact was used instead.

The questionnaire was developed by the researchers and contained the following questions:

1. What is your academic background? (graduation year, professional experience, postgraduate, course with ANDE – Brazil (with dates), improvements...).
2. Whom (age group/pathologies) is hippotherapy indicated for? Are there contraindications?
3. Which procedures and theoretical basis do you apply as a speech therapist in hippotherapy?
4. Which are the objectives of speech therapy in hippotherapy?
5. How is phonotherapy planning in hippotherapy performed when there are other speech therapy appointments?
6. Is every practitioner followed up by another team in addition to the hippotherapy one?
7. Is there any particular intervention program in the orofacial motricity area? How is it conducted?
8. Which are the expected speech therapy results in hippotherapy?
9. According to your experience, have the achieved results been satisfactory?
10. What is the speech therapist's role in the hippotherapy multidisciplinary team?

Material was collected using the researchers' e-mail address and the informed consent was presumed based upon the interest of the speech therapists in taking part in the research.

Results have been presented through descriptive analysis, divided into 10 Figures according to the questions made. Each table represents one question of the questionnaire and contains the summarized answers of all professionals who took part in the research, associated by similarity or keywords.

RESULTS

The website of ANDE – Brazil contained 47 registered hippotherapy centers (affiliates). All of them were contacted by telephone, 14 of which had no speech therapist in their staff, and 22 of them

did not answer the phone contact or the e-mail message. From the 11 questionnaires sent, 6 ones were answered.

The results below are organized in tables, according to the questionnaire applied. Each Figure represents one question and it should be noted that, at the first question, a curriculum summary of each professional was performed and, from the second question onward, answers of each participating speech therapist were also summarized. For confidentiality matters, they are identified as Speech Therapist A, B, C, D, E and F.

1. What is your academic background? (graduation year, professional experience, postgraduate, course with ANDE – Brazil (with dates), improvements...).

Speech Therapist	Graduation year	Courses/Specialization/Higher Title
A	2004	Hippotherapy basic course at EQUOLIBER (2006)
B	1995	Hippotherapy basic course at ANDE – Brazil (2001)
C	2007	MO expert focused on dysphagia and hippotherapy basic course at ANDE – Brazil (2008)
D	1985	Hippotherapy course at ANDE – Brazil (2002)
E	2006	Hippotherapy course at ANDE – Brazil (2008) and Graduate Student researching about hippotherapy
F	1998	Master's Degree in Biological Sciences in hippotherapy, Training in the Bobath Neuroevolutive Concept, Professor at ANDE – Brazil (National Hippotherapy Association – Brasília, DF) and GATI (Hippotherapy Integrated and Therapeutic Service Group – São Paulo).

Figure 1 – Courses

2. Whom (age group/pathologies) is hippotherapy indicated for? Are there contraindications?

Speech Therapist	Indications, contraindications and age group
A, C and D	Indications: Dysfunctions: neurological and child development; Several syndromes; Disorders: sensorial, mental, emotional, learning, orthopedic and behavior; rheumatic and respiratory diseases. Age group: from 3 years old on. Contraindication: Acute states of pain; severe cardiorespiratory changes; acute inflammatory conditions; high blood pressure difficult management; epilepsy with frequent seizures in adults; malignant tumors; atlanto-axial instability; hypotonias or severe hypertonias compromising joint stability; severe orthopedic condition.
B	Indications: Dysfunctions: neurological and child development; Several syndromes; Disorders: sensorial, mental, emotional, learning, orthopedic and behavior; rheumatic and respiratory diseases. Age group: from 2 years old on. Contraindication: Not specified
E	Information: depending on the patient's interest. Age group: free Contraindication: Individuals who, after medical assessment, have been considered as physical or psychological disabled.
F	Indications: Dysfunctions: neurological and child development; Several syndromes; Disorders: sensorial, mental, emotional, learning, orthopedic and behavior; rheumatic and respiratory diseases. Age group: free (according to medical authorization). Contraindication: Acute states of pain; severe cardiorespiratory changes; acute inflammatory conditions; high blood pressure difficult management; epilepsy with frequent seizures in adults; malignant tumors; atlanto-axial instability; hypotonias or severe hypertonias compromising joint stability; severe orthopedic condition.

Figure 2 - Indications, contraindications and age group

3. Which procedures and theoretical basis do you apply as a speech therapist in hippotherapy?

Speech Therapist	Procedures and theoretical basis
A	Procedures: Assessment and therapeutic plan. Theoretical basis: Not specified
B	Procedures: Anamnesis and assessment. Theoretical basis: Piaget, Jacob Levi Moreno, Feuerstein and Flavel.
C	Procedures: Language development, supplementary/alternative communication and orofacial motricity. Theoretical basis: Not specified
D	Procedures: According to the needs of each practitioner. Theoretical basis: Not specified
E	Procedures: Not specified Theoretical basis: Interactionist approach
F	Procedures: Not specified Theoretical basis: Neurology concepts (Bobath Neuroevolutive Concept and Castillo Morales Orofacial and Body Rehabilitation Concept)

Figure 3 - Procedures and theoretical basis

4. Which are the objectives of speech therapy in hippotherapy?

Speech Therapist	Objectives
A	Overall control, adequacy of speech articulation organs, verbal language and hearing development, tone adequacy.
B	Learning disorders.
C	Enhanced quality of life and communication.
D	Language development.
E	Depending on the demand, the speech therapist must turn the horse into an ally within the therapeutic sessions, causing the practitioner to feel completely capable of performing any activity proposed with the animal.
F	Tone adjustment, verbal and non-verbal communication, supplementary/alternative communication, adequacy of stomatognathic system functions, self-sufficiency, independence, daily activities, family counselling.

Figure 4 - Objectives

5. How is phonotherapy planning in hippotherapy performed when there is another speech therapy appointment?

Speech Therapist	Planning in case of other speech therapy appointments
A	Exchange of information with the speech therapist in charge of other appointments
B	Contact with other professionals to exchange information and plan.
C	Optimize items dealt with in other therapies and supplement them, if necessary.
D	Planning towards the same goals, but with different strategies adapted to the hippotherapy practice.
E	Contact with another professional and performing a similar work.
F	Contact with another professional to discuss and define priorities and common language among professionals.

Figure 5 - Therapeutic planning

6. Is every practitioner followed up by another team in addition to the hippotherapy one?

Speech Therapist	Is every practitioner followed up by another team?
A	No, but, if yes, they are instructed to do it on days different from those when hippotherapy is performed, in order to avoid muscular fatigue.
B and D	No.
C	Not necessarily; it all depends on the commitment of each practitioner.
E	Not all of them.
F	Some practitioners are followed up by clinical and educational professionals.

Figure 6 - Follow-ups

7. Is there any particular intervention program in the orofacial motricity area? How is it conducted?

Speech Therapist	MO specific intervention program
A	The therapeutic setting is not adequate, but neurofunctional reorganization occurs naturally by means of three-dimensional stimuli conveyed by the animal.
B	Oral motricity must be exhaustively reviewed according to the practitioner's motor reorganization.
C	Exercises for oral respirators or tone adequacy.
D and E	No.
F	Yes, the Altmann therapeutic approach (from the Facial Defects Hospital – São Paulo).

Figure 7 - Orofacial Motricity

8. Which are the expected speech therapy results in hippotherapy?

Speech Therapist	Expected speech therapy results
A	Bond, cervical control and trunk rotation, balance, adequacy of the stomatognathic system and its functions, visual, auditory and sensory perception, language adequacy, self-esteem, space-time organization.
B	Development of learning basis cognitive skills as well as reading and writing specific skills.
C	Tone and posture adequacy of the orofacial and cervical region as well as improving the practitioner's communication.
D	Global, language and learning development.
E	Language and orofacial motricity area adequacy; command and horse affectivity.
F	Development of motor, emotional, social, communication skills, better quality of life, space and body organization, self-sufficiency.

Figure 8 - Expected results

9. According to your experience, have the achieved results been satisfactory?

Speech Therapist	Results achieved in the professional experience
A	The therapeutic setting enables the practitioner to turn his or her feelings into words or sounds. It causes a communication attempt is made in order to show his or her noblest moment: communication, either with the environment, the parties, himself or herself or even as a way to thank the animal. When I see the practitioner's interaction with the animal, from the first contacts until the ride, I am more and more certain that hippotherapy is a thorough therapy, since it enables parents, practitioners and therapists to have a closer relationship in joyful and playful sessions.
B	Yes. I currently believe that hippotherapy is one of the best methods, supplementary to clinical speech therapy, for learning disorders.
C	Results obtained are satisfactory, but not always we are able to achieve all objectives defined.
D	It depends on each practitioner; for some, results are satisfactory in a shorter period; others have a slower pace.
E	Yes. This is true especially in the verbal language field.
F	"I am biased in this matter, but... after all, we believe in the potential much more than in the difficulties of our practitioners... even though, taking due proportions into account, depending on each clinical case, we have had positive experiences in our center."

Figure 9 - Achieved results

10. What is the speech therapist's role in the hippotherapy multidisciplinary team?

Speech Therapist	A speech therapist in the multidisciplinary team
A	To explain the speech therapy work to teammates; instruct them about adequate and inadequate procedures to be used with the practitioner; speech therapy case studies; session observations.
B	To contribute with knowledge specific techniques to the oral motricity, oral and writing language work; to be fully aware of his or her area of operation; to thoroughly know the horse etiology; to know hypology; to ride horses; to know how to harmoniously team-work; to like to study, since the method requires constant improvement.
C	To act directly with practitioners who have speech therapy changes and guide both parents and the team about speech therapy aspects.
D	To take part in the therapeutic planning; to appoint practitioners; guide the team during sessions; to attend weekly meetings.
E	To engage in discussions of each case dealt with in the hippotherapy center, helping the main side professional working on the case with aspects that might be interesting to the practitioner (trying to mingle both occupations in order to better meet the patient's demand) and deciding about the best professional to "lead" the case.
F	His or her role is observing each individual in full, realizing their preferred sensory access pathways and showing the team that communication is not just speaking; rather, it is winning one's place as an individual within the context where one lives; this implies being valued for what one is and for what he or she can do or accomplish.

Figure 10 - Multidisciplinary team

DISCUSSION

Every speech therapist participating in this research works with hippotherapy and has some qualification course in the area. Participant B has attended several courses on how to work as a hippotherapist and has created the Hippotherapy Service Program for Learning Disorders (PAEDA). However, it was observed that only one speech therapist has an Orofacial Motricity Expert title, two speech therapists have a Master's Degree in the field of hippotherapy, and another one has not completed it yet.

While the research was conducted, contacting hippotherapy centers was difficult, because some of them did not have a phone landline in operation at the facility where the practice is performed (in a horse-breeding farm, for example). In others, although the contact was made, no answer to the questionnaire was received; even after being sent as a result of the interest shown, many questionnaires were not returned. Many of the centers contacted did not answer the contact made by phone and/or e-mail.

In relation to indications and contraindications, a few answers were more specific than others, but there was no great divergence among the answers found and the literature. Among the indications for the hippotherapy practice, the following ones can be mentioned: cerebral palsy, stroke, neurological syndromes (Down, West, Rett and others), traumatic brain injury, sensory deficits, maturational delay, spinal cord injury, autism, hyperactivity, mental impairment, behavioral changes, learning or language difficulties. There are a few (relative or absolute) contraindications to the practice of hippotherapy. They are: people with Down syndrome under 3 years old (since there may be an excess of stimuli that the nervous system may not absorb), atlanto-axial instability, open wounds, horse fur allergy, hyperlordosis, shoulder and/or hip dislocations, scoliosis above 40 degrees, osteoporosis, herniated discs, severe heart diseases, uncontrolled epilepsy, etc.[8]

The research has investigated whether there is also a medical indication or evaluation for practitioners considered "normal", i.e., without any syndromes or disabilities. For instance, a medical assessment is not required for practitioners with learning difficulties to start the practice, but it cannot be disregarded that they may have some type of scoliosis, dislocations, osteoporosis, which are considered contraindications for the practice of hippotherapy. This seems to be a relevant subject for future researches.

In relation to age, a participant reported that she served patients of different ages, indicating that she has been following up the case of a child one year and four months old, and even cases with elderly people. Another participant indicated that the age group is considered free, as long as the patient submits a medical report certifying to be physically fit to perform the activity. Only one of the speech therapists interviewed reported that she has been serving a patient under 2 years old, since the remaining answers showed that this is a contraindication for the practice of hippotherapy. The literature used revealed a research reviewing the benefits of hippotherapy in an early stimulation program towards the global development of a practitioner with Down syndrome under two years old. Based on information and results achieved in this research, it has been evaluated that, after respecting individual aspects and taking due precaution, contraindications restraining the hippotherapy practice by children under two years old are overcome; therefore, a planned and well-structured intervention is an important component to acquire new skills and logical concepts, being it an auxiliary instrument towards the global development of children with Down syndrome, and it can be started before the child turns two years old[9].

As to the theoretical basis used for hippotherapy, different answers were found regarding adapting concepts such as those designed by Piaget, Jacob Levy Moreno, Feuerstein, Flavell, interactionist approaches, Bobath Neuroevolutive Concept and Castillo Morales Orofacial and Body Rehabilitation Concept – used in clinical visits to serve the hippotherapy practitioner. One participant (D) describes that the theoretical basis exists according to the needs of each patient, but this was not specified; another participant describes how the work is performed, but does not detail the theoretical basis used. According to ANDE – Brazil, all hippotherapy activity must be based on technical-scientific bases, supported by a prior assessment issued by a Doctor, a Psychologist and a Physical Therapist. Planning sessions must be made for each practitioner, and hippotherapy activities must be developed by a multidisciplinary team with an interdisciplinary operation, engaging healthcare, education and horseback riding professionals. No article or publication referring to any kind of theoretical basis in the speech therapy area was found in the literature. That question raised the most disagreement in the answers. Yet, a participant supplemented her hippotherapy basic course by attending other national and international courses and she also founded PAEDA. The absence of well-defined methodological lines is possibly due to this being a new area, thus demanding researches to indicate the effectiveness of the speech therapy aspects dealt with.

Hippotherapy as a therapeutic resource is applied to making the teaching-learning process easier by means of group activities focused on pre- and elementary school classes aiming at the integration among mentally handicapped practitioners and the therapeutic environment, within a playful context. It can be realized that the proposed context has increased the potential of students' attention and concentration as well as enhanced their socialization and individualization notions[10]. In horseback riding, the practitioner had the experience of overcoming his limitations and, therefore, his learning skill was strengthened, which enabled and made his literacy easier. The set of stages lived by the student during the group session also enabled the development of the student's language and communication aspects as well as observation and association of ideas, physical, emotional and social promotion, providing him with the possibility of enjoying a pleasant activity without losing his therapeutic objective[11].

The horse must become an ally during the sessions so that the practitioner feels capable of performing the proposed activities. In order to have that ally, it is necessary to consider it as a rehabilitation agent, since it is a docile, strong and large animal, which allows itself to be commanded and ridden, through which an important affective bond is created[12]. The therapeutic hippotherapy environment, such as stalls, the track, nature and feeding, brushing, bathing and riding activities enable the development of memory, attention, reasoning, space sense, perception, time sense, which are all required conditions for language development – the latter being one of the objectives of speech therapy in this treatment[11,13]. According to Santos (2007), since the beginning of the hippotherapy session, riding and final handling, the practitioner develops new ways of socialization, self-confidence and self-esteem[3,14,15]. For the practitioner, the time of meeting and leaving the horse at every session is important; it is when the bond created between them is observed[3].

It has been proven that hippotherapy promotes literacy, socialization and global development[16] of students with special educational needs.

When there are other speech therapy appointments, therapy planning is performed after exchanging information with the other professionals, in order to optimize what has been dealt with in other therapies and maintain adapted strategies to the practice of hippotherapy. The answers provided by each speech therapist were similar, not there being any disagreement on this matter.

Regarding follow-up by another team in addition to the hippotherapy one, it does not happen in all cases; it depends on the need of each practitioner and the place where practices occur. Only in one place, patients are followed up by clinical and educational professionals, since it is a special education school. When there are other follow-ups, these must be performed on days different from those when hippotherapy is performed, in order to avoid muscular fatigue.

Another matter addressed was whether there are any specific intervention program in the orofacial motricity area and how it is conducted. Out of the six answers provided, only one stated that such a program exists, based on the therapeutic line of Speech Therapist Elisa B. C. Altmann, and the clinical procedures performed are: anamnesis; clinical speech therapy specific assessment (anatomo-functional assessment of speech articulation organs, phonemic framework, breathing functional assessment, chewing, swallowing, suction, blowing); Speech therapy assessment with the practitioner (riding the horse and on the ground – in order to check motor, respiratory and postural adjustments); discussion of a clinical case in an interdisciplinary team (to define a therapeutic planning); hippotherapy treatment (itself); clinical supervision (on a weekly/fortnight basis) and guidance to relatives. Although without no specific intervention programs in the orofacial motricity field, several aspects of the area were mentioned as objectives of the work; however, there is no direct action, since the objective is achieved by means of the horse walks and its three-dimensional stimuli, i.e., depending on the motor-postural benefit, an impact on the face muscles may occur.

At the literature research stage, it was found that Cantarelli (2006) had a different therapeutic approach. The objective was evaluating and reviewing the results achieved in the electromyography examination of the mouth orbicular muscle (upper and lower beams) and in other supplementary examinations, such as: cephalometry and global postural assessment (goniometry), with children aged 8 to 13 years, buccal respiration syndrome carriers, pre- and post-treatment in hippotherapy. Based on such research, it was possible to conclude that there is no difference between the pre- and post-hippotherapy times for the following movements: rest and sealing in the mouth orbicular muscle (lower beam). This reinforced the fact that the hippotherapy treatment enabled such lip position adjustments and tongue position in the papilla to be automated. In this way, patients with the buccal respiration syndrome were able to achieve nasal breathing and the global posture adequacy depending on the head angle[5].

During its displacement, the horse performs a three-dimensional movement towards vertical (up and down), horizontal (forward and backward) and

lateral (left and right) directions. These movements are conveyed to the practitioner; therefore, at every walk, the center of gravity is shifted from its midline, causing imbalance that, in its turn, causes rebalance, restoring the center of gravity at the supporting structure[17]. Thus, the vestibular system is demanded on a permanent basis, continuously stimulating its connections among semicircular channels, where ciliary cells and otoliths capture the endolymph oscillations caused by head movements with the cerebellum, thalamus, cerebral cortex, spinal cord and peripheral nerves in upward and downward directions[18]. Slow vestibular stimulation promotes the muscle tone relaxation in the entire body; on the other hand, with a fast vestibular stimulation, the tone of the vertebral column erection muscle chain is increased[19], promoting better head sustaining in hypotonic patients. The therapist can interfere in this situation with the horse gait type. For this research, an animal transwalking with a high frequency and gait amplitude during its walk displacement was used[9].

When a human being is riding a horse, the first manifestation is tonic adjustment. In fact, the horse is never fully still. Shifting the supporting paws, head side movements, column bending, neck lowering and stretching, etc., forces the practitioner to adjust his or her muscle behavior, in order to respond to imbalances caused by these moves[20-22]. According to Araújo et al. (2010), hippotherapy has enabled increased agility to the elderly and, as a result, increased daily activity[23]. Botelho, Santos e Santos (2008) have also pointed out that the horse three-dimensional movement directly influences the muscles of the oral cavity, the larynx, postural control muscles and breathing[24].

During the ride, pelvic mobilization enables the organs located in that area to settle, making diaphragm lowering easier. Thus, there is an increased inspiratory volume and the shoulder girdle relaxation, contributing to abdominal breathing, a required condition for a good vocal quality[25]. Voice is an area of specialization within speech therapy that could also be one of the objectives of the hippotherapy work, but it was not mentioned by any of the participants.

The other answers reported that this specific intervention does occur, since the hippotherapy environment is not suitable for oral cavity stimulation, but that neurofunctional reorganization occurs naturally through the three-dimensional stimuli conveyed by the animal and, therefore, craniofacial muscle balance is worked, which promotes adequate development of the stomatognathic system. In addition, it is possible to perform exercises for oral respirators and tone adequacy by means of playful activities adapted to better performance. Not all pathologies can be worked on, such as dysphagia, for example, due to the practitioner's oral cavity difficult handling.

During the practice of hippotherapy, many expected results were mentioned by the participants, among which are bond; cervical control; trunk control and rotation; vestibular system balance; better visual, sensory and hearing perception; space-time organization; self-esteem; enhanced respiratory capability; adequacy of stomatognathic functions and OFAs; improved lung speech articulation coordination; larger vocabulary; language adequacy; development of learning cognitive skills as well as reading and writing specific skills; global development benefits; increased linguistic repertoire; horse command and affectivity. According to Silveira & Wibelinger (2010), there is a permanent and constant stimulation of self-control organs, which leads to the sensory-motor learning achieved by means of a global movement of the entire body[15,17,21,26-31].

In general, all answers included the practitioners' better quality of life and communication, varying according to the clientele served by each participant[14,29,32].

According to their individual experience, results obtained have been satisfactory, but not always are all objectives achieved, and results depend on each practitioner. Good results have been reported in the oral language area and learning disorders (as a supplement to speech therapy). The practitioner's interaction with the animal has also been shown as a satisfactory result for the patients' communicative purpose.

According to Negri et al. (2010), thirty minutes of hippotherapy did not influence the data analysis concerning heart rate and its variability in a child with cerebral palsy[33]. In another research dealing with the same subject, a higher heart rate was found in wheelchair-dependent volunteers with cerebral palsy[22].

Davis et al. (2009) did not achieve the expected results according to the criteria of his methodology and data analysis, but his parents and relatives noted significant advances of the condition of the child with cerebral palsy addressed by horse therapy[34].

Andrade (2010) reports that a practitioner with tongue protrusion, oral breathing and absence of lip sealing – stressing that he had no anatomofunctional impediment to nasal breathing – after a period of rehabilitation hippotherapy and verbal stimuli, had significant improvement in the changes mentioned during the ride; however, on the ground, such inadequacies still occurred, but to a lesser frequency[35].

The speech therapist plays a very important role in the hippotherapy team, since his or her role is explaining the speech therapy work to other professionals, directly working with the practitioner who has phonoaudiological changes and guide parents and the team about such aspects, in addition to taking part in case discussions and enhancing integration between the practitioner and the animal. In terms of interdisciplinary team, role horizontalization is recommended and, respecting the professional specificity, a consensus is expected to be reached regarding diagnosis, prognosis, clinical behavior and the client's release. The minimum team required team by the National Hippotherapy Association for the hippotherapy practice is comprised by a Psychologist, a Physical Therapist and a Riding Instructor. A Speech Therapist, an Occupational Therapist, a Pedagogue and a Physical Education Teacher can join the team. A support team, comprised by an Animal Keeper and a Veterinarian, is also necessary[1].

In a hippotherapy setting, the practitioner feels useful and "normal" by feeding or brushing the horse, namely, "working" to handle the animal just like any other individual. At that moment, they are part of the support team by helping to care for the horse. In other words, the horse allows the practitioner to show what he or she is capable of achieving in order to contribute to the animal care and benefit from the new stimuli of this different therapeutic setting. The horse is the mediator of family relations – it helps to adjust the practitioner's behavior to that of his or her relatives[4]. Hippotherapy promotes social integration, encouraging interpersonal relationships among the practitioner, the family, the therapeutic team and the horse[16, 36].

In hippotherapy, the practitioner must not be regarded as a carrier of a syndrome, disease, disorder, disability, etc., not even as an individual who needs better posture, speech development, better muscle tone, among others. The practitioner must be seen in hippotherapy in full, i.e., the individual as a whole, an active being in his or her therapy and life.

The therapist who realizes that, for the practitioner, the horse is a transitional object, understands that in hippotherapy the objective exceeds the horse movement as a rehabilitation technique; it is a global therapeutic instrument acting in several biopsychosocial realms[37-39]. The benefits of activities with the horse are attributed to a combination of sensory stimuli generated by the movement produced by the horse walk towards the human being's vital systems which, together, result in expanded motor and sensory integration[9,37,40].

The operation of speech therapy in hippotherapy varies according to the operation place, based on the data collected; since this area is new, the speech therapist does not know the means of operation yet, but there are professionals who are experts and masters in this field. However, a speech therapist has the potential to work in this multidisciplinary team, to have his or her work acknowledged, in addition to creating therapeutic protocols and performing research in this field, showing the benefits offered from serving in this new therapeutic setting.

In the rehabilitation with horses, it is essential the participation of an interdisciplinary team connecting the knowledge of several healthcare areas towards effectively proposing therapeutic method, taking all neurological, physical, mental and social parameters into account.

Therefore, future researches on the subject should propose assessment speech therapy protocols and intervention programs covering the several areas of speech therapy, including language, voice and orofacial motricity, in order to make planning and the therapy itself easier, improve intervention and speech therapy results and that, in the future, speech therapists are able to join the minimum hippotherapy team, taking part in the therapeutic planning, guiding other professionals and practitioners' relatives about the area.

It is worth noting the difficulty in finding speech therapy-related hippotherapy publications, specifically in the orofacial motricity area. It is important that a professional wishing to work in the field of rehabilitation with the horse attends specific hippotherapy courses in order to achieve better professional performance and that speech therapists already active in hippotherapy perform research in the area, aiming at higher growth, promotion and recognition of speech therapy within the multidisciplinary team.

CONCLUSION

By means of this research, it has been possible to conclude that although professionals have attended courses in the hippotherapy area, few are those who specialize in speech therapy areas, such as orofacial motricity, language, among others, and that speech therapy intervention could be optimized by creating procedures for the practice of hippotherapy.

RESUMO

Objetivo: descrever a formação dos fonoaudiólogos que atuam em equoterapia e as linhas gerais da intervenção fonoaudiológica na área proposta pelos mesmos. **Métodos:** trata-se de uma pesquisa prospectiva transversal, que foi realizada com fonoaudiólogos que atuam com equoterapia nos centros cadastrados pela Associação Nacional de Equoterapia do estado de São Paulo. Como critérios para inclusão na pesquisa, os fonoaudiólogos participantes deveriam ter realizado algum curso específico de equoterapia e atuar na área há mais de um ano. Os resultados foram apresentados por meio de análise descritiva, divididos em 13 quadros de acordo com as questões realizadas. **Resultados:** foram encontrados 47 centros de equoterapia cadastrados. Foi realizado o contato telefônico com todos os centros, e dentre eles 14 não possuíam fonoaudióloga na equipe, 22 não responderam, 11 questionários foram encaminhados e 06 questionários foram respondidos. **Conclusão:** o grupo de profissionais apontou que o papel do fonoaudiólogo dentro da equipe de equoterapia, além de atuar diretamente com o praticante, é participar do planejamento terapêutico, esclarecer, mostrar e provar a importância do trabalho fonoaudiológico para a equipe e orientar a família do praticante. Porém, foi constatado que não há procedimentos e fundamentação teórica considerada padrão para a prática fonoaudiológica na equoterapia.

DESCRITORES: Equoterapia Assistida; Fonoaudiologia; Sistema Estomatognático

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