Meditation, public health and speech language pathology and audiology: a dialogue under construction

Meditação, saúde coletiva e fonoaudiologia: um diálogo em construção

Meditación, Salud Publica y Fonoaudiología: diálogo en construcción

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Abstract

Meditation in the West has been the focus of interest of several researchers due to the benefits it provides to the physical and mental health, with major repercussions in quality of life and well-being. Studies point to the importance of mental activity in the physiological processes, and the relation of interdependence between mind and body. This fact, in turn, reflects the need for mental activity care, rather than only body care, to be included in health care. This work aims at carrying out a review of the scientific articles on meditation and communication disorders, discussing the implications to Speech Language Pathology and Audiology. We searched the data bases Medline, PUBMED, Scielo and Lilacs – for articles published until April 2015. We found only seven articles that associate Speech Language Pathology and Audiology and meditation, as opposed to the large number of articles on meditation in the health area. Those articles highlight the need for more studies in this field, and suggest a possible benefit in the use of meditation as a complementary therapy for patients with various communication disorders. The present work also aims at presenting a scenario of the scientific studies that have been carried out on meditation – an Integrative and Complementary Practice which, for decades, has been the focus of interest of several foreign researchers and, more recently, has been standing out in the Brazilian scientific production.

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**Resumo**

A meditação no Ocidente vem sendo foco de interesse de diversos pesquisadores em função dos benefícios que promove à saúde física e mental com repercussões importantes na qualidade de vida e bem-estar. Tais estudos apontaram a importância da atividade mental nos processos fisiológicos e a relação de interdependência entre corpo e mente indicando a necessidade de se incluir no cuidado à saúde, não apenas o cuidado com o corpo, mas também o cuidado com a atividade mental. Este trabalho tem como objetivo realizar um levantamento dos artigos científicos existentes sobre meditação, distúrbios da comunicação e suas implicações para a Fonoaudiologia. Buscou-se nas bases de dados - Medline, PUBMED, Scielo e Lilacs – as publicações existentes até o mês de abril de 2015. Foram encontrados somente sete artigos relacionando Fonoaudiologia com meditação, o que contrasta com o vasto número de publicações existentes sobre meditação na área da saúde. Os trabajos indicaram a necessidade de serem conduzidos mais estudos na área investigada e sugeriram um possível benefício do uso da meditação como terapia complementar em pacientes portadores de diferentes distúrbios da comunicação. O presente trabalho procurou também apresentar um panorama dos estudos científicos que vem sendo realizados acerca da meditação – uma Prática Integrativa e Complementar - que há décadas, é foco de interesse de diversos pesquisadores estrangeiros e, nestes últimos anos, vem merecendo destaque na produção científica brasileira.

**Palavras-chave:** Meditação, Qualidade de vida, Terapias Complementares, Fonoaudiologia

**Resumen**

La meditación en Occidente es un foco de interés de muchos investigadores debido a los beneficios que promueve en la salud física y mental con repercusiones importantes en la calidad de vida y bienestar. Estos estudios señalan la importancia de la actividad mental en los procesos fisiológicos y la relación de interdependencia entre cuerpo y mente, indicando la necesidad de incluirla en el cuidado de la salud, no sólo el cuidado con el cuerpo, sino también el cuidado con la actividad mental. Este trabajo tiene como objetivo realizar un inventario de los artículos científicos disponibles sobre meditación, trastornos de la comunicación y las implicaciones para la Fonoaudiología. Se realizó una búsqueda en las bases de datos - Medline, PubMed, Lilacs y Scielo – de las publicaciones existentes hasta el mes de abril 2015. Sólo se encontraron siete artículos que relacionaron Fonoaudiología con meditación, lo que hace contraste con el gran número de publicaciones existente sobre meditación en el área de la salud. Los estudios han indicado la necesidad de realizar más investigaciones en el área investigado y sugirieron una posible ventaja de utilizar la meditación como terapia complementaria en pacientes con diferentes trastornos de comunicación. Este estudio también trató de presentar una visión general de los estudios científicos que se están llevando a cabo sobre la meditación – una Práctica Integrativa y Complementaria - que hacen décadas es el foco de interés de muchos investigadores extranjeros y que, en los últimos años, se está destacando en la producción científica brasileña.
**Introduction**

The social and urban movement known as counterculture, triggered in the USA and Europe in the 60's and 70's, favored the rise of new health models in the West which developed even more in the 80's. This movement exposed the crisis of the technological and specialized medicine—a crisis that the World Health Organization has pointed out since the Alma Ata Conference in 1978—considering that the development of scientific medicine has not met the demands of health problems of a large part of the world population. Additionally, there is an ethical and social crisis, characterized by medicalization, emphasis on the illness and deterioration of the physician-patient relation as a result of the commercialization of this relation. In this scenario, the patient is seen as a consumer of medical assets rather than an ill person whose suffering must be relieved. Consequently, there has been increasing search for and use of alternative and complementary practices in the health area.

Integrative and Complementary Practices (ICPs)–denomination the Ministry of Health adopted in Brazil - began to stand out in this scenario, not only regarding private clients, but also in the public health system, where it has been gradually inserted. The growth and institutionalization of those practices can also be attributed to its kind of diagnosis and therapeutics, which are effective, devoid of technology, and less costly. Moreover, they favor autonomy and respect for the patients, considering them in their psychobiological, social and spiritual dimensions.

The gradual institutionalization of the ICPs led to the publication of regulation # 971 in 2006, which defines the National Policy of Integrative and Complementary Practices (NPICP) in the Brazilian National Health System (SUS). After that, Brazil began to play a pioneer role in the continent as to the recognition of the importance of those practices in the public health services. With the NPICP, approaches as traditional Chinese medicine, Ayurvedic medicine, homeopathy, meditation and herbal therapy, among others, have been included in several health units, mainly those of Primary Care. Such approaches stimulate natural prevention mechanisms from a broad view of the health-illness process, emphasizing self-care. It is important to highlight the fact that Integrative and Complementary Practices/Traditional Medicine are used in practically all the countries of the world, with a growing demand. Access to it is encouraged and regulated by strategies recently updated by the World Health Organization.

In Brazil, several cities as São Paulo, Campinas, Florianópolis, Recife, Volta Redonda and Rio de Janeiro have been implementing the ICPs in the SUS with positive results. The Municipal Health Secretariat of São Paulo, for instance, has been incorporating Integrative Practices and Traditional Medicine in programs of recovery and health promotion. The most widespread modalities are grouped together in the program “Body and Meditative Practices, and Physical Activities”, with 2,610 group activities that happen weekly, involving 1,575 instructors and 46,706 participants in 499 Health Units. These data of 2012 showed the high adherence of health professionals and the community, encouraged by the favorable results on quality of life; signs and symptoms; reduction in the use of medications, contribution to the adoption of healthy habits, in addition to the safety regarding adverse reactions. This scenario, however, does not reflect the situation of other cities where many health managers and professionals of the SUS still do not know the NPICP.

**ICPs, INTEGRALITY AND HUMANIZATION**

In the last decades there has been an increase in the scientific production that discusses more integral and effective interventions and, at the same time, search for reducing or eliminating risk and harm, in addition to promoting quality of life, peace and citizenship. Traditional Medicines (TMs), such as Traditional Chinese Medicine Ayurvedic Medicine and Homeopathy, present significant differences in relation to the present Western medical rationality. The former tend to provide greater self-knowledge, hence more autonomy in the health-illness. TMs encourage the creation of healthy citizens that become agents of cure themselves, broadening the view of the health-illness processes and the global promotion of human care. The question of integrality, therefore, is the foundation of knowledge and practices of those rationalities from which the diagnostic and therapeutic processes are organized.

For the biomedical model, however, integrality is a great problem, since its knowledge and practices fragment the patient, focusing on the illness
in a more and more specialized way. Considering that this is the rationality that prevails in the country, the issue is then transferred to SUS itself. In this sense, the IPCs may favor the integralality of the care and the strengthening of empowerment of the subjects regarding their health needs, since they do not presuppose a passive user who is devoid of knowledge. Those factors are an addition to the physical and mental health, which will be discussed later, and have implications in well-being and quality of life. The IPCs are also in syntonity with the Humanization Policy of the SUS in the health services. Mindfulness meditation, for instance, can be a useful tool in the development of empathy and humanistic aspects of the health professionals, and improve the prognosis of the patients they evaluate.

The present work aims at discussing an IPC which, although not widespread in the public health services, has a robust scientific production: meditation. We are going to present a scenario of the scientific studies regarding it and its benefits to physical and mental health.

THE BENEFITS OF MEDITATION TO PHYSICAL AND MENTAL HEALTH: PERSPECTIVES OF APPLICATION IN SPEECH LANGUAGE PATHOLOGY AND AUDIOLOGY

Researches in the last years have stressed the benefits of physical exercises, emphasizing body care. Studies on meditation, on the other hand, have emphasized the need for mind care. Meditation clearly explains the body-mind unity, the repercussion of one aspect over the other. This unity is dissociated by the biomedical paradigm, which favors biological aspects over the others, making the materiality of the body its main object of analysis and intervention. The studies on meditation, however, show the mental state that results from a meditative practice might trigger significant physiological changes.

The first electroencephalographic studies with yoga practitioners date to the 50’s and, in spite of the technological limitations, already identified patterns of differentiated electric activation with predominantly alpha waves associated with body relaxation. This is the origin of the popular belief that meditation leads to an “alpha” state. Later on, studies observed that the type of meditation used and how long the individuals had been practicing it influenced the electroencephalographic findings in a way that was not limited to alpha waves.

Kothari et. Al. carried out a study with an Indian yoga practitioner who was confined underground for eight days, without food and water. He remained in a state of hypometabolism and aroused the curiosity of researchers. Studies focused on physiological changes, mainly on the respiratory patterns and heart rate of experienced meditation practitioners. Those studies gave rise to others that pointed to the possibility of using such techniques in the therapeutic context to treat individuals with heart and respiratory problems.

Different studies on meditation and/or yoga and the physiological alterations associated with those practices detected reduction of heart rate; alterations in the brain blood flow and encephalographic activity; changes in the concentration of neurotransmitters; hormone variations; decreases of body temperature; alterations of the senses and perception; increase of blood volume; increase of galvanic skin resistance; decrease of peripheral vascular resistance; decrease of oxygen and carbon dioxide consumption, and decrease of blood lactate. All those factors suggest a possible conscious control of systems considered involuntary.

Meditation is also the focus of interest of researchers in the mental health area, especially due to its benefits in the reduction of stress; anxiety; compulsive eating disorder; neuroticism and somatization, and improvement in resilience, positive affects and mood, as well as reduction of distracting and ruminative thoughts and behaviors. Studies also showed great improvement in cognitive aspects as increased capacity of attentional absorption and concentration.

Considering the scientific evidence and the minor potential damage, meditation can be indicated as a complementary therapy in cases of diabetes; fibromyalgia; hypertension; coronary disease; chronic low back pain; psoriasis; breast cancer; substance abuse and alcohol dependence; HIV and Alzheimer’s disease, among others.

Another line of research that has been growing in the last years is the study of changes in the brain anatomy associated with more experienced meditation practitioners. Recent studies detected an increase in the brain gyri, mainly in the precentral left gyrus, fusiform right gyrus, right cuneus and anterior bilateral dorsal insula in meditation.
Methodology

We searched the databases Medline, PUBMED, Scielo and Lilacs for articles published until April 2015. The key words used in the search were “meditation and language”, “meditation and hearing”, “meditation and speech”, “meditation and communication”, and their equivalent expressions in English and Spanish. Considering the large number of publications in the area of health regarding mindfulness, we also ran a search with the same words, substituting “meditation” for “mindfulness”, considering only works that used a/some meditation technique(s). Other alternative, integrative and complementary practices as herbal therapy, acupuncture, corporal practices as yoga, tai chi chuan, chi-kung, among others, were excluded.

FEW STUDIES ON SPEECH LANGUAGE PATHOLOGY AND AUDIOLOGY AND MEDITATION X SEVERAL STUDIES ON MEDITATION AND HEALTH

Only seven articles addressed different disorders treated by speech therapists, as presented in Chart 1. This small number associating Speech Language Pathology and Audiology therapy with meditation contrasts with the vast amount of articles on meditation in the health area. A search in the databases Medline and Pubmed in April 2015 with the word meditation yielded over 3,000 scientific articles in each of those bases. Therefore, it is possible to find the discussion on the use of meditative techniques in various disorders, illnesses, clinical and non-clinical conditions. In this sense, a search with more specific terms related to certain alterations or illnesses might result in a larger number of articles than a search related to the area of Speech Language Pathology and Audiology. An example of this search is presented in Chart 2. The survey also showed that the research on ICPs in the area of Speech Language Pathology and Audiology is scanty, in addition to being quite recent: only one article is from the 80’s, while all the others were published between 2008 and 2014.
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<th>Disorder</th>
<th>Author(s) and title of the article</th>
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<td>Mental Retardation</td>
<td>Eyerman J. Transcendental meditation and mental retardation.</td>
<td>The Journal of clinical psychiatry 1981</td>
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<td>Severe Speech and Physical Impairments</td>
<td>Goodrich E, Wahbeh H, Mooney A., Miller M, Oken B. Teaching Mindfulness Meditation to Adults with Severe Speech and Physical Impairments: An Exploratory Study.</td>
<td>Neuropsychological Rehabilitation, 2014</td>
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Chart 1 - Survey of the studies on meditation in communication disorders
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The work of Eyerman, published in 1981, differs from the other studies found in this survey (Chart 1), as it uses transcendental meditation. The other studies in Chart 1 use mindfulness, which suggests that this meditation technique is the most used in more recent scientific studies. That study addressed the therapeutic perspective of the use of meditation to treat communication disorders, as in the Works of Orestein et al. (2012), Boyle (2011) and Sadlier et al. (2008). The study of Sadlier et al. (2008) concluded that mindfulness meditation along with cognitive-behavioral therapy might help individuals handle tinnitus, facilitating their habituation process.

The work of Boyle (2011) proposed the use of mindfulness meditation for the treatment of individuals with stuttering, since many of the benefits achieved by meditation coincide with the successful management of that disorder. The reduction of rumination, the increase of metacognitive awareness that makes it possible for one to observe thoughts as mental events rather than absolute truths, and the improvement of attentional control are some points in common that the author mentions. Boyle also stressed that mindfulness techniques improved the awareness of body tensions, as well as the self-monitoring of movements and body sensations, which might contribute to a better management of stuttering.

The work of Orestein et al. (2012) with three aphasic persons who learned mindfulness meditation demonstrated that, even though they had no improvement regarding language and attention, the participants reported a feeling of peace and relaxation with the practice, which they did not have difficulty to learn. This is an interesting aspect, once the instructions for learning the technique are verbal, but the learning and the practice of the technique per se do not seem to be based on the cognitive-linguistic ability of the practitioner.

Another interesting finding of this study is that meditative practices may or may not improve the speech complaints, but they provide the practitioners with new ways to deal with their difficulties, improving their well-being and quality of life.

The review carried out by Levin et al. (2014) also highlighted the beneficial effects of meditation in handling the stress and the symptoms implied in multiple sclerosis.

Another important aspect of those studies is the need to adapt the technique to the specificities of each condition. Pagnini et al. (2014) proposed a

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<td>disorder</td>
<td>Philippot Pierre, Nef F, Clauw L, Romrée M, Segal Z. A Randomized Controlled Trial of Mindfulness Based Cognitive Therapy for Treating Tinnitus.</td>
<td>Clinical psychology &amp; psychotherapy, 2012</td>
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Chart 2- Examples of articles found from the search using the terms “meditation/mindfulness” and a specific disorder/illness
protocol for the use of mindfulness meditation with subjects suffering from amyotrophic lateral sclerosis that included the caregivers of those patients in the intervention. The breathing and mobility difficulties in addition to the emotional reactions that result from the perception of their proximity to death are specific aspects of this condition. Therefore, it was necessary to adapt commands and procedures in order to provide better care and quality of life to both patients and their caregivers. Goodrich et al. (2014) evaluated seven subjects who had severe physical and linguistic impairment and a diagnosis of cerebral palsy, amyotrophic lateral sclerosis, spinocerebellar ataxia, muscular dystrophy or cerebrovascular accident. The authors proposed a number of necessary adaptations to the mindfulness techniques on the basis of the needs of that population. Even though the results did not show improvement in the post-intervention tests when compared with pre-intervention ones, the study showed the viability of teaching meditation to people with linguistic and motor difficulties, The conclusion was similar to that of the work of Orestein et al. (2012). The authors also presented qualitative data that portray the positive aspects of the experience of participants in the study and the absence of adverse effects.

The studies we surveyed in this search pointed out the demand for further studies to be carried out in the area, and suggested a possible benefit in the use of meditation, especially concerning the quality of life and well-being of subjects with different communication disorders. We must bear in mind, however, that the authors discussed the use of meditation as a complementary therapy that does not substitute other treatments.

As far as improvement of quality of life and well-being are concerned, several works have discussed the relation between those aspects and improvement in the physical and mental health and life expectation. Mindfulness meditation, considered a distinct form of awareness and attention, is associated with a number of well-being indicators related to the increase of self-awareness and self-regulation.

Harvard researchers conducted an interesting study that pointed in the same direction and published it in Science in 2010. The research aimed at assessing the frequency of wandering mind, and how much it affected the happiness of the participants in the study. The research followed up 2,250 American adults and concluded that those people were frequently wandering independently of what they were doing. Mind wandering or SIT (stimulus-independent thought) is when the individual thinks about past or future events, or situations that have never happened, thus reducing or shifting their attention from what is happening in the present. Far from being an occasional mental activity, in fact it seems to be the default way of brain functioning. The study showed that, even though people’s mind wandering more about pleasant topics than about negative or neutral ones, they were not happier when they wandering about pleasant topics than when they thought about the activity they were performing at that moment. The researchers state that the set of those results suggests that the mind wandering was the cause rather than the consequence of unhappiness. Even though mind wandering is a default activity of the mind, the possibility of breaking the vicious circle between mind wandering and negative emotions might lie in meditation practices. Mindfulness meditation is a practice based on experiencing the present moment with full awareness. It aims at reducing the uncontrolled chain of thoughts.

Generally speaking, studies on meditation from different areas of knowledge indicate that the body care cannot be disconnected from the mind care, since those two aspects should be considered as unity. Meditative practices that interfere directly in the continuous chain of thoughts seem to play an important role in the health-illness processes, well-being and quality of life, as many of the works we cited detected.

Meditative practices, mainly those that originate from Eastern philosophical systems, are not concerned about making the individual change negative thoughts or focus on positive ones. Instead, it aims at helping the individual understand the nature of the thought itself, its immateriality and transiency, gradually leading them to non-identification with them.

BUT WHAT IS MEDITATION, AFTER ALL?

A group of researchers at UNIFESP (Universidade Federal de São Paulo) proposed a definition of meditation that is much cited in scientific works. In their view, meditation should encompass the following requirements: use of a specific technique, a self-induced state that leads,
at some point, to a muscular and “logic” relaxation, and use of ability to direct the focus of attention (named “anchor”).

Meditation may be considered a voluntary and persistent activity of the practitioner in (re)directing their attention, often turned to mind wandering, and focusing on a single object (“anchor”) that might be, for example, breathing; a sentence; their own body or a specific part of it, an image or a sound. Anchoring of attention may also happen in the present moment in relation to the environment where the practitioner is (noises, sounds, smells, temperature), in relation to themselves (body sensations and movements, emotions, thoughts) or in relation to the action being performed at the moment (walking, eating, driving, speaking, etc.). In this way, some meditative practices allow the mind to become focused and attentive to it, and the practitioners to become observers of their own thoughts. This observation causes a splitting: the subject (observer) is at the same time the object of observation (the observed), indirectly triggering a process of self-knowledge and self-regulation, as previously discussed.

There are countless meditation techniques, the best known and most widely used in researches carried out in the West being transcendental meditation, mindfulness, zen, Vipassana, among others. A known program of stress reduction - Mindfulness Based Stress Reduction - is based on different meditation techniques, has been widely used in the health area, with several scientific studies showing its benefits.16

In addition to the health benefits we already mentioned, the more experienced meditation practitioners might experience a feeling of self-transcendence and deep connection with the world and others. This experience is known as samadhi or nirvana in the Eastern tradition. In the West, that experience has been the focus of interest of several researchers, since they consider it as a differentiated state of consciousness that is distinct from the states of sleepiness, wakefulness and dream.15

Freud had already addressed those experiences, calling them “oceanic feeling”, in the very beginning of his famous work “Civilization and Its Discontents”. Based on his exchange of correspondence with the winner of the Nobel Prize in Literature of 1915, Romain Rolland, Freud stated that this feeling could be translated as a sensation of eternity, of something limitless, of being connected with the external world. In addition to having experienced those feelings, Rolland was also the biographer of several spiritual leaders in India. In his final analysis of this feeling, Freud postulated this feeling is a fragment of infantile consciousness when the infant begins to differentiate himself from the world and it is in association with a feeling of ecstasy and well-being.

In spite of the similarities with the psychotherapeutic process (it fosters the reduction of repetitive thoughts and helps the individual develop abilities to deal with automatic thoughts), meditation does not deal directly with the contents that emerge, which are observed and understood as mental flows.15 Rather, meditation as well as psychotherapy might bring about the elimination of ego barriers, undoing conditionings and programming of the mind, creating a state of psychological freedom.

Final Considerations

The scanty number of publications that discuss meditation in the area of speech therapy contrasts with the vast amount of scientific publications on meditation applied to health. Such contrast points to the need for speech therapy to come closer to IPCs, discussing their possible uses as a complementary therapy in the cases of speech alterations.

The publications regarding communication disorders and meditation have aroused the interest of researchers mainly in this last decade. Such publications pointed to possible uses of meditation in various communication disorders. On one hand, they demonstrated the viability of this population learning meditation and, on the other hand, the need for researchers to adapt those techniques according to the specificities of each clinical condition.

The main contribution of those studies to the area is the potential for an improvement in the quality of life and well-being of the practitioners, factors of extreme importance if we consider the possibility of enabling those individuals to handle both their difficulties and the stress that results from them.

In this sense, it is adamant that the Speech Language Pathology and Audiology area follow the discussion on the use of IPCs, especially meditation, which is growing deeper and broader day by day. Moreover, it is important to discuss their benefits for the mental and physical health, the well-being and the quality of life of its practitioners.
This significance is due to the fact that the work of a Speech Language Pathologist and Audiologist converges exactly to the same objectives, that is, improvement in the quality of life and autonomy of the patients.

The Brazilian Ministry of Health has been encouraging and regulating the insertion of IPCs in the SUS, especially in Primary Care, since such practices are based on a broad view of the health-illness process, which favors global care and self-care. In spite of the countless scientific studies pointing to its benefits, it still has not received due consideration in the scope of public health services in Brazil, in the Brazilian scientific production and, mainly, in the training of health professionals. The guidelines of NASF (Centers of Support to Family Health) stress the need for the “articulation among university-service-community as a way to potentialize the dimensions of integrality and interdisciplinarity”4 (pg. 139). The scientific research on IPCs, therefore, could play a fundamental role in this context, contributing to a more effective integration of those practices in the health services to the population.

Consequently, we suggest that further studies on meditative practices be carried out in different clinical and non-clinical contexts, considering the importance of including care with mental activity in the health care. We also suggest more studies that associate meditative practices with Speech Language Pathology and Audiology be carried out in order to make known the possible benefits of those practices to the area.

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