164 - THE RELATION BETWEEN THE PHYSIOTHERAPY AND THE TECHNOSCIENCE

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Introduction

In today's world we live in the science progresses quickly and in the form of technology that comes in all relations, a fact that contributes to reshape the relationship more complex and the inherent health professional, in this case physiotherapy. These improvements in relations require the incorporation of new concepts and values, which implies the indissoluble link between science, technology and physiotherapy. The science of modifying the daily professional and must be in the form of technology in all areas the pace of transforming historic production of professional practice (Sasso,2001).

Recovering the speech in the history of physiotherapy is a condition to establish the relationship between the physical and technoscience.

According to Rosen (1980), ancient civilizations have used nature's resources, such as heat, water and electricity for pain relief or simply as a form of relaxation and care for the body. The massages and physical exercise were also charged by Greek peoples. Among the Romans, there is Galen, a eminent observer and investigator, who then described muscles, bones, brain, nerve and vascular system with wonderful richness of detail. Galen also applied diets, drugs and treatments in their lofty physiotherapy (Rebelatto;Botomé,1999).

In the XVI century, the artist and researcher Leonardo da Vinci has done several studies on the human gait and body mechanics. And other scientists have also contributed to the evelopment of Kinesiology, as Galileo Galilei, Alfonso Borelli, Giorgi Baglivo among others (Rebelatto; Botomé, 1999).

Industrialization, which started in England, was characterized as a time of social transformation determined by large-scale production, the increasing use of machines with long, exploratory and stressfull days of work, in addition to child labor. Thus, the situation of workers and their working conditions were the worst possible: damp places and poorly ventilated, pitiful wages, poor sanitary conditions, poor food, which, allied to the disorderly urban growth, generated an increase in morbidity and mortality, causing a major political impact , Cultural and social (Rebelatto; Botomé, 1999; Rosen, 1980).

From the twentieth century have been many changes in health. According to Sanchez (1984) due to increased complexity in science and technology and also to increase the number and variety of cases from cases involving the Great War and the epidemics of polio, the health care that was previously restricted to some few professions, suffered a profound transformation, when you delegate tasks to others, forming teams of health workers with certain duties and functions. The schools first appeared in Germany in 1902 and 1918 in Kiel and Dresden respectively. It highlighted the importance of the development of numerous joint work between doctors and physiotherapists, especially at the beginning of the twentieth century, particularly the German physician Rudolf Klapp, which together with the physiotherapists and Blederbeck Hess developed the method Klapp (Barros, 2003).

In countries attending the first world war, the large number of dead and maimed led the decline in active labor force, creating an urgent need to reintegrate the sequelae of war to force productive. In this age are the major rehabilitation centers, places where they were prescribed and carried out reaprendizagens driven, the functionality, among others. The rehabilitation was developed mainly through technical kinesiotherapy. After the war, the physiotherapy treatment has been developed for various diseases, especially with regard to polio, which had its first major epidemic in the United States from the first decade of the XX century, requiring an enormous amount of skilled professionals, among them is the physiotherapist, mainly between the years 1940 and 1950 (FIGUEIRÔA, 1996).

According to the historical section of the official website of the American Physical Therapy Association (American Association of Physical Therapy), the physiotherapists formed their first association in 1921, and initially did not accept men in the association, which only happened from the decade of 30. In this decade, the number of physiotherapists members of the American Association did not go to 1,000, but with the changes in historical context the number of associates was to 8,000 in the 50's, thus increasing the number of schools forming in the same period from 16 to 39 and in the 60s physiotherapists were 15,000 Americans in full professional activity.

Napoleon Bonaparte contributed, indirectly, for the development of the first package of Physiotherapy in Brazil, to invade Portugal and that the Portuguese royal family disembark in the country in 1808. With the monarchs, came the noble and there was also the human resources in various areas to serve the Portuguese elite, from passing through these lands. The biggest contribution was the deployment of Portuguese schools and doctors, in February, 1808 in Bahia and Rio de Janeiro on Nov. 5, 1808, and the resources of physiotherapy were part of medical therapy (Barros, 2003).

During the 50's, Brazil suffered an outbreak of industrialization through a bold plan for developing the then president of the republic Juscelino Kubitschek, the Plan Goals, popularly known as "Fifty years in five." It was at that time that they have settled in Brazil the factories of vehicles Ford, General Motors, Volkswagen and Willys. Thus, accidents at work from the automotive industry, needed to share a physical rehabilitation, to make the workers again ready for production. In the same decade, the incidence of polio affected many victims with sequels driven, and once again there was the need to treat, rehabilitate and heal individuals to reintegrate them into society and their normal daily activities (Rebelatto; Botomé, 1999).

The jump in exceptional recognition of professional physiotherapist happened in 1969 when the military that ruled the country in 1969 (the ministers of War Navy, Army and Air Military), has signed the Decree Law No. 938 and in particular by writing their first three articles:

"Article 1: It is ensured that the professions of physical therapist and occupational therapist observed the provisions of this decree-law.

Article 2: The physical therapist and occupational therapist, graduates of recognized schools and courses, are top-level professionals.

Article 3: Is the private activity physiotherapist run physiotherapy methods and techniques in order to restore, conserve and develop the physical capacity of the patient. "

Initially the fundamental characteristics such as physiotherapy had technical training and rehabilitation of human beings through the use of the media. The conduct physiotherapy was carried out only in accordance with the diagnosis and

prescription.

Concomitant with this reality, North America and Europe, some scholars, like Carl McConnel and Meziére, play concepts of whole and entire, that is, understand and treat the patient as a whole, within its socio-economic context and cultural. It was then that the physiotherapy began to be perceived as science, as an instrument of scientific knowledge in search of cause and effect (Petry, 2006).

In Brazil, this whole idea of completeness and began to be discussed only in the 80s and 90, due to the exchange of continental and accelerated production of scientific knowledge.

In this way the whole interdisciplinarity and the paragraph 10 of resolution COFFITO of 03 July 1978 created the Committee on Professional Ethics of Physical and Occupational Therapy, determining that these professionals provide assistance to man the three levels of health care: promotion, treatment and recovery. Becoming a physiotherapy an applied science, whose main subject is the study of human movement, using its own resources, with which (considering the initial capacity of the individual, both physical, the emotional, such as social) seeks to promote, improve or adapt these capabilities, thereby establishing a therapeutic process that involves therapist, patient and physical resources and / or natural, rational employees. The physical therapist has the duty to use all technical and scientific knowledge which is in its power to prevent or minimize the suffering of human beings and prevent its extermination (Coffito, 1978).

Realizes that this period of 40 years left to make the physical characteristics of technical training, to restore the human being through the use of the media and lay pipelines fisioterapêuticas only in accordance with the diagnosis and prescription. Came to be perceived as science, therefore, seeks to guide the scientific clinical practice, it becomes increasingly complex and varied, increased at every moment of techniques and methods more effective and accessible to the population.

It can be said that physiotherapy is an applied science with the object of the studies human movement in all its forms of expression and potential. Physical acts both in pathological changes in its organizational and psychological repercussions, with the purpose to promote, improve or adapt the individual to improve quality of life. Already the technology is seen as a facilitator for the application of science to everyday human. Based on these assumptions this study aimed to investigate the relationship between the physical and techno.

Methodology

To achieve the proposed objective has been chosen as a method to conduct a literature review, with the keywords: physiotherapy, techno and science. We selected articles, theses, dissertations and books. The period of publication was selected 1996 to 2003. And we did not find any articles related these three key words, so it was conducting that relationship with the keyword individually.

Result

The agent responsible for the transformation of physical therapy is the technoscienci. Technoscience is a word to denote the interactions emerging from the combination of technology and science (Paese, 2007).

Over the past decades, and as a result of close links between science, technology and industry under a new, patent very established its place in the middle of all modern societies, the technoscienci.

Some consequences of the presence of technoscience are obvious in almost every activity and practice of human life (business, communications, education, nutrition, medicine, entertainment, health). Cultivating the broader sense, as social and personal relationships are no exceptions to this rule, it is important to keep in mind that the techno is not only machines, but a system that also includes new ways of economic relations / policies along with diagrams different social organization. This system not only shows what we can do, but as should be done (Basart, 2004).

The link between science and technology is solid from the mid-nineteenth century when the industry began to apply scientific knowledge in the production of goods through the use of.

In considering the development of modern industry, Marx (1989) argues that this process was responsible for the creation of the modern science of technology ". He defined as "the application of science consciously planned and systematically the effectiveness specializes second defendant" (Marx, 1989, p. 557). The definition of Marx what he calls "modern science of technology" is possibly the first conceptualization of technoscience available to us. There are two reasons:

(1) Unlike what happened until then, that the inventions resulting from the work of individuals, mostly with no scientific training, the interaction between scientific knowledge and technology becomes a prerequisite for industrial activity;

(2) The production of scientific knowledge not only seeks to deepen the understanding of a particular area of knowledge, but produce a result with some value, specialized and planned in advance, which contrasts with the idea of a science practiced so disinterested.

The development of science and modern technology can not be separated from the great transformation that has been the emergence and consolidation of capitalism as economic and social system, initially in Europe. Today, virtually worldwide.

At least to some extent you can say, so that science and technology we know are a science and technology a capitalist. From this finding, it would be reasonable to expect that the anti-capitalist movements which have over the last two centuries have their ideas as part of a criticism of such practices. What is true, however, is quite the opposite. Heirs of the optimism of the Enlightenment, the socialist movement, and in particular the Marxist, have incorporated the vision of their ideal of progress that is so firmly established in the nineteenth century, and had the science and technology in the account of the key elements for the promotion of development of productive forces, and this development practically identified with the progress of humanity. Science and technology appeared as the good side of capitalism, as achievements of the bourgeoisie which represented a breakthrough in relation to what existed before, and something to be preserved and promoted in the transition to socialism. Later, it incorporates recovery to the ideals which developmental emperor and yet somehow prevails in the peripheral countries (Oliveira, 2002).

The fact that the image of science as an activity of isolated individuals in search of truth does not coincide with the contemporary social reality on the one hand, and that science and technology have been increasingly driven by the pursuit of global hegemony of big powers and the demands of industrial development and consumption of staff there to generate and broadcast companies to imitate these processes of modernization, on the other hand, can not be underestimated. On the contrary, they seem not indicate a trend of change merely quantitative, it seems we are facing a qualitative transformation to a rupture in relation to past history. In fact, neither the time nor the space cut, usually used to differentiate the science, or basic research, technology, or applied research, are currently sense. Set the second as one whose goal is to produce knowledge with immediate application and the prospect of the first as it creates an awareness of application not only uncertain how distant is not consistent with the empirical

evidence that shows a dramatic reduction in time between the " invention "and innovation. This reduction, of course, interested companies whose survival and expansion depends on the speed with which precisely in its laboratories can shorten this time (Dagnino, 2005).

Through experience, we can arrive at the solution of any inquiry, such results in future lead to new assumptions about the same subject, that is, everything is just a cycle, however, with these "rounds" generate new knowledge increasingly reliable. With globalization and all technologies that permeate the field of management information and communication, promote the growth of scientific exponential manner (Popper, Eccles, 1992).

In this same context of globalization at the physiotherapy aimed interested in science. The accidents at work arising from the industry needed to share a physical rehabilitation, to make the workers again ready for production. Consequently, the physiotherapy deepen knowledge needed to rehabilitate the workers effectively and to produce a result that technical-scientific.

Conclusion

The Physiotherapy and science of health, has become with the passage of time, since the electric fish used therapeutically for thousands of years even the most sophisticated equipment for eletrotermoterapia, were influenced by various processes of creation and improvement. Increasingly the science contributes to the development of therapeutic resources that mimic the human physiology, and encourage the re-balancing of it (homeostasis), in the fields of prevention and treatment.

Within this perspective what can you expect for the coming years, with so many fields of science directly related to daily physiotherapy is strengthening the broad steps providing a broad and strong base for the training of professional physiotherapist, such aspects encourage a greater flow of materials scientific and intellectual reconstruction of the occupation.

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THE RELATION BETWEEN THE PHYSIOTHERAPY AND THE TECHNOSCIENCE

Abstract

In the current world where we live science advances with rapidity and in the form of technology that if inserts in all the relations what it contributes to reformulate the complex relations most intrinsic and of the professional of the area of the health, in this case the physiotherapy. The objective of this study was to investigate the relation between the physiotherapy and the technoscience. The physiotherapy is perceived in a period of 40 years left to present formation characteristics technique. It passed to be understood as science, therefore, searched recital scientific to guide the practical clinic, becoming each more complex and varied time, increased at every moment of techniques and more efficient and accessible methods to the population. This development and transformation of physiotherapy have the techno as one of the main agents responsible for these changes. Ahead of this relation between the physiotherapy and the technoscience, one gives credit that the physiotherapy foments a bigger flow of scientific materials as well as the permanent intellectual reconstruction of the professional.

Key Words: physiotherapy; technoscience; science.

LA RELATION ENTRE LES PHYSIOTéRAPIE JANVIER / PC

Resumé

Dans le monde d'aujourd'hui, nous vivons dans la science progresse rapidement et dans la forme de la technologie qui vient dans toutes les relations qui permet de remodeler la relation plus complexe et les qualifications des professionnels de la santé, dans ce cas, la physiothérapie. Cette étude visait à étudier la relation entre le physique et la techno. Perçoit lui-même dans une période de 40 ans à gauche pour faire les caractéristiques physiques de la formation technique. Est venu à être perçu comme la science, donc, a cherché la base scientifique pour guider la pratique clinique, de plus en plus complexes et variés, a augmenté à chaque instant de techniques et de méthodes plus efficaces et plus accessibles à la population. Cette évolution et la transformation de la kinésithérapie ont une technoscience comme l'un des principaux agents responsables de ces changements. Compte tenu de cette relation entre le physique et la techno, on estime que la thérapie physique favorise une plus grande circulation de la science des matériaux et intellectuel des travaux de reconstruction.

Mots-clés: physiotérapie; techno science, science.

LA RELACIóN ENTRE LA FISIOTERAPIA Y LA TECNOCIENCIA

Resumen

En el mundo de hoy vivimos en la ciencia avanza rápidamente y en forma de tecnología que viene en todas las relaciones que contribuye a reconfigurar la relación más compleja y la inherente profesional de la salud, en este caso la fisioterapia. El objetivo del estudio fue investigar la relación entre la física y techno. Percibe a sí mismo en un período de 40 años de izquierda a hacer las características físicas de la formación técnica. Llegó a ser percibida como la ciencia, por lo tanto, solicitó la base científica para guiar la práctica clínica, cada vez más complejas y variadas, el aumento en cada momento de las técnicas y métodos más eficaces y accesibles a la población. Esta evolución y la transformación de fisioterapia tienen una tecnociencia como uno de los principales agentes responsables de estos cambios. Habida cuenta de esta relación entre la física y techno, se cree que la terapia física promueve un mayor flujo de la ciencia de los materiales e intelectual permanente de los trabajos de reconstrucción.

Palabras claves: fisioterapia; tecnociencia; ciencia.

A RELAÇÃO ENTRE A FISIOTERAPIA E A TECNOCIÊNCIA

Resumo

No mundo atual em que vivemos a ciência avança com rapidez e na forma de tecnologia que se insere em todas as relações o que contribui para reformular as relações mais intrínsecas e complexas do profissional da área da saúde, neste caso a fisioterapia. O objetivo deste estudo foi investigar a relação entre a fisioterapia e a tecnociência. Percebe-se num período de 40 anos a fisioterapia deixou de apresentar características de formação técnica. Passou a ser entendida como ciência, pois, buscou fundamentação científica para nortear a prática clínica, tornando-se cada vez mais complexa e variada, acrescida a cada instante de técnicas e métodos mais eficazes e acessíveis à população. Esta evolução e transformação da fisioterapia têm a tecnociência como um dos principais agentes responsáveis por estas mudanças. Diante desta relação entre a fisioterapia e a tecnociência, acredita-se que a fisioterapia fomenta um maior fluxo de materiais científicos bem como a reconstrução intelectual permanente do profissional.

Palavras-chave: fisioterapia; tecnociência; ciência.