The emergence of medical professions of [re]habilitation and childhood: a history intertwined with theoretical tensions

Abstract  This article is the product of a review of historical-critical literature that analyzes the global historical events during the 20th century that made the emergence and consolidation of the medical rehabilitation professions possible and an examination of the ways in which these professions approach childhood. The analysis of and reflections upon the reviewed documents are outlined below according to three theoretical tensions: 1) the child of today and the adult of tomorrow, 2) the meaning of habilitation-rehabilitation, and 3) the positioning of the subject in society. To account for the breadth of these topics, the text is divided into two sections: the first covers the first half of the 20th century, the period between the wars and the emergence of [re]habilitation, and the second covers the second half of the 20th century through the present, a period of political organization and technological advances. In the contemporary era, these views of [re]habilitation are confronted by the overwhelming reality of historical conceptions of childhood. The realities that children face today are diverse and complex; therefore, it is necessary to rethink the normalizing view of childhood that was instituted in the 20th century.

Key words  Physical and rehabilitation medicine, Disability, Speech, language, and hearing sciences, Occupational therapy, Physical therapy
Introduction

Medicine has ventured into diverse research and practice pertaining to life, death, health, and disease. Explanations of medical lore date back to ancient practices based on harmony, balance, and cosmic order. These medical practices have been projected onto modern experimental medicine since the 19th century with the strong influence of positivism, especially in Europe. This consecrated medicine was regarded as a source of unquestionable truth that gave special importance to the body and stimulated the development of new medical specializations. The health sciences defined normality in opposition to the pathological, and these concepts were located at the center of all medical practice, to the point that today, that expert knowledge is responsible for regulating the lives of individuals.

The concept of ‘normal’ has been established strongly in everyday experience, even more so since the era of industrialization, which demanded an efficient body that could respond to a capitalist economic system. This model of the productive body pointed to health standards dictated by medical science, which presupposed that the human body had a particular condition and level of function.

Like medicine, childhood was consolidated as an autonomous category in the modern age. Medical science radiated its knowledge to the care of children, so that in the 19th century, the scientific study of this population was distinguished from the study of adults; even in Central Europe, pediatrics appeared as an independent branch of medicine, gradually separating from obstetrics and internal medicine.

Little by little, throughout the 20th century, the expectations of the child population led to the consolidation of professions that focused on children’s development and helping children achieve skills that will position them to function in today’s world. The objective of this article is to analyze the global historical conditions during the 20th century that allowed the emergence and consolidation of the [re]habilitation health professions and to examine their approach to childhood.

Methods

A literature review guided by a conceptual theoretical interest in the historical relationship between childhood and rehabilitation concepts was performed. Based on the question, “What did childhood [re]habilitation imply, beginning with the emergence of the rehabilitative medical professions?”, scientific documents that gave accounts of these relationships were searched. This review involved constructing meaning cores and grouping these cores into two sets of texts.

The first set of texts was oriented towards the history of professions such as physical medicine and rehabilitation, physical therapy, occupational therapy, and speech and language therapy, which we believe form the scientific discipline base of rehabilitation programs, especially in the United States and Europe, which have heavily influenced the development of Latin America. The other set of texts was oriented toward childhood from a historical perspective that included not just medical but pedagogical and social research that intersected with the history of rehabilitation.

Although documents published during 2003–2013 were preferred to maintain a current perspective, documents published outside this period were not excluded because in this historical trajectory, it was necessary to refer to sources published in previous years. A theoretical route was constructed that related the concepts of [re]habilitation and childhood with contextual aspects particular to the 20th century. An exhaustive reading of these texts entailed deconstructing the information from a critical perspective and establishing the intertextual relations from which the theoretical tensions that are discussed in this article emerged.

Development and discussion

The convergence between the concepts of childhood and rehabilitation imply that there are different ways of considering children. This implication is revealed by the different theoretical models that medical science in particular offered to explain the relationship between man and the world. The strong influence of the Darwinian theory of evolution, ideas about the degeneration of the race, and the eugenic discourses derived from the theories of Galton and Quetelet that have been positioned in medical science since the 19th century focused attention on the study of the child population.

These theoretical discourses differentiate between normal and abnormal children. According to Donzelot, the designation of ‘abnormal’ was given to children with problems related to a mental or physical illness, those who presented character disorders, school misfits, and those
who suffered deficiencies in their environment. For the purposes of this article, we will call them ‘children with disabilities’ to overcome the labels that in past decades were given to children who lived in irregular situations or were ill, difficult, handicapped, or impaired and to orient our discussion toward the current view of the child in the habilitation and rehabilitation context.

In the intersection of medical science and childhood, we found theoretical tensions, represented in Figure 1, that relate to historical events in the development of medical knowledge regarding the habilitation/rehabilitation and the positioning of childhood, which in the 20th century was considered a characteristic stage of human life and valued in terms of the future and the hope of nations.

The first theoretical tension is between the child of today and the future adult. It is clear that for the child to develop into a good adult, the child should be very well prepared. That is, this child-adult dichotomy suggests that the child will not be a child forever and that the quality of his/her childhood is directly related to the type of adult that he/she will turn out to be. Hence, the importance of childhood: the child should be happy and free of trauma, should develop properly, and should do everything for his/her own sake and for the sake of his/her future. If this happens, the child is likely to be a happy, successful adult and contribute to society.

The second theoretical tension is related to the concepts of habilitation and rehabilitation: we must habilitate the child and rehabilitate the adult. In this sense, habilitation involves making someone or something skillful, apt or capable of a particular thing; rehabilitation involves habilitating again or returning someone or something to a former state. In some countries, the terms are used differentially, emphasizing that the needs of those who are born with disabilities differ from those whose disability is the result of an illness. For Vera & Pinzón, the concept of rehabilitation is applied to adults who have lost some capacity and who receive treatment to recover from or compensate for their loss, while habilitation refers to treatments provided to children who have not acquired a particular skill because of age and brain immaturity and to help them require it.

Therefore, in this article, the concept of [re]habilitation will refer to both habilitation and rehabilitation because what prevails is the idea of normality, the intention of returning something that has been diverted to its original position. Both terms refer to accomplishing, maintaining, or reestablishing a high degree of functional capacity and possible independence for the self-fulfillment of established functions within the society, either for children (and their potential as adults) or for adults.

The third theoretical tension is the subject-society relationship. Medical knowledge’s guarantees about the prolongation of life, the health-disease relationship, and the birth of prophylaxis suggests an important relationship between the subject and his/her environment. This relationship shifts the focus of the intervention from the subject towards society. In Colombia, comprehensive habilitation/rehabilitation is a continuous and coordinated process aimed at maximally restoring the disabled person’s functional, physical, psychological, educational, social, professional, and occupational aspects to reintegrate him/her as a productive member of the community. This approach allows us to see how [re]habilitation of the body shifts towards the social, educational, and occupational, thus presenting the possibility of mobilizing these sorts of conceptions towards social models of disability. These approaches are sufficient to visualize how throughout history, especially in the 20th century, a series of professional initiatives and policies emerged to address childhood from the standpoint of pediatrics, radiology, orthopedics, and even psychiatry and psychology, giving rise to the medical [re]habilitation professions. Consequently, in relation to childhood, these professions reflect a considerable demographic expectation of healthy and productive bodies. To discuss this historical perspective, two sections are presented: the first covers the first half of the last century, the period between the wars and during which [re]habilitation emerged; the second covers the second half of the 20th century through the present, a period of political organization and technological advances.

First half of the 20th century: The emergence of the [re]habilitation medical professions

Although the beginning of global [re]habilitation dates back to ancient Greece, with manual therapy and hydrotherapy, it was during the 20th century that the academic and scientific foundation of the [re]habilitation medical professions first emerged. This field initially focused on adults, especially with the influence of two fundamental factors: war and occupational accidents.
The First World War produced a large number of wounded soldiers who survived with disabilities; after 1918, countries such as the United States implemented rehabilitation programs and vocational education to help veterans reintegrate into society and find employment. Additionally, in England, Sir Robert Jones, considered the pioneer of rehabilitation in that country and one of the founders of modern orthopedics, focused on treating injured soldiers using a system he called ‘rehabilitation therapy’, which later became known as physiotherapy. This type of rehabilitation came about as a result of formal training programs, such as the School of Physiotherapy at the University of Otago, New Zealand (1913), and physical therapy programs at Reed College and Walter Reed Military Hospital in the United States (1914), pioneering institutions of physiotherapy inspired by four nurses who formed the ‘Chartered Society of Physiotherapy’ in Great Britain in 1884.

In the following years, physicians investigated means of increasing health care and ventured into the use of physical therapy professionals. Radiologists were the first to use X-rays as a diagnostic tool, while another group of physicians ventured into physical therapy as a specialty and in 1933 created the American Physical Therapy Association, which recommended the certification of qualified technicians in physical therapy. However, in the late 1930s, the interests of physical therapy physicians drifted from those of radiologists, and a group of medical specialists in physical therapy led by Dr. Frank Krusen of the Mayo Clinic in Rochester started formal education programs and established quality standards and extension services to serve the disabled population. The first department of physical medicine and rehabilitation in the United States, the first graduate school of medicine, and the first 3-year residency in physical medicine, which later was renamed physical medicine and rehabilitation, were created. By 1938, a group of physicians practicing this profession in the United States formed the Society for Physical Therapy Physicians, which included representatives of central Europe and Scandinavia, where physical therapy and hydrotherapy had achieved great respect. Dr. Krusen is considered the ‘father of physical medicine’. In 1939, he proposed the term ‘physiatry’ for this medical specialization, derived from the Greek words ‘physi’, relating to physical phenomena, and ‘iatreia’, which refers to medical treatment.

At that time, childhood was perceived as a detached stage of adulthood, and its history was linked to measures of protection, education, and hygiene. The incipient field of children’s medicine in the early 20th century made alliances with schools and families, presenting medical-pedagogic discourses for the benefit of childhood. During that time, children with disabilities were heirs to a tradition of exclusion because of disparagement or the fear generated by their presence, a position that had been strengthened over the past centuries by religious explanations for disability. However, in the early 20th century, the need for a comprehensive approach to childhood emerged because of the great value that children held for the family and because of the relationship that children would have with the future as adults in society. In addition, rehabilitation in childhood also began to take hold during the decades of the 1930s and 1940s because of such significant events as the polio epidemic, which afflicted children worldwide and left the survivors severely paralyzed. This event shifted the focus of care more on the child and the family, especially the mother, who had to provide the necessary care for children who were disabled by the disease.

Against this background, in 1940, Elizabeth Kenny, an Australian nurse, articulated a revolutionary treatment for the victims of polio that used warm, wet compresses for muscle spasms and muscle manipulation to re-educate the muscles. Although it was controversial within physical and rehabilitation medicine at the time, this method, later known as ‘the Kenny method for treating infantile paralysis’, became a key aspect of aftercare for patients with physical disabilities and pioneered modern physical therapy. The increased number of children with polio made children the largest age group with physical disabilities. Although the development of programs for children with disabilities progressed more slowly than that of programs for adults, the growing number of children with disabilities led to the implementation of early intervention programs, child care and child rehabilitation to improve children’s quality of life and increase their chances of being productive members of society as adults.

This fact further entrenched the medicine-school relationship. A marked influence of the hygienist discourse could be observed in the school environment, which was considered the origin of many diseases. Similarly, a strong educational campaign was initiated towards families, especially mothers, who were educated about hygiene, nutrition, and even moral habits. In
addition, the incipient fields of child psychiatry and evolutionary psychology were increasingly developing a classification of abnormal children: physical abnormalities, psychological abnormalities, and abnormalities related to other structural deficiencies, such as deafness, blindness, and mental retardation, were ratified by the professionals who were flooding the field of childhood medicine.

This scenario, coupled with medical developments pertaining to children, brought together a number of professions. For example, speech therapy, which had centuries-long history in areas related to medicine, rhetoric, and special education focused on audition, speech, and language treatments, responded to the needs of the moment; in 1925, this profession was consolidated in the United States with the creation of the American Speech-Language-Hearing Association (ASHA). During this boom period of rehabilitation, the 20th century era of language therapy was initiated, and concepts, diagnostic tools, and scientific knowledge regarding the causes and conditions associated with communication disorders in children and adults were implemented.

At the same time, occupational therapists (initially called occupational technicians) were incorporated into rehabilitation services. In 1915, with the impetus of their founder, Eleanor Clarke Slagle, a nurse and social worker, the first occupational therapy schools were started in Chicago. This profession worked in conjunction with mental health through so-called ‘moral treatments’ in which psychiatric patients engaged in therapeutic activities that were regulated, directed, and adapted to their environment through the use of occupation as a therapy, resulting in improved performance in activities of daily life. However, the world wars marked an important development for occupational therapy, which then began to serve a new group of people with disabilities that included physical illnesses, war wounds, and chronic illness, among others. Thus, physical medicine and rehabilitation became the engine that drove occupational therapy during the 1940s and 1950s. A change in the philosophy in the therapeutic action of psychiatry was also initiated and was vital to the future modulation of this profession, which eventually extended its role in helping to promote the health and welfare of the individual.

The positioning of physical medicine and rehabilitation encouraged the recognition of therapeutic tools such as mechanotherapy (also known as medical gymnastics, orthopedic gymnastics, kinesiotherapy, or heliotherapy), which included exercises, manipulations, and massages. Professional organizations in this area that responded to the medical needs of the time were also created in the United States and Europe. However, the arrival of wounded soldiers during the Second World War increased the demand for physical therapists in military hospitals. This motivated the creation of organizations for this practice, and the Baruch Committee on Physical Medicine (1943) and the American Board of Physical Therapy were formed (1947). Similarly, in 1945, the American Medical Association officially established the field of physical medicine and rehabilitation, which is also known today as physiatry. This area of medicine helps patients regain control of their lives through the restoration of their bodily functions. The creation of these organizations strengthened the core of physicians dedicated to promoting, facilitating, developing, and establishing the field of rehabilitation medicine.

Although some physicians practiced physical medicine (the treatment of acute diseases using physical agents) and others practiced rehabilitation medicine (the psycho-social adjustment of people with disabilities), the fields were integrated because it was illogical for them to follow different paths. Thus, in 1949, the two concepts were integrated, and the American Board of Physical Medicine and Rehabilitation (ABPMR) was established. The ABPMR, which still exists today, aims to emphasize the concept of integrated rehabilitation teams that focus on maximizing the biological, psychological, and social functioning of people with disabilities as well as their physical and vocational skills. The organized delivery of physical medicine and rehabilitation services was thus achieved, and these services were expanded to provide comprehensive rehabilitation, not only to ease the pain of the individual but also to restore their functions so that they could integrate into ‘normal’ society.

During the same period, the creation of pediatrics and of rehabilitation medicine departments in hospital centers reduced the proportion of children who presented physical disabilities. However, a large number of children were identified with other disabilities (mental or behavioral) and also required interdisciplinary medical teams for their care. The rehabilitation concept consolidated its use of interdisciplinary teams led by medical physiatrists with the participation of physical therapists, occupational therapists, speech therapists, psychologists, nurses, caregiv-
The second half of the 20th century: child development and the consolidation of [re]habilitation medical sciences

After the end of the Second World War, the view of childhood was clearly assistantialistic, and the problems surrounding childhood vulnerability received greater attention. A movement focused on children in crisis situations was conceived to help those affected by postwar issues, various internal conflicts, and hunger, among other issues. Endemic diseases spread, particularly in pediatric populations weakened by the war, which necessitated specific attention to children. All of these movements extended to Latin America via doctors who were trained in the United States and Europe and guided by local political developments arising from various civil conflicts.

In early 1950, the British Commonwealth countries practiced the manipulation of articulations, the vertebral column, and the extremities. In this manner, physical therapists moved beyond hospital practice, and during the 1960s, they practiced in a wide variety of environments, including outpatient orthopedic clinics, educational institutions, hospitals, and geriatric and rehabilitation centers. At the same time, in France, the psychopedagogical medical center was created. Such centers had a psychoanalytical orientation and dealt with ‘difficult’ children. This approach favored the medicalized view of childhood, in which the family would assume a key role.

The start of the second half of the 20th century was marked by the creation of organizations that consolidated and spread medical [re]habilitation practices worldwide. A variety of sources provided economic support to improve the situations of people with disabilities. The following funding sources are noteworthy: the United Nations (UN), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO), the United Nations Fund for Children (UNICEF), the non-governmental organization Rehabilitation International (RI), and the International Labor Organization (ILO). The support that these organizations gave to the [re]habilitation of adults and children with disabilities promoted the recognition of [re]habilitation medicine in other countries: Australia in 1976, New Zealand in 1995, and Japan in 1996.

In Latin America, the first rehabilitation societies were created in 1949 in Argentina. In 1961, the Latin American Medical Rehabilitation Association (Asociación Médica Latinoamericana de Rehabilitación- AMLAR) was formed in Mexico with the participation of Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Peru, Puerto Rico, and Uruguay. The objective of the AMLAR was to develop knowledge about rehabilitation and means of disability prevention and treatment for people with some degree of disability and/or handicap. The AMLAR also developed public policies supporting the inclusion and social participation of disabled children. In the late 20th century and early 21st century, the demand for assistive technologies increased as a result of longer life expectancy, demographic changes, and greater participation of people with disabilities in all areas of social, employment, and cultural life and in communication. A new spectrum of professionals was added to the interdisciplinary [re]habilitation team: engineers, architects, systems experts, and bio-technologists, among others. These professionals responded to the idea of increasing co-responsibility among the family, the community, and the individual and group for ensuring the disabled person’s ability to remain connected with his/her cultural and social context.

All of these scientific and medical developments signified only greater possibilities of survival for children with disabilities, to the extent that they could overcome many types of adversity that had previously been impossible to treat and had generated high rates of infant mortality; furthermore, these advances increased the options available to give children with disabilities access to family, educational, and social scenarios. Participation in [re]habilitation processes could make a child’s disability decrease or disappear to the point that he/she was able to function in society.

In comparison, the ideal [re]habilitator, grounded in medical-assistantialistic practices, formed the breeding ground for a society obsessed with good health, where human imperfection was constantly overcome. According to
Davis, the concept of normal or average (which emerged in the 19th century) and Quetelet’s formulations concerning anthropometry, were an important step for the generalization of this idea. Quetelet’s proposal of a physically and morally ‘average man’ constituted a type of ideal man, an exemplification of all the greatness of humanity. Normality implies the majority and, in that sense, extremes were considered deviations: other, contrary, non-normal. The consequential step was for the state to normalize that which was not standard. Additionally, Galton’s studies on normal distributions described “ideal” as a hierarchical imperative that departed from normal and formed an upper extreme, an ideal of human perfection that should be reached; at the other extreme represented the inferior, where the weakest individuals were located. Within this scope, works such as Binet’s were developed addressing the concept of an intelligence quotient, which opened up a new range of terms for children who were below normal.

This line of thought served as the basis for the idea of measuring child development with a pre-established, standardized scale based on ‘normality’ parameters that all children were expected to achieve at certain ages. These scales were developed using well-argued scientific discourses that today are assumed to be unquestionable truths and perpetuate the expectation of an ideal, especially for children.

Therefore, today, children are observed very closely, and at any indication of deviation, even at very young ages, they are subjected to discipline and training that would permit them to return as much as possible to that ideal of perfectibility that would allow them to be valued for their productivity and social contributions. That ideal child, scientifically constructed according to the developmentalists’ discourses and colonized by medical science, constitutes a major core of [re]habilitation work today.

However, it is also the case that in recent years, the shortcomings of the [re]habilitation approach to disability has gradually and increasingly fallen under question. The individualistic emphasis has been combined with the social context, resulting in a bio-psycho-social approach to disability. [Re]habilitation should go beyond individual health care to create a dynamic that coexists with the increasingly widespread discourse about the acceptance of diversity.

However, the attempt to extend interventions to processes outside of the individual by decentralizing the emphasis on the healthy body has had little success. Indeed, rather than becoming a social issue, a health-centered view prevails and inevitably drives [re]habilitation professionals to further strengthen their alliance with the medical sciences. Although bodily perfection continues to be emphasized (and aesthetics contributes considerably to this emphasis), the idea of the ‘other’ as different has also taken root. This tension between the normal and the diverse generates uncertainties for [re]habilitation, and even more so when it relates to childhood, which currently breaks from all of the developmentalists’ standards that for many years focused on instilling normalizing and medicalizing perspectives.

Conclusions

In this contemporary era, [re]habilitation is challenged by conceptions regarding childhood, which is viewed as a social construct. Several authors consider that the concept of childhood has changed in important ways during the second half of the 20th century. Worldwide changes associated with globalization, deepening social crisis, the positioning of new technologies, and communication media have influenced the ways of being a child and of understanding childhood. In the 21st century, we cannot speak of childhood as a single concept; rather, there are various childhoods because, as Colangelo says, childhood “does not represent the same thing nor is it experienced in the same way in all human groups”. Additionally, in the present context, there are multiple circumstances that influence the way the children look, act, and feel. Many childhoods conceive authority not as a feature that adults have per se but as an attribute built on interactions mediated by language. Adults must overcome the discourses that refer to children as objects to mold, order, classify, discipline, and educate and accept them as social actors. This approach is about recognizing what can be done at each stage (childhood and adulthood) to transform individuals’ lived experiences and develop their capacity to be productive.

In contexts where the communication media influence the construction of subjectivities, the realities that children face are diverse and complex, and it is difficult to maintain the normalizing vision of childhood that was promoted during the 20th century. It is necessary to rethink the ways of perceiving children as active subjects, participants in their own developmental processes, and engaged in a constant search for greater
autonomy and acceptance of their particular history within one of the varied childhoods emerging in this new social order.

With respect to the theoretical tensions raised, the movement progressed from the understanding of the [re]habilitation of adults towards the habilitation of children; this movement clarifies society’s normalizing attitude, which is geared towards functionality and the notion that every person should meet an ideal of perfection. However, in the debate about what or who qualifies as “[re]habilitated”, there are no differences in society’s expectations: [re]habilitation refers to a person’s ability to achieve autonomy and functionality with respect to the role they should play in society.

Likewise, the tensions between the subject and society are outlined, suggesting how the discourses of medicine, school, family, and state permeated ideas about the “correct” or suitable ways of being a child. According to Donzalot, society leads us to think of children as smaller subjects in the legal, economic, urban/rural, public and private sense, which in turn affects those realities and ways of being a child. Additionally, pressures exerted by the state regarding medicine, the family regarding school, the judicial system regarding the family, the school regarding medicine, etc. play a role. However, beyond these intersections, from which childhood emerges, these domains have also been the focus of the shift of [re]habilitation efforts toward social approaches in which the target of [re]habilitation is not the body or the individual subject, but society. But what does it mean to rehabilitate society? How are the [re]habilitative health professions displacing their paradigms of biological functionality in favor of other social paradigms? How is this intersection between the medical sciences and social sciences becoming evident, especially in regard to the [re]habilitation of children? To answer these questions, it is necessary to understand that for children, [re]habilitation is just one possible approach; this is why it is necessary to think about the permanent interactions among the issues presented in Figure 1.

Beyond the ingrained conceptual strength and the practice of the [re]habilitation medical sciences, it is necessary to understand the importance of “shaking off” the frequent urge to stigmatize children because of their development. The idea is to break from dichotomous thinking and consider the alternative: rebelling to reveal [rebéllarnos para poder revelar] what is truly different rather than what deviates from the norm. Doing so would allow us to construct other ways of understanding this different reality, one that dwells below a normal distribution curve.

---

**Figure 1.** Interactions between the theoretical tensions postulated 1) between the child and the future adult; 2) between the concepts of habilitation and rehabilitation; and 3) between the subject and society. All of these tensions are geared towards creating/restoring a functional body.

Source: Own preparation.
Collaborations

NA Pava-Ripoll participated in the conception, organization, and methodological drafting, and P Granada-Echeverry participated in the drafting and critical revision of the article.

References


42. Davis L. Cómo se construye la normalidad. La curva de Bell, la novela, y la invención del cuerpo discapacitado en el siglo XIX. In: Brogna P, editor. Visiones y revisiones de la discapacidad. México: Fondo de Cultura Económica; 2009. p. 188-211.


