

FOREIGN EDITOR'S REPORT

Rehabilitation Research and Development in Physical Medicine in Japan: A Historical and State-of-the-Art Review

The Eighth World Congress of the International Rehabilitation Medicine Association (IRMA VIII) will be held in Kyoto, Japan in August-September, 1997. As one of the Foreign Editors of the *Journal of Rehabilitation Research and Development* from Japan, as well as the chairman of the IRMA VIII Organizing Committee, I take this editorial as a most appropriate opportunity to introduce to American and international readers a short historical and state-of-the-art review of rehabilitation research and development in this Far Eastern country that has recently emerged as one of the world's economic powers, but whose cultural and scientific contribution to the world community still remains relatively unknown.

Target of the Service: From Children to Young Adults to the Elderly

The origin of rehabilitation in Japan can be traced to the early 1920s, when Dr. Kenji Takagi, then Professor of Orthopaedic Surgery at the University of Tokyo, urged the medical profession and society in general to support his and his colleagues' devoted work for restoring independence to children with physical disabilities, mainly children with polio. Dr. Takagi considered the traditional orthopaedic approach inadequate for this task and looked for a new way of thinking. Finally, he coined a pair of new Japanese words that expressed his new ideas most appropriately. One was "Shitai-fujiyuu-ji," meaning literally "limb-and-body not-free children"; that was meant to replace the old notions, such as "crippled," "deformed," or "invalid" children, etc., emphasizing the restriction on the freedom of the child as a human being. The other new word was "Ryo-iku," which Dr. Takagi composed taking the first part (ryo) from a Japanese word meaning medical treatment, and the second part (iku) from another word meaning education (general and vocational).

Thus, Dr. Takagi's vision of Ryo-iku (treatment-education) closely resembled the present-day concept of rehabilitation as being a comprehensive, multidisciplinary effort to restore people with disabilities to their fullest possible independence. Dr.



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Takagi was instrumental in founding the Japanese Association for the "limb-and-body not-free children" in 1925, in establishing the first special school for such children in 1932, and opening the first rehabilitation center for the disabled children in 1942. He was the director of the latter until the end of his life in 1963.

World War II dealt a hard blow to Dr. Takagi's humanitarian endeavors. For example, his center was destroyed by an air raid. However, the wartime experience of rehabilitating veterans with amputation and spinal cord injury in hospitals run by the Agency for Protection of Militarily Wounded (a Japanese counterpart of the U.S. Department of Veterans Affairs) paved the way for the postwar development of rehabilitation services for young adults with disabilities.

In postwar Japan, rehabilitation for children with disabilities flourished anew, while the main cause of

disability in children shifted rapidly from polio to cerebral palsy in the early 1960s. Thus, the target population of rehabilitation in postwar years was no longer restricted to children but came to include young adults as well.

The rapid aging of the general population, with longer life expectancy resulting from medical progress and the improvement of living conditions, gave rise to the development of geriatric rehabilitation, mainly for stroke, in the 1960s.

Therefore, it is interesting to note that the emphasis of rehabilitation in Japan has shifted historically from children to young adults to the elderly, just as the life stages of a human being.

There has been a maturation process in rehabilitation from the 1970s to the present day, including:

1. the gradual transition of medical rehabilitation services for the elderly away from spa resorts and toward the cities.
2. the development of rehabilitation services in general hospitals allowing an earlier start in the acute stage.
3. expansion of target groups from the traditional persons with amputation, spinal cord injury, cerebral palsy, and stroke to those with neuromuscular disease, traumatic brain injury, lung and cardiac diseases, cancer mental illness, etc.
4. deinstitutionalization and development of community rehabilitation and independent living of people with disabilities.
5. development of coordination and cooperation among medical, educational, vocational, and social rehabilitation professionals.

Professional Organizations and Professional Education

The year 1963 was a very important landmark in the development of rehabilitation-related professions in this country. The Japanese Association of Rehabilitation Medicine (JARM), the most prestigious academic organization in this field, was founded in 1963 by about 100 physicians and surgeons. Now, after 32 years, it has a membership of more than 8,000 MDs with a small number of allied health professionals. In 1980, JARM started a board certification system for physicians whose specialty is in rehabilitation medicine. The number of board-certified specialists is now over 500.

The first rehabilitation service in a university hospital was established in 1963 in the University of Tokyo. Today, there are more than 20 professional chairs in rehabilitation medicine, and medical education in rehabilitation medicine is included, more or less, in all of the 80 medical schools in Japan.

The first school for physical and occupational therapists was opened in 1963 in Kiyose, Tokyo, with a 3-year diploma course. The first national examination for both the professions was given in 1966, and the Japanese Association of Physical Therapists (JAPT) and the Japanese Association of Occupational Therapists (JAOT) were founded in the same year. Now, after 29 years, JAPT has a membership of more than 10,000 and JAOT of about 6,000. The first junior college education (a 3-year course) in physical and occupational therapy was started in Kanazawa University in 1979. Finally, the first 4-year college course in physical and occupational therapy was started in Hiroshima University in 1992. Currently, there are more than 70 physical therapy schools and more than 50 occupational therapy schools, which means that Japan has the second largest number of physical and occupational schools in the world.

Trends in Rehabilitation Research and Development

Research in rehabilitation medicine and engineering is conducted in medical schools, in large recreation centers sponsored by either national or prefectural governments, in research institutes, in large rehabilitation hospitals, etc. The most favored topics for research in rehabilitation medicine are stroke, spinal cord injury, amputation, cerebral palsy, rheumatoid arthritis, muscular dystrophy, and traumatic brain injury. Those in rehabilitation engineering are prosthetics, orthotics, communication aids, architectural barriers, and designs for people with disabilities.

The annual congress of the Japanese Association of Rehabilitation Medicine offers special lectures, symposia, panels, and seminars, and generates more than 400 scientific papers, all related to the above-mentioned topics. Both national associations of physical and occupational therapists (JAPT and JAOT) hold their annual congresses with comparably large programs.

Also, there is an annual Biomechanism Symposium on basic and applied research and development in rehabilitation engineering and related fields.

There are three major Japanese monthly journals on rehabilitation medicine, two monthly and one bimonthly journals on physical therapy, and one monthly and one quarterly journal on occupational therapy. Currently, there is no journal on rehabilitation engineering except for the annual proceedings of the aforementioned Biomechanism Symposium.

Toward the Twenty-first Century

Rehabilitation research and development in Japan, having come of age, has much to contribute to the body of knowledge and experience in the world community of professionals working together for the benefit of the people with disabilities. We must look forward to the twenty-first century that is within our reach. Our task now is to break through the communication/information gap that is due mainly to language barriers.

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