

NEUROPSYCHOLOGICAL REHABILITATION IN FINLAND

Anu Tolonen

Käpylä Rehabilitation Centre

Key words: neuropsychology, specialized education, TBI

HISTORY

Finnish neuropsychology has been influenced by both Eastern and Western traditions. The work of Alexander Romanovich Luria has played an important role, while the American tradition (Arthur Benton, Leonard Diller, David Wechsler and others) has also had considerable influence in Finland. French experimental psychology and Swiss psychologist Andre Rey have had an effect on the work of Finnish neuropsychologists as well, especially in the area of terminology and some testing methods. The pioneer work in the further development of neuropsychology in this country, however, was done by Anna-Riitta Putkonen, whose intensive work and contacts, for example with Polish professor Mariusz Maruszewski and other colleagues, laid the foundation for Finnish neuropsychology.

Neuropsychological rehabilitation in Finland began with the rehabilitation of aphasic patients, as well as veterans and civilians injured during World War II. The rehabilitation of TBI patients has been an area of particular interest for several centers. In the early 1960s the Finnish social service system underwent major changes, and laws were passed to regulate the treatment and rehabilitation of persons who had suffered injury at work or in motor vehicle accidents. By the end of the 1960s, neuropsychology had been separated from neurology, as neurology was separated from psychiatry, which was a turning point. Neuropsychology began to grow and flourish.

Psychometric methods had been quite strongly emphasized in Finnish psychology in the 1950s and 60s, but in the beginning of the 1970s Polish professor Mariusz Maruszewski visited Finland several times and demonstrated in his lectures and patient demonstrations the merits of qualitative neuropsychological assessment and individual rehabilitation methods based on the work of Alexander Luria. Indeed, the first article on clinical neuropsychology in Finnish (published by Anna-Riitta Putkonen in 1972) was based on the Maruszewski's lectures. Afterwards, the development of neuropsychology was strongly influenced by Luria's theories, but psychometric and quantitative approaches were also practiced. The work of two of Luria's students,

Lubov Tsvetkova and E. D. Homskaja, has had a strong influence on the development and establishment of neuropsychological rehabilitation methods, especially concerning aphasic disorders. Ritva Hänninen translated Tsvetkova's aphasia rehabilitation method into Finnish.

Anna-Riitta Putkonen, Ritva Laaksonen and Ritva Hänninen have made a strong effort to establish Finnish neuropsychology and teach other colleagues intensively from the very beginning. One characteristic trait of Finnish neuropsychology is strong co-operation between colleagues. Finnish neuropsychologists have been relatively independent in their work, and neuropsychology is appreciated in clinical practice by physicians and other team members. Cooperation with Scandinavian colleagues has also been intensive, and the first Nordic Meeting in Neuropsychology was held in Helsinki, Finland, in 1982.

The first position of clinical neuropsychologist was established at the Käpylä Rehabilitation Centre in 1975. By the beginning of the 1990s neuropsychology was a specific and widely practiced profession.

SPECIALIZED EDUCATION

There is a university level specialization in neuropsychology after the Master of Psychology degree in Finland. It takes four years to complete, in addition to clinical work, and includes studies in theoretical neurosciences, working under supervision, and completing a thesis. The title granted after completion of this program the education is psychologist-specialist in neuropsychology, and also a licensed psychologist. The first specialized education in neuropsychology for psychologists was offered in 1983. Nowadays there are about 150 neuropsychologists in Finland, a country of 5 million people.

A new area in Finnish neuropsychology is psychotherapy. Ritva Laaksonen has recently started a new educational program in neuropsychotherapy for specialists in neuropsychology. It lasts 2 and a half years, and is addressed to neuropsychologists working in a rehabilitation context.

NEUROPSYCHOLOGICAL REHABILITATION

The idea of cognitive training has been quite strong in Finnish neuropsychological rehabilitation, which is understandable when considering the history of rehabilitating patients with focal brain damage. However, cognitive training as such is a limited method for rehabilitation after brain injury. It is essential to help the patient understand the effects of brain injury on their behavior and their social environment, and also to teach the patient to compensate for and manage the symptoms, and to cope with lifestyle changes. For example, the specific features and demands of TBI have created a need for more holistic rehabilitation methods. The INSURE program, an individualized neuropsychological subgroup rehabilitation program, is an internationally known, 6-week, holistic TBI rehabilitation program, which is based on the intensive and enthusiastic work of George Prigatano, Yehuda Ben-Yishay

and Anne-Lise Christensen. The program has been modified for the Finnish social services and circumstances. It is designed for those TBI patients who have realistic possibilities of a return to work, and therefore they are carefully selected in clinical interview.

A detailed description of the program has been published by Kaipio et al. (2000).

Outcome

The major problem for scientific studies in neuropsychological rehabilitation is how to measure the outcome. The outcome factor is often working ability and productivity, as in previous studies, but we should ask what the most salient factor actually is: are there, for example, psychological and psychosocial factors that better describe the real outcome, or should we focus on the subjective state (e.g. happiness) of the patient? The clinical experience of TBI rehabilitation shows that a successful outcome is achieved in patients who can obtain good awareness and management of the regulation problems in their behavior and emotional life, and generalize this knowledge into real-life situations. A prerequisite for this is often lengthy neuropsychological rehabilitation, meaning several years in many cases.

There are very few scientific studies of outcome after neuropsychological rehabilitation in Finland. It is difficult to acquire control groups in outcome studies, and it is also very complicated to control all the confounding factors in the case of outcome. So far the only controlled outcome study after neuropsychological rehabilitation in Finland was published in December 2005 in *Archives of Physical Medicine and Rehabilitation* about the INSURE-program (Sarajuuri et al. 2005). The basic finding is a more productive life and a better psychosocial outcome than after conventional rehabilitation.

REFERENCES

- Kaipio, M.-L., Sarajuuri, J. & Koskinen, S. (2000). The INSURE program and modifications in Finland. In: A.-L. Christensen & B. Uzzell (eds.), *International handbook of neuropsychological rehabilitation* (247-258). New York: Kluwer Academic/Plenum Publishers
- Sarajuuri, J.M., Kaipio, M.-L., Koskinen, S.K., Niemelä, M.R., Servo, A.R. & Vilkki, J.S. (2005). Outcome of a comprehensive neurorehabilitation program for patients with traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*

Correspondence address:

Dr Anu Tolonen

Käpylä Rehabilitation Centre

Finland

e-mail: Anu.Tolonen@invalidiliitto.fi

Received: 10 January 2007

Accepted: 28 December 2007