



Research, education and service in rehabilitation (PT/OT)

-summary of the day 19.3.2010

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Challenges of Rehabilitation

- Heterogeneous groups of people with disabilities
- We have to use or study variety of rehabilitation and health promotion programs
- Rehabilitation is combined with multiple treatment domains (medical, functional, social, psychological, vocational etc.)
- Numerous assessment instruments
- Different cultural values and ethical issues etc..

Innovations in
Outcome
assessment - CAT
Jette

Neuromuscular
diseases
EK_scale /wheelchair
Krog /Steffensen

Rehabilitation and
labour market
Urbanowski

PT/OT
research/
Academic
education
Mälkiä

Occupational
health
Sjögren

OT research
Salminen

Basic Education:
Exercise and motor learning
Kuukkanen
Multidiciplinary approach
Arkela-Kautiainen

Low back pain
in industry
employees
Kääriä



Innovations of outcome assessment

Computerized Adaptive testing

- Clinically and scientifically relevant items
- Measure both the patient's and clinicians perspective
- Useful to interpret patient status and progress (CAT)
- Applicable to different age and patient groups
- Tool to increase quality of treatment/research

**Outcome
assessment**

Professor Alan Jette



Rehabilitation in severe disabled neuromuscular diseases: EK scale

- *Validity and reliability of the EK scale*
- *Useful for adults and children*
- *Outcome measure in transatlantic medical studies*
- *Co-operation with association of neuromuscular disease (Muskelsvindfonden, MSF)- “laymen”*

**Outcome
assessment**

**Chairman of MSF Evald Krog and
researcher Birgit Steffensen**

Low back pain – sustainable problem

Back problems are the most common and recurrent reason for work incapacity

- Leads to high productivity costs for the employer
- New tools are needed to identify potential severe LBP subgroups (radiating?)
- costs/different diseases or physical fitness classes

Researcher Sanna Kääriä

Labour market



Rehabilitation and labour markets

Responsibilities:

- Employers
- Occupational health care
- Workers
- Policy makers

⇒ New technology, educational materials, websites, training workshops, ergonomics, health promotion programs (obesity, life style habits..), reducing physical demands of the work, career development
⇒ cost-effective research

Labour market

Assistant Deputy Minister
Reg Urbanowski

Occupational health

Interventions are needed for

- promoting the health of the employees
- preventing accidents and occupational diseases
- maintaining working capacity (retirement age↑)
- returning people to work from sick leaves (increase tax dollars and decrease health care costs)

•=>“general” interventions for employees at high risk of work disability vs. occupational specific interventions

Labour market

Researcher Tuulikki Sjögren

Occupational therapy vision for research programs



**Education
Research**



Laboratory/clinical research

- Feasibility of the intervention across settings and over time (need of implementation)

Effective dose of intervention

- more is better vs. minimal amount of treatment
- decision based on evidence or costs?

High quality research

- preventive interventions or treatment of chronic/serious problems
- only RCTs will do??
- meta-analysis??

**Researcher, OT
Anna-Liisa Salminen**


Science of Basic education of rehabilitation specialist

Education lay the foundation

- for career-long professional development
- lifelong learning, to support best professional practice and the maintenance of professional standards

Transforming education

- Globalization /international students and workers
- Dynamic nature of the profession and the health care delivery system /laws...
- Roles and responsibilities of the practitioners are changing (task transfer)
- Revolution of technology, new therapies....



Education
- more than a degree

Principal lecturer
Tiina Kuukkanen
Marja Arkela-Kautiainen



Challenges of PT/OT research and academic education

Academic graduates will work in research, clinical scientists, consultants to government, health authorities or other organizations with interests in rehabilitation

New trends/competition:

- excellent research,
- external funding,
- centers of excellence
- international study groups....

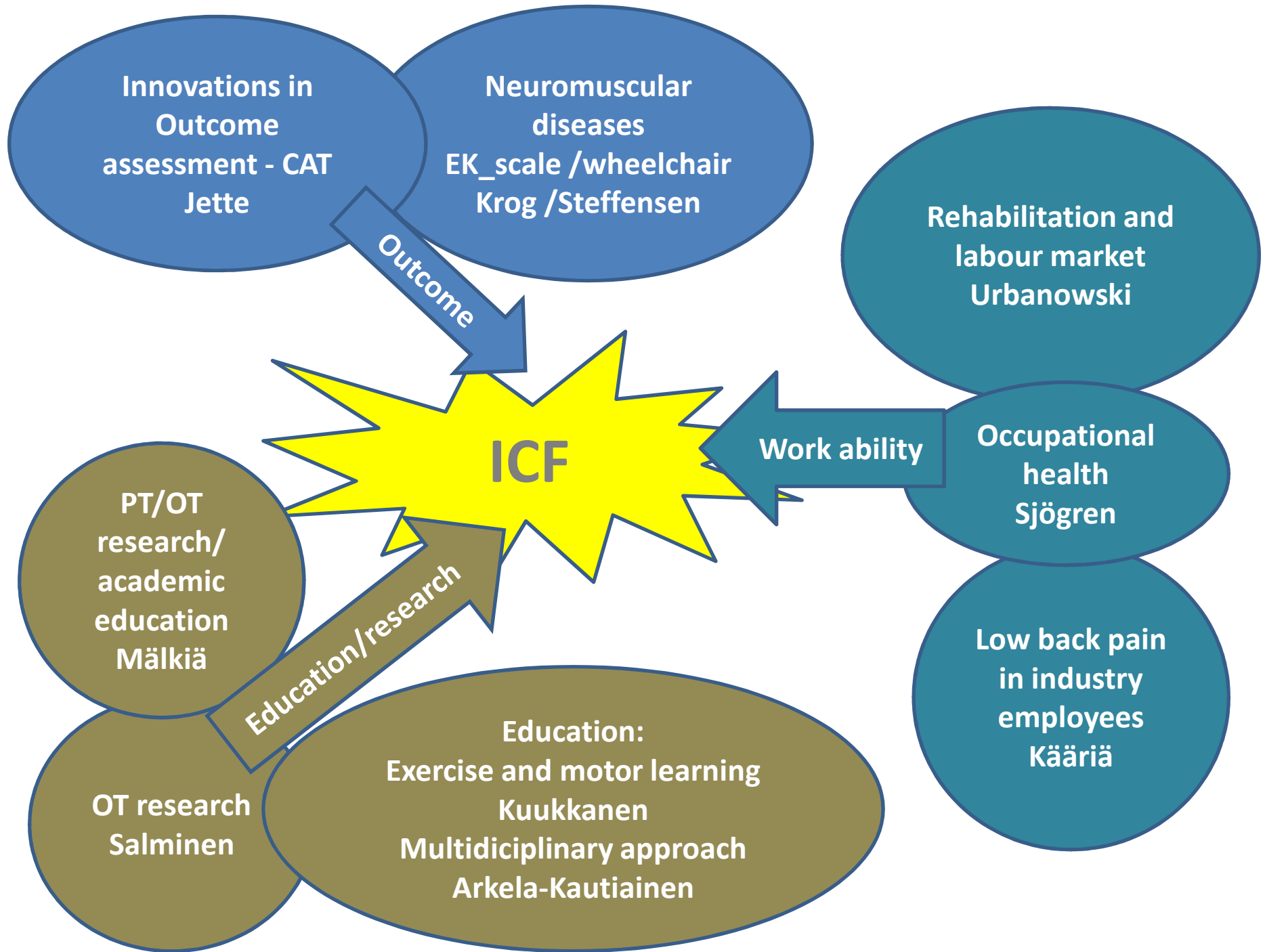
Status and funding of rehabilitation science with other biomedical fields?

The future of rehabilitation

- a great explosion of professional information
- robot based manipulation, locomotion and rehabilitation
- virtual visualisation – e.g. stroke
- dose of training: smart exercise machine

=> next generation of researchers and teachers and health care professionals








Esko Mälkiä

First professor in physiotherapy in Finland (since 1988)

- Innovator of Academic PT and OT programs in JYU
- Supervising several doctoral theses (+ masters)
- Extensive international collaboration
- Main focuses of the research:
 - physical activity and exercise therapy (MetPro)
 - rehabilitation for severely disabled persons
 - aquatic therapy
 - integrated ICF (ICDH) in physiotherapy
- We have to take care of this heritage !

**First emeritus
professor in PT**

**Looking forward to challenging future:
September 1, 2010**



*Not everything that matters can be counted
and not everything that can be counted matters.”*

– Albert Einstein

***Challenges of
Rehabilitation***

We find the focus!!!