The Bergen Experiments

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Outline of this presentation:

- Two experiments:
  - The Bergen Experiment I (1993-1995)
  - The Bergen Experiment II (1995-1997)
- Background for the experiments
- Design and Data
- Treatment effects
- Important lessons from these experiments

Some background information

- Sick leave rates were, and still are, high in Norway
- Musculoskeletal problems account for a substantial part of this.
- We have a generous social insurance system:
  - 100 percent compensation of wage from day 1 – 365.
  - Employers pay for the first 16 days
  - As of day 17 the wage is remunerated by the National Social Insurance.
- Early 1990`ies: Can multidisciplinary treatment reduce the amount of sick leave due to musculoskeletal problems?

The Bergen Experiment I (Return to work)

- Designed to evaluate a four-weeks treatment programme for workers on sick leave due to musculoskeletal pain

- A clinic was established for this purpose (Neurologist, Psychologist, Physiotherapists, Nurses)

- Treatment: cognitive as well as physical treatment (individual treatment as well as treatment in groups)

The Bergen Experiment I (Return to work)

- Well defined inclusion criteria (+ exclusion criteria)
  - Sick listed for minimum 8 weeks
  - Living in the Bergen area
  - Holding a permanent job
- Invited by the local social insurance agency by mail
- Pre-treatment testing and randomisation outside the clinic.
- Follow-up tests after 12 months by the same team that did the pre-testing.
- Labour market outcomes from national administrative registers

The Bergen Experiment I (Return to work)

- Inclusion of participants from Nov.1993 to March 1995.
- In total, 1648 were invited to participate
- Of these,
  - 560 accepted the invitation
  - 498 did not accept (returned a letter)
  - 590 did not respond to the invitation
- Of those who accepted the invitation
  - 358 were assigned to treatment at the clinic
  - 202 were assigned to standard practice in the primary health care sector

Treatment effects:

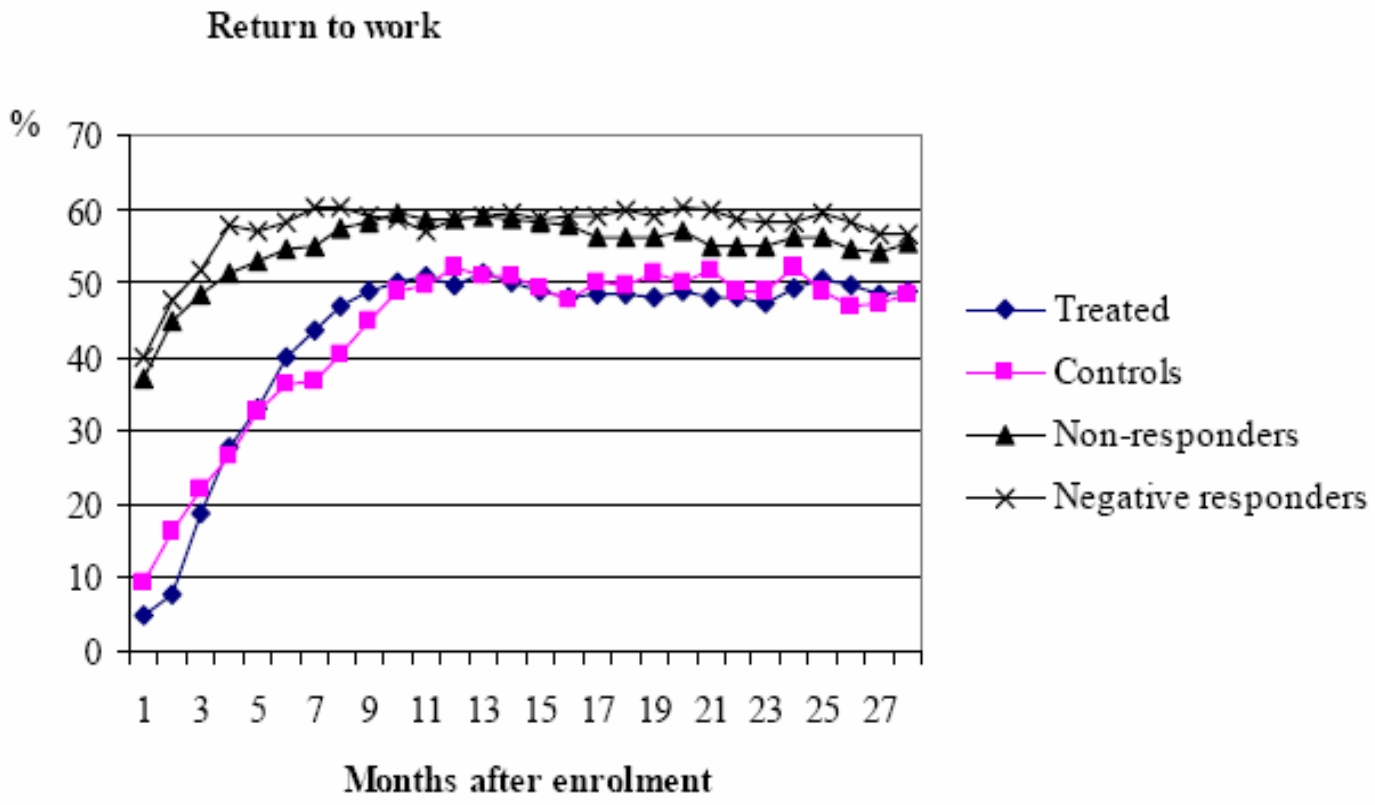
- Evaluation based on comparison of pre- and post-treatment data:
  - Treatment group scored on average somewhat better on measures of pain, functional ability and life satisfaction

  However,
  - 94% of the treated and only 60% of the controls showed up at the post-treatment examination.
  - The differences between the treatment- and the control group were not adjusted for potential bias due to attrition from the post-test!

Treatment effects:

- Evaluation of labour market outcomes based on register data:

  - no difference in return to work 12 months after inclusion



The Bergen Experiment II (Active follow up)

- Evaluate two different treatment programmes:
  - the four weeks programme (extensive treatment),
    against
  - a one-day programme (light treatment) , and
  - treatment as usual in the primary health care sector
    (control group).

- Same inclusion criteria and recruitment as in the first experiment!
- Inclusion and treatment from December 1995
  to March 1997.

A slightly more sophisticated design:

- Systematic, standardised screening before randomisation (physical tests and questionnaire):

  -group participants according to prognosis for return to work: good, medium or poor.

- After the screening, and independent of the screening result, participants were randomly assigned to extensive treatment, light treatment or to the control group:

Hypothesis:

- When comparing to treatment as usual

  -sick listed workers with poor prognosis for return to work should benefit from the extensive treatment

  - those with medium prognosis should benefit from light treatment

  - those with good prognosis for return to work should not benefit from the treatment at the clinic

Participants:

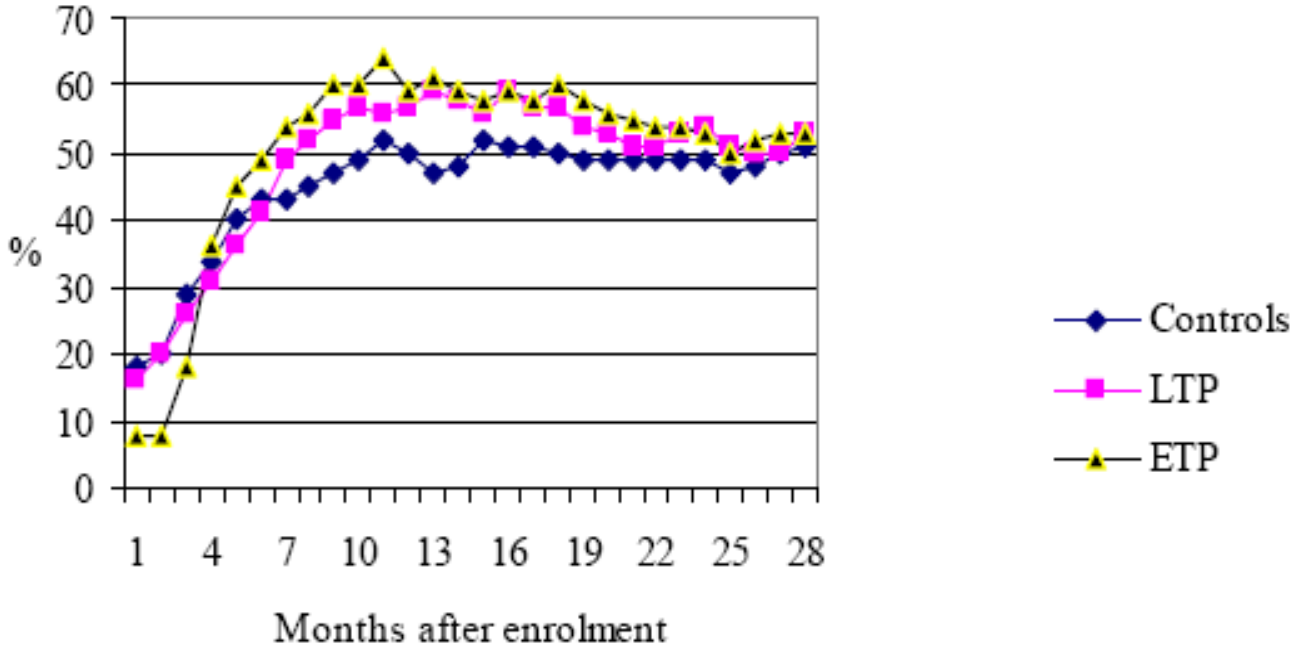
Table 2 Participants in BE-II, grouped according to treatment and pre-treatment probability for return to work (government employed workers in parenthesis).[a]

Prognosis	Treatment			
	Ordinary	LTP	ETP	# obs.
Good	70	46	26	136 (6)
Medium	120	116	92	314 (14)
Poor	73	60	51	178 (7)
# obs.	249 (15)	214 (8)	165 (4)	628 (27)

a) Due to missing data on individual sickness spells, government employed workers, 27 in total, had to be excluded from the evaluation.

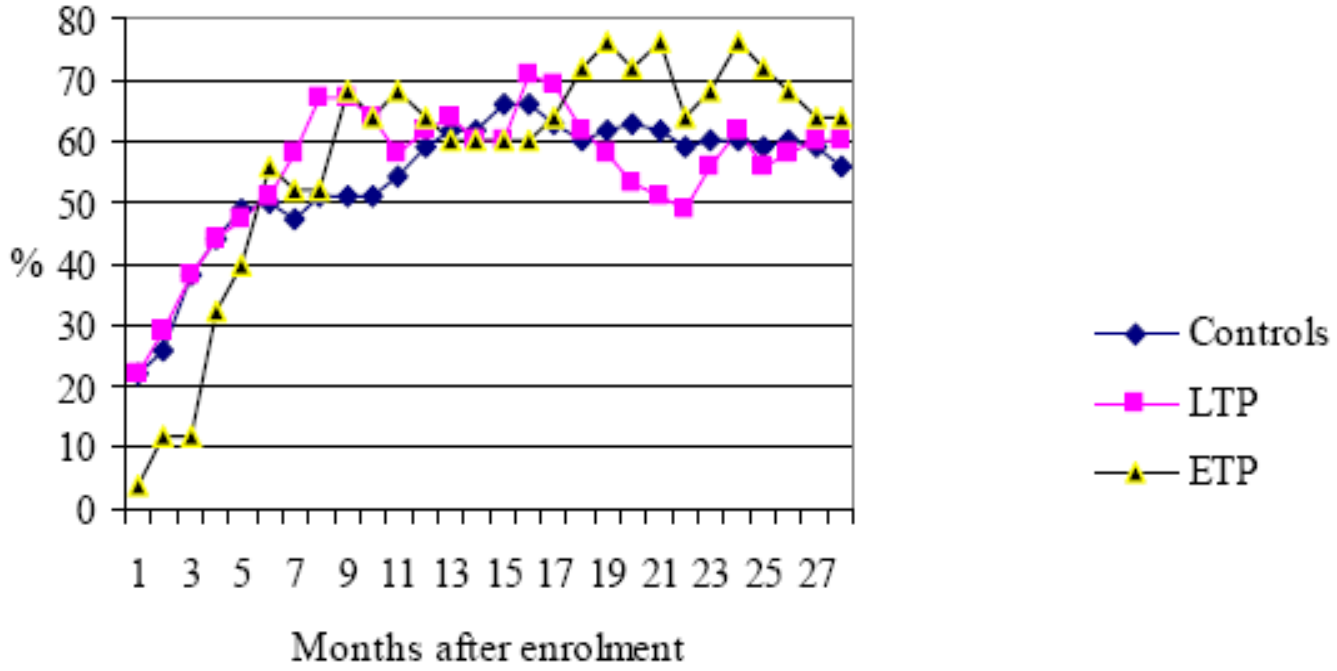
Treatment effect (return to work):

- Ignoring the screening information:



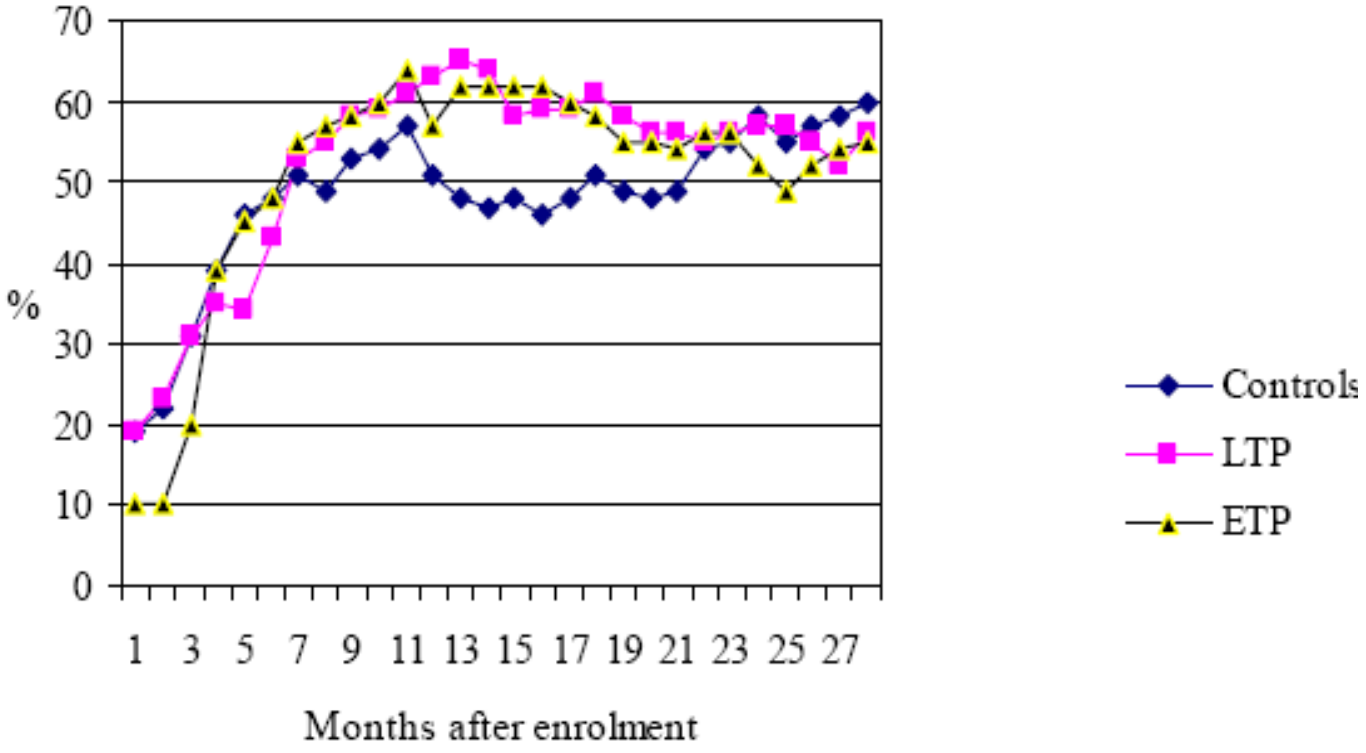
Treatment effect (return to work):

- Participants with good prognosis for return to work:



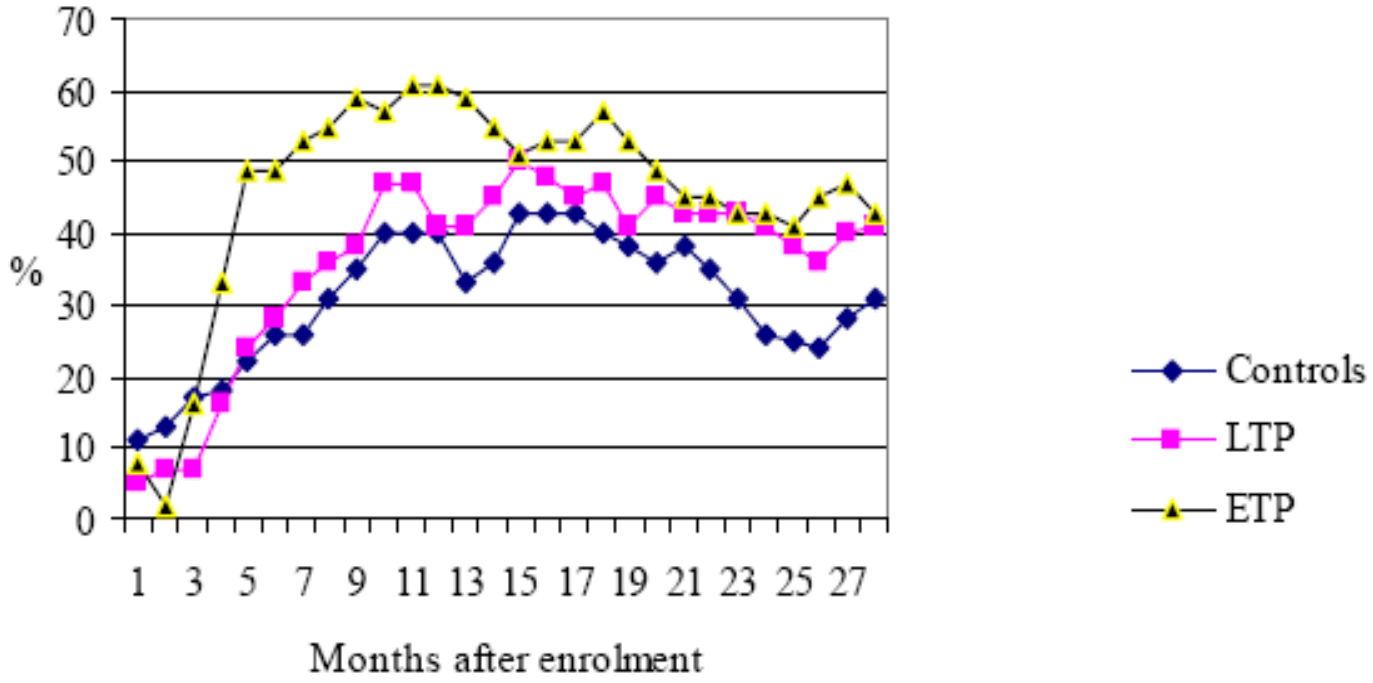
Treatment effect (return to work):

- Participants with medium prognosis for return to work:



Treatment effect (return to work):

- Participants with poor prognosis for return to work:



Lessons from the experiments:

- Attrition from post-programme follow up may very well hamper the randomisation and reintroduce potential selection bias.

  - follow-up through register data if possible

  - if not, worthwhile to put effort into the work of collecting follow-up information.

- Important to know what controls actually receive

- If possible, collect information about those who fulfill the inclusion criteria but opt out of the experiment.

Lessons, continued:

- Duration of programme effects?

  - Nice to have data for a long follow-up period!

- Heterogeneity in treatment effects – sometimes this heterogeneity is linked to unobserved characteristics (motivation, personal beliefs, etc.)

  - careful collection of pre-randomisation/treatment data may be useful.

- References with details in summary at the web.