



**Cochrane
Rehabilitation**

Universität Bielefeld

Generating evidence in rehabilitation: specific challenges and possible answers

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Trusted evidence.
Informed decisions.
Better health.



Disclosure of speaker's interests

(Potential) conflict of interest None

Disclaimer

Views developed in this talk primarily represent the perspective of the speaker and - being on a conceptual level - are not directly related to empirical evidence.

Overview

- What is the background to the present challenges?
- Is rehabilitation a special case in evidence-based health care approaches?
- What challenges have I encountered in doing evidence-based rehabilitation?
- What are possible ways and answers?





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What is the background to the present challenges?



background

- „era of assessment and accountability“, „revolution of medical care“ (Relman 1988 NEJM)
- Need for quality assurance and scientific foundation of health care
- Clear-cut orientation towards consequences of care: independent of reasons and motives for professional decisions, does the intervention do more good than harm? → core question of ebm

background

- Theoretical reasoning, plausibility or personal experience is insufficient to legitimate interventions
- Consequence: research evidence for practice is needed
- Clinical study as the ideal of evidence base in research practice (cf. Chan et al. 2014)



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Is rehabilitation a special case in evidence-based health care approaches?



One side of the coin:

No special case

- Need to legitimize what we are doing with patients in rehab care
- We have to know if what we do in rehab does more good than harm (and to what degree)
- Problem of unwarranted variation present in rehab, as in other health care fields
- Strong causal claims of interventions need a randomized-controlled study design



The turning side of the coin:

Yes, it is a special case

- There are characteristics of rehab that interfere with a “simple” evaluative framework
- Problems of rehab embedded in social law framework (“right for rehab”)
- Effectiveness of services is also dependent on context factors, such as...
 - ...the quality of the therapists (person-, not just intervention related)
 - ...the quality of interdisciplinary team work
 - ...overarching concept
 - ...organisation of care





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What challenges have I encountered in doing evidence- based rehabilitation?



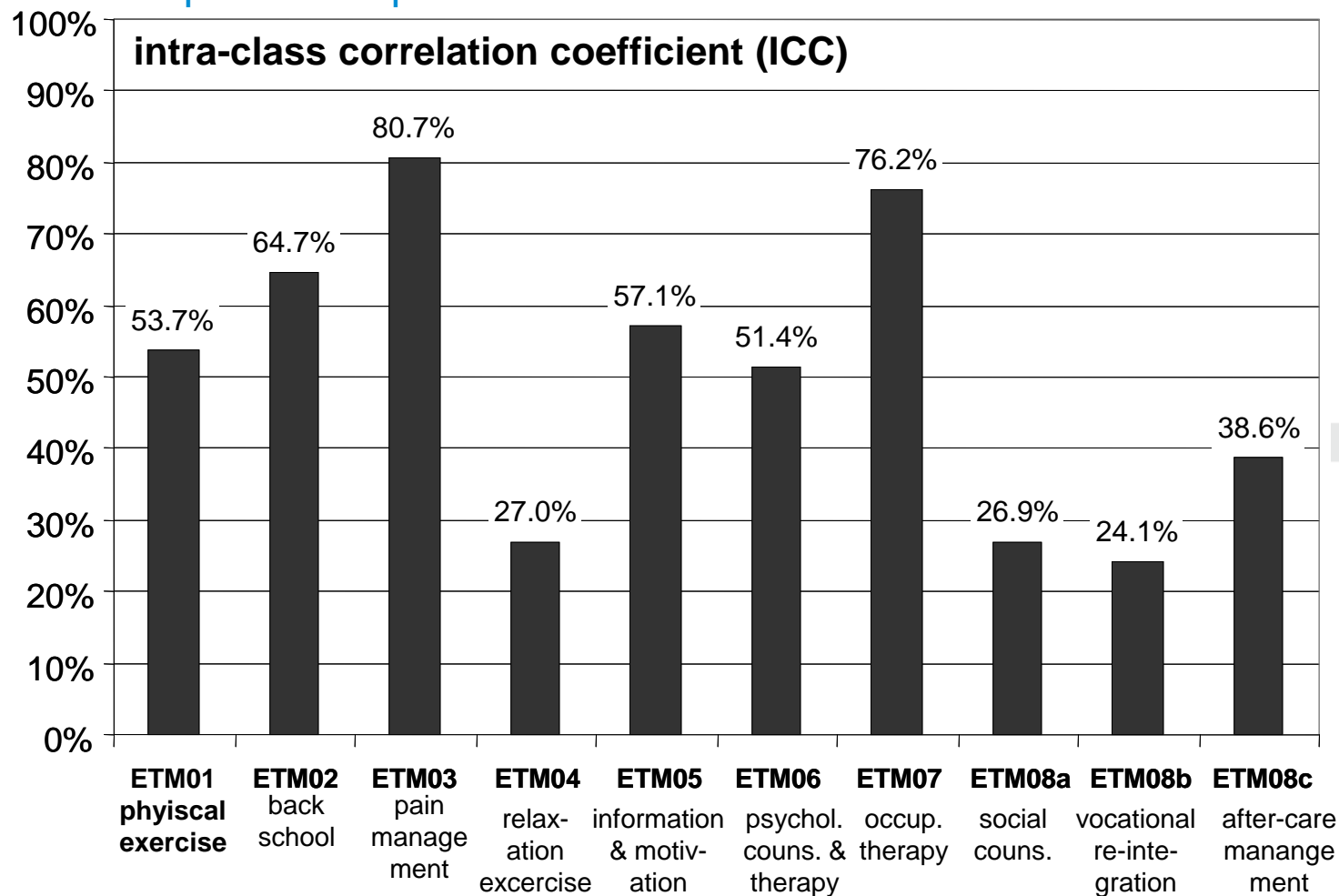
Rehab as a special case

- Functional, multidimensional outcomes
- Outcomes are always personal to some degree
- Multidisciplinary approaches by definition
- Complexity of the intervention („black box“)
- Complexity of context of intervention („double complexity“)
- Rehab success is to a high degree dependent on factors not in direct control of rehab professionals
- Unwarranted rehab service variation



Variation of rehab-interventions

variance of duration of services accounted for by rehab centers
independent of patient characteristics



ETM =
evidence-
based
treatment
module

Rehab as a special case

Essential to distinguish among

- **studies that address single interventions**
can give guidance for professionals which interventions to choose; causal conclusions useful
- **studies that relate to whole complex of rehab phases**
can legitimize the whole integrated approach and is in essence patient-centred
- **studies that relate to local evidence of single institutions**
can help patients which rehab service to choose and commissioners in managing the rehab system





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What are possible ways and answers?



Knowledge translation

Central question:

„What kinds of evidence reliably support predictions of effectiveness for health and social care interventions?“

Cartwright N, Munro E (2010) The limitations of randomized controlled trials in predicting effectiveness. *Journal of Evaluation in Clinical Practice* 16: 260-266



Knowledge translation:

learning from philosophy of sciences

„Evidence-based policy. You are told: use politics that work. And you are told: RCTs – randomized controlled trials – will show you what these are. That’s not so. RCTs are great, but they do not do that for you. What they tell you is true – that this policy produced that result there. But they do not tell you why this is relevant to what you need to bet on getting the result you want here. For that, you will need to know a lot more.“ (ix)

Introduction of the concept of „(stable) capacities“
(causal power)

Cartwright N, Hardie J (2012) Evidence-based policy. A practical guide for doing it better.

Oxford: OUP.



Knowledge translation: learning from qualitative research

Three models of generalization in *empirical research*

- statistical generalization
- analytic generalization
- transferability

Polit DF, Beck CT (2010) Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies* 47: 1451–1458.



Knowledge translation: learning from qualitative research

Transferability

- „case-to-case translation“, „reader generalizability“
- collaborative effort between researcher and reader
- responsibility of the researcher: provide detailed or „thick“ descriptions, including the context
- task of the reader: evaluate the extent to which the findings apply ones own (or other) situations
- proximal similarity, i.e. a gradient of similarity for times, people, settings, and contexts

Knowledge translation:

learning from health services research

The perspective of health services research

- **efficacy-study:** provides evidence that an intervention is effective under optimal conditions
→ contextual factors are held constant
- **effectiveness-study:** provides evidence that an intervention is effective in real life conditions
→ contextual factors are seen to provide as error variance
- **health services research:** provides evidence on which conditions the interventions do more good than harm
→ contextual factors as the variables of interest

Resumée

- the field of rehabilitation needs more sophisticated answers to which evidence is needed for practice
- different solutions have to be acknowledged and adapted to rehab problems
- there is a way forward: join Cochrane Rehab 😊

