

Folie 1

## The Benefits of Digital Treatment Monitoring During Rehabilitation – A Mixed-Method Cohort Study

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**HANDOUT**

Folie 2

### Key points

1. Ba

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4. Inclusions

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Folie 3

### Background

- automatically capturing decision-making
- monitoring of treatment
- motivation (Nelson et
- monitoring, timely (2025).

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**... there are two different categories of PROMS...**

**PROMs**

**Generic,**  
e.g., quality of life  
(Walker et al., 2017)

**Diagnosis-specific,**  
e.g., hip osteoarthritis  
(Walker et al., 2017)

**End of side-note**

➔ ... there is a **research gap** in **Switzerland** regarding the concrete value of **systematic, digital PROM-management** in **musculoskeletal physiotherapy** that leads to...

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**... the research questions and aims of this mixed-method cohort study**

- RQ\* 1: Fea
- RQ 2: Patie
- RQ 3: Tech
- RQ 4: Patie
- RQ 5: Ther
- RQ 6: Impa
- RQ 7: Exter
- RQ 8: Corre

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and  
dex app  
f-life

\*RQ = research question

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## Methods

### Study design and participants

- Sample:** n = 200 patients with musculoskeletal disorders
- Setting:** 4 outpatient physiotherapy centers across Switzerland
- ➔ **Timeline:** Longitudinal data collection over a 2–12 week period

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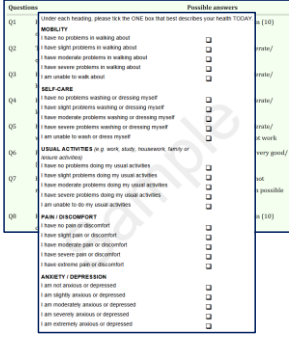
## Methods

### Data collection

- **Digital PROMs:** Continuous tracking of symptoms and activity via smartphone app (Activity-Index)
- **Assessments:** Baseline and post-treatment evaluation using AI\*, EQ-5D-5L, and usability scales
- **Adherence:** Facilitators and barriers of therapists using the AI app

### Statistical and qualitative analysis

- **Quantitative:** Descriptive statistics and multivariate regression models
- **Qualitative:** Structured deductive and inductive content analysis → focus group interviews



\*AI = Activity-Index

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## Results

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analysis

cient data

\*AI = Activity-Index

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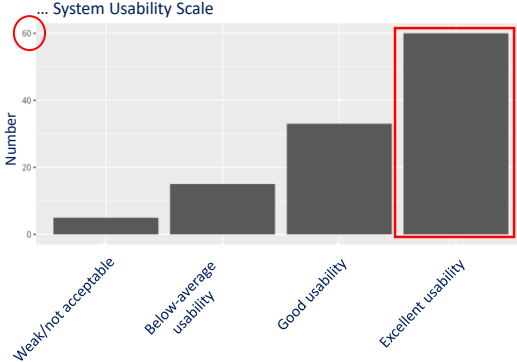
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## Results

### 1. Quantitative results

➔ Usability of the Activity-Index app with the...

... System Usability Scale



Usability Category	Number
Weak/not acceptable	~5
Below-average usability	~15
Good Usability	~35
Excellent usability	50

\*AI = Activity-Index

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## Results

➔ Quality of life with the EQ-5D

0 = no change  
-1 = impr

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Difference (follow-up – baseline)

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## Results

➔ Activity-Index

Q3 = Complaints/pain → leisure time  
Q4 = Overall health  
Q5 = Satisfaction → therapy process  
Q6 = Complaints/pain → job

Changes from baseline to follow-up

45% = unchanged  
25% = improvement (1 pt)  
15% = improvement (2 pts)  
10% = decline

Difference (follow-up – baseline)

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## Results

### 2. Quantitative results

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*How Do Physiotherapists Think About Their Adherence to App-Based Treatment Monitoring of Patient-Reported Outcome Measures During Rehabilitation? A Focus Group*

Health, Patient-Reported Outcome Measures (PROMs) are rehabilitation process. This qualitative focus group study thoughts about their adherence to using the generic PROMs in the rehabilitation of their patients.

Activity Index-App reflects an altruistic orientation, individual PROMs, and a graphical depiction of the being assessment - patient history and the interdisciplinary to the app. The experts recommended expanding a personalized, flexible selection of PROMs, and compare patients' conditions.

contributing to their adherence to the Activity Index-App's energy efficiency, facilitate patients' self-management, PROMs. An observational cohort study is currently being in this focus group study and the ongoing quantitative

ers, physiotherapy; Active Index-App; Adherence; health apps

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## Discussion and Conclusions

Feas


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Data

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disciplinary

app-based, clinical


decision-making → educational and professional institutions

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## Take-Home Message

- In modern clinical practice, **PROMs** are key indicators of the quality of the **rehabilitation process**
- There are **diagnosis-specific** and **generic** PROMs
- **Inadequate documentation of treatment progress** is a major challenge in healthcare
- Digital PROM management promises enormous **savings in resources** (especially time and money)
- The QUALITOUCH **Activity-Index-app** is an **effective tool** for digital **PROM-management**



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