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Rehabilitation, Work-related issues, Patient reported outcomes

Changes in work ability following rehabilitation

Mari Nilsen Skinnes*[1, 2], Rikke Helene Moe[1], Thomas Johansen[3], Hege Bruun-Hanssen[4], Kjersti Dahl[5], Idun Eid[5], Tor Fagertun[6], Andreas Habberstad[7], Ingvild Kjeken[1], Tarja Rajalahti[8], Anita Dyp Linge[9], Anne Dorthe Lyken[10], Anders Orpana[11], Linda Røset[12], Ross Wilkie[13], Till Uhlig[1, 2], - The Rehabnytte Consortium[1]

[1]Diakonhjemmet Hospital, Center for treatment of Rheumatic and Musculoskeletal Diseases (REMEDY), Norwegian National Advisory Unit on Rehabilitation in Rheumatology (NKRR), Oslo, Norway, *[2]University of Oslo, Faculty of Medicine, Oslo, Norway*, *[3]National Advisory Unit on Occupational Rehabilitation, Dept. of Rehabilitation, Rauland, Norway*, *[4]Stiftelsen Catosenteret, Dept. of Rehabilitation, Son, Norway*, *[5]Avonova Ringerike, Dept. of Rehabilitation, Hønesfoss, Norway*, *[6]Vikersund Rehabilitation Centre, Dept. of Rehabilitation, Vikersund, Norway*, *[7]The Norwegian Federation of Organisations of Disabled People, Dept. of Rehabilitation, Oslo, Norway*, *[8]Red Cross Haugland Rehabilitation Centre, Dept. of Rehabilitation, Flekke, Norway*, *[9]Muritunet Rehabilitation Centre, Dept. of Rehabilitation, Sylte, Norway*, *[10]Sørlandet Rehabilitation Centre, Department of Rehabiliation, Eiken, Norway*, *[11]Skogli Health and Rehabilitation Centre, Dept. of Rehabilitation, Lillehammer, Norway*, *[12]Hernes Rehabilitation Centre, Dept. of Rehabilitation, Hernes, Norway*, *[13]Keele University , Institute for Primary Care and Health Sciences, Newcastle, United Kingdom*

Background:

Improved work participation is an important goal in rehabilitation, and has important socio-economic benefits. Despite this, there is limited knowledge about how rehabilitation impacts work ability across different diagnostic groups.

Objectives:

To examine whether personal and disease-related factors predict changes in self-perceived work ability one year after rehabilitation.

Methods:

In a longitudinal multicenter rehabilitation cohort (RehabNytte) 17 rehabilitation centers across Norway recruited more than 3700 patients with rheumatic and musculoskeletal diseases (RMD) as the largest diagnostic group (1). Participants completed questionnaires at admission and discharge, and after 3, 6 and 12 months.

Work ability was self-reported with a single item from the Work Ability Index (WAI) (2), referred to as the Work Ability Scale (WAS), where patients compared their current work ability to their lifetime best on a 0-10 scale (10= best work ability). For the logistic regression analysis WAS was categorized as either low/moderate (≤7) or good/excellent (≥8) (3).

Variables of interest were age, gender, diagnosis (cancer, rheumatic and musculoskeletal diseases, other), comorbidities, health region, education level (low, medium, high), body mass index (BMI), smoking, pain intensity (NRS-scale 0-10) and self-reported health (EuroQol VAS, scale 0-100). Retired patients were removed from analysis. A logistic regression model was fitted with variables

individually predicting WAS at 12 months follow up, adjusted for sociodemographic and lifestyle variables and baseline WAS.

Results:

Mean age at baseline was 53.3 (13.6) years. Seventy percent were female, 42 % had RMD, 24 % cancers and 33 % other diseases. Mean WAS at baseline (n= 3096) was 3.3 (SD 3.0), which significantly increased to 4.4 (3.2) at 12-months follow-up (n= 2397) ($p<0.001$, Figure 1).

Good WAS-score ≥ 8 at 12 months (adjusted for baseline work ability score and BMI) was predicted by high education level, higher age and high self-reported health at baseline, whereas low WAS-score ≤7 was predicted by RMD or cancer diseases, number of comorbidities and higher pain intensity (Table 1, OR in bold indicates $p<0.05$).

Conclusion:

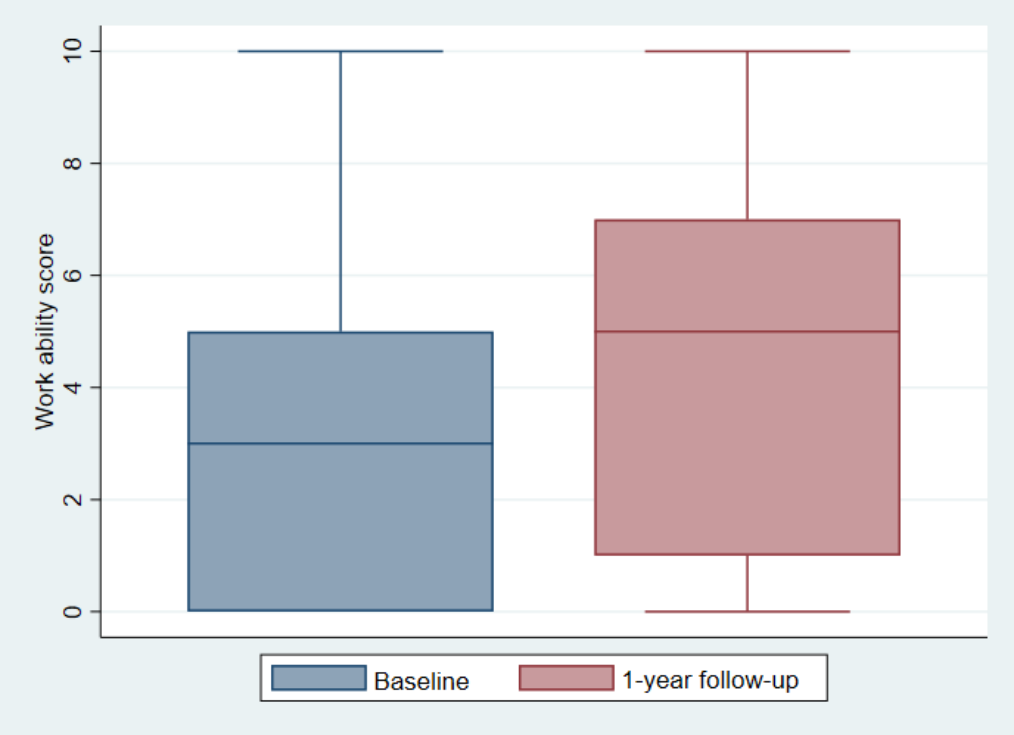
In addition to disease- and demographic factors like high age, high education, comorbidities and presence of RMD, changes in work ability scores were related to pain and self-reported health, factors that are modifiable trough rehabilitation.

Table 1. Logistic regression model of work ability 12 months after rehabilitation.

	Work ability	
	Univariable	Multivariable*
Independent variable	OR (95 % CI)	OR (95 % CI)
Age	1.0 (0.99, 1.00)	**1.01** (1.00, 1.02)
Education level		
10 years or less	1 (Ref)	1 (Ref)
High school	**1.56** (1.08, 2.26)	1.25 (0.78, 2.01)
University	**1.96** (1.37, 2.80)	**1.70** (1.07, 2.69)
Diagnosis		
Other disease	1 (Ref)	1 (Ref)
RMDs	0.80 (0.64, 0.99)	**0.60** (1.11, 3.31)
Cancer	**0.64** (0.49, 0.83)	**0.42** (0.26, 0.68)
Comorbidities	**0.84** (0.79, 0.90)	**0.79** (0.71, 0.87)
Pain intensity	**0.86** (0.80, 0.92)	**0.90** (0.83, 0.98)
EuroQol VAS	**1.04** (1.03, 1.04)	**1.02** (1.02, 1.03)

*Final model also adjusted for gender, BMI, health region, and work ability at baseline.

Figure 1. Work ability score (WAS) at baseline n = 3096, and at 1-year follow up n= 2397.



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