

# Everyday Occupations Prioritised by Older Adults Participating in Reablement. A Cross-Sectional Study

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## **Abstract**

**Background:** Little knowledge exists regarding which occupations older adults prioritise as rehabilitation goals in reablement and what factors are associated with their preferences.

**Objectives:** To explore which occupations older people with functional decline find important to improve, which of these they prioritise as their rehabilitation goals, and what factors are associated with these priorities.

**Materials and methods:** A cross-sectional study was undertaken with a sample of 738 older adults from a nationwide trial evaluating the effects of reablement in Norway. The nine occupational sub-areas of the Canadian Occupational Performance Measure were used as a framework for analyses.

**Results:** Participants identified a multitude of occupations as challenging. Functional mobility was the most frequently identified and prioritised sub-area. Significant associations were found between prioritised occupations and health condition, sex, living status, education, walking speed and motivation.

**Conclusions:** This study found both abundance and diversity in the occupational problems and prioritised goals of older adults, with mobility being a key priority regardless of health condition.

**Significance:** It is important that reablement continues to be a person-centered intervention embracing the possibility to choose meaningful occupations. Occupational Therapists and other health professionals should address mobility when improving occupational performance in older adults.

**Key words:** occupation, older adults, everyday life, reablement, mobility, Canadian Occupational Performance Measure.

## **Introduction**

Reablement is a form of rehabilitation usually offered to older adults who are experiencing functional decline, and has been seen as an answer to a number of challenges in health care, including those related to an increasing elderly population [1]. It is a time-limited, intensive and multidisciplinary intervention delivered in people`s homes or in the community, and is currently being employed in a growing number of countries. The intervention is conceptually embedded in a person-centered perspective, and focuses on the person`s needs and preferences related to everyday occupations and real-life difficulties [2]. More specifically, the focus in reablement is on enhancing performance of everyday occupations perceived as important by the person in question [1,3].

In reablement, the rehabilitation goals are based on the person`s prioritised occupations. The term *rehabilitation goal* refers to a desired future state to be achieved as a result of rehabilitation efforts by a person with disability [4]. In line with the Canadian Model of Occupational Performance and Engagement (CMOP-E), *occupation* in the current study is defined as “activities or tasks of everyday life, named, organized, and given value and meaning by individuals and a culture” [5:17]. *Occupational performance* refers to the result of interaction and interdependence between the person(s), their environment and their occupation(s) and is accordingly unique to each person and requires individualised instruments sensitive to varying needs and situations [6]. The Canadian Occupational Performance Measure (COPM) is such an instrument, and is widely used in Norwegian reablement for goal planning purposes [7]. Goals may be occupation-based or impairment-based. Using an occupation-based strategy to guide goal planning means that the language of the goal is more likely to be in terms of occupational performance. Occupation-based rehabilitation goals (e.g. to be able to take a shower independently), rather than impairment-based goals (e.g. to improve standing balance), are more likely to be motivating as they have more personal and practical meaning to the person in question [6].

## **Literature review**

Reablement is an intervention with the potential to reduce an individual`s service needs [8]. However, striving for cost-effectiveness may lead to a service which is less person-centred. In British reablement especially, pre-determined occupations constitute, to some degree, the focus of the intervention, and self-determination and personalisation of goals have been reported to be lacking, making goals such as mobility, and those associated with leisure and socialisation, less likely [9,10]. Moreover, goals involving occupations outside the home are seldom

addressed [9-12]. Within Norwegian rehabilitation, however, there is insufficient knowledge regarding what kinds of rehabilitation goals older adults are allowed to choose. It is usually assumed that gaining independence in occupations related to Activities of Daily Living (ADL), such as personal care and household management, leads to reduced need for home-based services. Nevertheless, evidence is lacking regarding the degree to which older adults in Norway are allowed to select goals beyond those which may directly lead to reduced demand for home-based services.

A few studies have examined which occupations frail older adults find meaningful or important. In one study, home-dwelling people with dementia were found to value leisure and recreation, household chores, and social engagement with friends and family [13]. In another study, moving around in the house, personal care and dressing were the occupations older adults receiving home-based services perceived as most important [14]. In a third study examining Instrumental Activities of Daily Living (IADL), using the telephone, taking public transport and reading were regarded as the most important occupations by home-dwelling older adults receiving home-based services [15]. However, as these studies have used various instruments and occupational categories, the results are not easily comparable. There are, however, some rehabilitation studies in which COPM has been used in populations over 65 years of age to identify which occupational problems people struggle to perform. The results show that they most often prioritise occupational problems in the self-care area and are more variable in their addressing of problems in the productivity and leisure areas [16-21]. Functional mobility is the most frequently identified problem and prioritised occupation according to studies in older populations with various diagnoses [17-19,22,23]. Still, no larger studies have examined older adults' identified and prioritised occupations within rehabilitation. Knowledge of this may contribute to more person-centred rehabilitation services.

Older adults' occupational preferences may be influenced by demographic variables such as age, residential status, marital status and educational level [24]. However, other potential factors may also be associated with their priorities. Nonetheless, little knowledge exists regarding potential factors that may be associated with occupational preferences and actual prioritised occupations.

The objectives of this study were to explore which occupations older people experiencing functional decline found important to improve, which of these they prioritised as their rehabilitation goals, and what factors were associated with these priorities.

## **Materials and methods**

This was a cross-sectional study with a sample derived from a nation-wide, multi-centre clinical controlled trial evaluating the effects of reablement in Norway [25]. The trial was registered in ClinicalTrials.gov (October 24, 2014, identifier: NCT02273934). The nation-wide sample consisted of 833 participants living in 43 different municipalities. The enrolment period lasted from the beginning of April 2014 until the end of June 2015. People applying for, or who were referred to, public home-based services were potential participants in the study. People were eligible if they were home-dwelling, were over 18 years of age, understood spoken and written Norwegian and experienced functional decline. People were excluded if they were in need of institution-based rehabilitation or nursing home placement, or if they were terminally ill or cognitively diminished. In the current study, only people over the age of 65 years were included.

All participants received information about the study and gave written consent prior to study enrolment. The trial was approved by the Regional Committee for Medical and Health Research Ethics for Western Norway (REK West, 2014/57-1).

### **Data collection**

We collected the following socio-demographic data from the participants: age, sex, living status (categories living alone or cohabitating), educational level (categories of high and low education, cut off was having had education at university/university college level), motivation for rehabilitation (scale 1-10, 10 is best) and major health condition (out of 10 predefined categories). From the European Quality of Life Scale (EQ-5D-5L), we used the visual analogue scale of health today, rated by participants on a scale from 0-100, where 100 is excellent health [26]. Based on the walking test from the Short Physical Performance Battery (SPPB) [27], participants' walking speed was calculated regardless of whether or not they used walking aids. A walking speed below 0.6 m/s is regarded to represent frailty [28].

The COPM is based on the CMOP-E [5] and was used as a measure of occupational performance. It was designed to help participants identify, prioritise and evaluate occupational performance and satisfaction with performance of important occupations they encounter in their daily lives [29]. The instrument measures a person's self-perceived occupational performance within the sub-areas of personal care, functional mobility, community management (self-care), paid/unpaid work, household management, play/school (productivity), quiet recreation, active recreation, and socialisation (leisure) [29]. Assessment using the COPM is performed as a

semi-structured interview addressing patient-specific occupational problems. In the current study, the interview began with an open question inviting the participant to talk about occupations she or he wanted to do or had to do during an ordinary day. To make sure that all relevant occupations were examined, the nine predefined sub-areas from the COPM form were used as an interview guide, and occupations considered to be important to improve were written on the form in the sub-area in which he or she had mentioned them. The interview concluded with the prioritisation of a maximum of five occupations which the participant had problems performing and considered important. The prioritised problems were redefined as rehabilitation goals after the assessment. The participant rated performance and satisfaction with performance for each of these occupations on a scale from 1-10 (a higher score reflecting better performance or higher satisfaction). Sum scores for performance and satisfaction with performance, respectively, were calculated by adding the performance or satisfaction scores and thereafter dividing by the number of prioritised occupations.

Although the COPM was developed as a tool for Occupational Therapists, various health professionals performed the COPM interviews in the current study. The health professions were, in declining order, based on frequency of conducting the COPM interviews; Occupational Therapists, Physiotherapists, Nurses, Auxiliary Nurses, Social Workers and Social Educators. Inter-rater reliability was not tested between the different assessors. However, other psychometric properties of COPM performed by various professions in a heterogeneous older population have been tested with good results [7].

### **Data analyses**

Descriptive statistics were used to present the sample's socio-demographic data. Means and standard deviations were calculated for continuous variables. For categorical variables, frequency counts and percentages were calculated. With three age groups as the dependent variable, a one-way ANOVA test was calculated in order to compare variability between groups for various baseline characteristics regarding continuous variables. Likewise, chi-squared analyses were performed for categorical variables (Table 1).

Descriptive statistics were used to present the amount of identified and prioritised occupations (Fig. 1).

The identified occupations were categorised into the nine sub-areas when filling out the COPM form. The prioritised occupations, however, had to be categorised by the first author before data analyses. The post hoc categorisation was done by searching for the identified occupation and

using the same predefined sub-area as that used when filling out the form. Responses that were impairment-based, i.e. not occupation-based, were recorded as a tenth category. Since the nine sub-areas are broad, occupations were grouped within each category in order to obtain more specific information on characteristics and frequency of each occupation (Table 2).

All prioritised sub-areas were combined into one variable representing 2748 goals in nine categories. However, one category, play/school, could not be analysed due to zero prioritations (Table 3). Significance tests were used to investigate differences between the eight prioritised COPM sub-areas and participant characteristics, such as socio-demographic data and performance scores. The tests used were one-way ANOVA for continuous variables, chi-square test for categorical variables, and Fisher test when assumptions were not met (Table 3).

Logistic regression analyses were conducted to explore factors that may be associated with actual prioritised sub-area (Table 4). In this case, the dependent variables were each of eight prioritised sub-areas (again the play/school sub-area was not applicable due to zero prioritations). Only prioritised sub-areas with significant differences between the specific sub-area and various other variables, are presented in the table. In dichotomising the data for analyses, the first prioritised sub-area was labelled 1 and the second to seventh prioritised sub-areas were all labelled 0. The independent variables were socio-demographic data and performance scores and were selected based on earlier analyses of the same data material [23] and on findings in another publication [24].

A P-value below 0.05 was regarded as statistically significant. Statistical analyses were performed in IBM SPSS statistics data editor, version 24 (IBM Corp, Armonk, NY, USA) and Stata version 14.2 (Stata Corp, College Station, TX, USA).

## **Results**

The sample of 738 older adults lived in 42 different municipalities, stretching from the south to the north of Norway. Baseline characteristics of the whole sample, and according to the age groups of 65-74 years, 75-84 years and 85+ years, are presented in Table 1. Their mean age (SD) was 81.2 (6.9) years, 70% were female and 74% were living alone. They had various health conditions, but fracture and dizziness/balance problems were the most frequent reasons for needing reablement. A mean walking speed of 0.48 m/s is indicating a slightly frail sample. There were significant differences in the mean scores between the three age groups concerning living status (P=0.001), walking speed (P=0.001), health today (P=0.02) and satisfaction score

COPM (P=0.003), indicating higher frequency of living alone and frailer function with increasing age and in particular among the oldest ones. However, their satisfaction with their own health and occupational performance also increased significantly as they aged.

**Table 1.** Participant characteristics

Variable	Total (N=738)	65-74 years (n=147)	75-84 years (n=329)	85+ years (n=260)	P-value
Age (years), mean (SD), min-max	81.2 (6.9), 66-97	70.84 (2.61)	80.14 (2.84)	88.35 (2.72)	NA
Sex, females (%)	517 (70.1)	97 (66)	227 (69)	191 (73.5)	0.25
Living alone, frequency yes (%)	545 (73.8)	94 (64)	233 (70.8)	216 (83.1)	0.001
Higher education, frequency yes (%)	167 (20.3)	33 (22.5)	61 (18.6)	50 (19.3)	0.13
Motivation for rehabilitation, mean (SD), scale 1-10, 10 is best	8.04 (2.14)	8.35 (2.1)	7.97 (2.1)	7.96 (2.18)	0.15
Walking speed (SPPB) (m/s), mean (SD), min-max	0.48 (0.22), 0.04-1.55	0.51 (0.24)	0.50 (0.24)	0.44 (0.19)	0.001
Health today (EQ-5D) (scale 0-100, 100 is best), mean (SD), min-max	51.33 (19.00), 0-100	48.77(1.80)	50.54 (1.05)	53.86 (1.10)	0.02
Performance sum score (COPM), mean (SD), scale 1-10, 10 is best	3.50 (1.85)	3.38 (1.63)	3.43 (1.56)	3.67 (1.77)	0.13
Satisfaction sum score (COPM), mean (SD), scale 1-10, 10 is best	3.47 (1.65)	3.12 (1.91)	3.41 (1.70)	3.76 (1.97)	0.003
Major health condition, frequency (%)					0.31
Fractures	154 (20.9)	26 (17.7)	66 (20.1)	62 (23.8)	
Dizziness/balance problems	113 (15.4)	17 (11.6)	49 (14.9)	47 (18.1)	
Orthopaedic disease	81 (11.0)	13 (8.8)	40 (12.2)	27 (10.4)	
Pain	75 (10.2)	16 (10.9)	32 (9.7)	26 (10)	
Stroke	63 (8.5)	16 (10.9)	34 (10.3)	13 (5)	
Arthritis	56 (7.6)	12 (8.2)	18 (5.5)	26 (10)	
Heart disease	44 (6.0)	8 (5.4)	23 (7)	13 (5)	
Pulmonary disease	30 (4.1)	14 (9.5)	8 (2.4)	8 (3.1)	
Neurological disease other than stroke	23 (3.1)	6 (4.1)	12 (3.6)	5 (1.9)	
Other health conditions	97 (13.2)	19 (12.9)	45 (13.7)	33 (12.7)	

**Abbreviation:** SD = standard deviation, SPPB= Short Physical Performance Battery, EQ-5D-5L=European Quality of Life Scale, COPM=Canadian Occupational Performance Measure.

Tests: One-way ANOVA for continuous variables and chi squared analyses for categorical variables.

The participants listed a total of 4645 identified occupational problems, (on average 6.3 identified problems per person), and prioritised 2852 occupations out of these, (on average 3.9 occupations per person). These occupations became their rehabilitation goals. The distribution of identified and prioritised occupations into the nine COPM sub-areas can be seen in Figure 1. Functional mobility, personal care and household arrangement were the most frequently identified and prioritised sub-areas with a distribution of 35%, 18% and 15% of the total amount of rehabilitation goals, respectively. In total, 3.5% of the responses (n=104) could not be categorised into any of the nine sub-areas of COPM. The unclassifiable items were mainly impairment-based goals such as to improve balance, strength or memory (data not shown).



Distribution of prioritised rehabilitation goals into occupational areas and sub-areas are presented in Table 2 (n=2748 occupations). Categories with more than 20 responses are presented in the table, giving information on frequency and type of each occupation. The table provides detailed information on which occupational performance problems constitute each sub-area. The specified occupational performance problems show what challenges the participants experienced in their daily lives.

**Table 2.** Distribution of prioritised occupational performance problems described in COPM interviews within occupational areas and sub-areas (N=735 persons)

Occupational area	Sub-area/occupation	Occupational performance problems*
Self-care (n=1817)	Personal care (n=500)	Take a shower (n=187) Dress/undress oneself (n=180) Do the morning routine (n=43) Wash body/take a bath/wash hair (n=29) Go to toilet (n=24)
	Functional mobility (n=1002)	Go for a walk (n=150) Climb stairs (n=142) Transfer bed/chair/toilet (n=125) Go to a specific target outdoors (n=119) Outdoor mobility with/without a walking aid (n=98) Outdoor mobility (n=89) Indoor mobility with/without a walking aid (n=88) Indoor mobility (n=75) Be able to stand/walk/move (n=64)
	Community management (n=315)	Do errands (n=170) Drive a car (n=76) Take public transportation (n=25)
Productivity (n=445)	Paid/unpaid work (n=27)	NA
	Household management (n=418)	Prepare various kinds of food (n=164) Clean/vacuum/tidy up the house (n=120) Wash/hang up/iron clothes (n=30)
	Play/school (n=0)	NA
Leisure (n=486)	Quiet recreation (n=150)	Do handicrafts (n=40) Read/write book/PC (n=36)
	Active recreation (n=139)	Go for an outdoor walk (n=48) Participate in organised physical activities (n=25) Travel (n=20)
	Socialisation (n=197)	Participate in social activities (n=82) Visit or receive visits (family, friends and neighbors) (n=69)

Abbreviation: NA = Not applicable

Notes: \* Distribution of types of occupations with more than 20 responses within each sub-area.

Table 3 demonstrates significant differences for sex (P=0.001), walking speed (P=0.001), and mayor health condition (P=0.001) respectively, across eight of the prioritised sub-areas of COPM. Household management was to a higher degree prioritised by female participants

(80.4%), while active recreation was more frequently prioritised by participants with the highest walking speed (0.56 m/s). Of the 10 specific health condition categories, dizziness/balance problems ( $P=0.001$ ) and stroke ( $P=0.002$ ) respectively, differ significantly. It is worth noticing that people with stroke and people with dizziness/balance problems prioritised functional mobility frequently. Hence, the results show that for the variables of sex, walking speed, health condition in general and for the two specific health conditions, the variability in participants' scores and demographic characteristics differ significantly depending on COPM sub-areas. The results also reveal that functional mobility was the most frequently prioritised sub-area and paid/unpaid work was the least frequently prioritised sub-area, regardless of diagnosis.

**Table 3.** Differences between prioritised sub-areas and participant characteristics

Variable*	Personal care	Functional mobility	Community management	Paid/unpaid work	Household arrangements	Quiet recreation	Active recreation	Socialisation	Mean (SD) score or total %	P-value
Age (years), mean (SD)	81.4 (6.5)	81.3 (7.0)	80.4 (7.0)	80.6 (7.5)	81.2 (7.1)	80.7 (6.9)	79.5 (7.0)	81.2 (7.0)	81.1	0.62
Sex, female, (%)	73.4	69.0	67.1	66.7	80.4	68.0	63.3	77.7	71.6	0.001
Living alone, (%)	75.8	71.6	75.1	70.4	79.4	73.3	63.3	77.7	74.0	0.05
Higher education, dichotomised (%)	17.7	19.6	22.1	11.1	15.7	27.3	24.6	20.8	19.6	0.08
Motivation for rehabilitation, mean (SD)	8.16 (2.07)	8.03 (2.20)	8.26 (2.06)	8.37 (1.76)	7.96 (2.13)	8.15 (2.18)	8.47 (1.87)	8.12 (2.14)	8.11 (2.12)	0.20
Walking speed (SPPB) (m/s), mean (SD) (SPPB)	0.46 (0.22)	0.46 (0.22)	0.50 (0.23)	0.52 (0.21)	0.47 (0.21)	0.52 (0.23)	0.56 (0.25)	0.46 (0.23)	0.47 (0.22)	0.001
Health today (EQ-5D) (scale 0-100, 100 is best), mean (SD)	50.6 (19.4)	51.9 (19.2)	51.5 (18.6)	52.4 (15.8)	50.5 (19.0)	51.2 (21.4)	49.4 (18.4)	51.4 (18.5)	51.2 (19.1)	0.75
Performance sum score (COPM), mean (SD), scale 1-10, 10 is best, mean (SD)	3.34 (1.52)	3.48 (1.61)	3.20 (1.62)	3.47 (1.60)	3.52 (1.58)	3.60 (1.69)	3.45 (1.66)	3.42 (1.73)	3.4 (1.60)	0.17
Satisfaction sum score (COPM), mean (SD), scale 1-10, 10 is best.	3.40 (1.79)	3.40 (1.81)	3.20 (1.76)	3.39 (1.77)	3.48 (1.81)	3.64 (1.79)	3.54 (1.84)	3.41 (1.92)	3.41 (1.81)	0.36
Major health condition, frequency										0.001
Fractures (%)	19.8	33.7	13.5	0.7	16.0	4.5	3.6	8.3	100	0.07
Dizziness/balance problems (%)	12.7	46.1	13.5	0.5	13.5	4.4	4.9	4.4	100	0.001
Orthopedic disease (%)	16.2	41.2	9.7	0.6	11.4	4.9	6.8	9.1	100	0.12
Pain (%)	17.9	36.1	9.1	0.0	15.0	5.8	7.7	8.4	100	0.25
Stroke (%)	21.3	31.9	10.6	3.4	16.2	7.7	3.4	5.5	100	0.002
Arthritis (%)	17.5	33.6	9.2	1.4	21.2	6.0	5.1	6.0	100	0.32
Heart disease (%)	21.2	36.4	11.9	0.7	13.9	6.6	5.3	4.0	100	0.80
Pulmonary disease (%)	21.4	32.0	11.7	0.0	12.6	5.8	7.8	8.7	100	0.71
Neurological disease other than stroke (%)	22.4	37.6	9.4	0.0	17.6	4.7	3.5	4.7	100	0.82
Other health conditions (%)	19.3	32.0	10.3	2.0	15.4	6.6	4.9	9.4	100	0.15

**Abbreviation:** SD= standard deviation, SPPB= Short Physical Performance Battery, EQ-5D-5L=European Quality of Life Scale, COPM=Canadian Occupational Performance Measure.

Notes: The sub-area play/school was not applicable for calculations. Tests: One-way ANOVA for continuous variables, Chi-Square test for category variables, and Fisher test when assumptions were not met.

Table 4 shows the results from logistic regression analysis of prioritised sub-areas. For the sub-area *personal care*, the results were significant for sex, walking speed and those with dizziness/balance problems ( $P < 0.05$ ). Concerning sex, the results indicate that, compared to male participants, female participants were more likely to prioritise personal care. When it comes to walking speed, participants with faster walking speed were less likely to prioritise personal care than those with slower speed. Moreover, participants with dizziness/balance problems were also less likely to prioritise personal care. Looking at *functional mobility*, the results show that the participants living alone were less likely to prioritise this occupation ( $P < 0.05$ ), whereas the participants with dizziness/balance problems were significantly more likely to prioritise functional mobility than the participants with other conditions. Concerning the sub-area *quiet recreation*, the results indicate that people with high education were more likely to prioritise quiet recreation than people with low education, and that female participants were less likely to prioritise quiet recreation than male participants. As for the sub-area *socialisation*, the results show that people with high education were more likely to prioritise social activities than people with low education, and that the more motivated participants were to engage in rehabilitation and the faster they walked, the less likely they were to prioritise socialisation. Regarding the other sub-areas (community management, paid/unpaid work, household management, and active recreation) we found no significant results (results not shown).

**Table 4.** Regression analysis on differences between factors that may be associated with prioritised sub-areas.  
Unstandardised coefficients

Variables	Categories	Prioritised sub-area (COPM) – dependent variables <sup>c</sup>			
		Personal care	Functional mobility	Quiet recreation	Socialisation
Age	Continuous	0.02	-0.01	0.03	0.02
Sex	1=female	0.53*	-0.10	-1.83*	0.35
Education	1= higher education	-0.05	0.11	1.15*	1.35*
Living status	1=living alone	0.37	-0.43*	-0.30	-0.19
Motivation	Mean score (scale 1-10)	0.00	0.01	-0.13	-0.29*
Satisfaction score (COPM)	Mean score (scale 1-10)	0.00	-0.04	-0.07	0.07
Performance score (COPM)	Mean score (scale 1-10)	-0.02	0.01	0.35	-0.24
Walking speed (SPPB), mean m/s	Continuous	-0.87*	0.08	0.39	-2.89*
Health today (EQ-5D) (scale 0-100)	Continuous	0.00	0.00	0.00	0.02
Major health condition	Stroke	-0.45	0.03	1.05	0.32
	Arthritis	-0.81	0.69	0.63	-0.60
	Pulmonary disease	-0.81	0.55	<sup>b</sup>	<sup>b</sup>
	Fractures	-0.45	0.21	1.40	-0.36
	Dizziness/balance problems	-1.11*	0.83*	-0.68	-0.67
	Pain	-0.82	0.34	1.92	-0.29
	Other health conditions	-0.76	0.62	0.47	1.20
	Neurological disease other than stroke	-0.81	0.67	<sup>b</sup>	<sup>b</sup>
	Orthopaedic disease	-0.79	0.64	0.43	-0.97
Constant		-1.83	0.38	-6.09	-2.05
Number of observations		655	655	606	606
Pseudo R <sup>2</sup>		0.04	0.02	0.17	0.15

<sup>a</sup> Reference category is the health condition heart disease, <sup>b</sup> Empty, no responses, <sup>c</sup> COPM sub-area was dichotomised where value 1 represented the first prioritised sub-area, and the value 0 was allocated to the other prioritised sub-areas. \* = P<0.05.

## Discussion

The results of this study provide insight into older adults` goals and occupational preferences in rehabilitation, which is essential in order to tailor reablement according to peoples` needs and occupational priorities. Moreover, the results demonstrate that older adults` choice of rehabilitation goals are associated with factors such as health condition, sex, living status, education, walking speed and motivation. The following discussion of the results is organised into one section addressing identified and prioritised goals of older adults with functional decline, and another section discussing matters of interest associated with the reablement intervention in particular.

## **Identified and prioritised occupations of older adults**

The high amount of occupational problems shown in Figure 1 and the relatively low COPM scores presented in Table 1 reflect a variety of occupational challenges experienced by the participants. The diversity of prioritised occupations described in Table 2 reveal some of the heterogeneity of preferences within each sub-area. In descending order, functional mobility, personal care, household management and community management were the most frequently identified and prioritised occupations (Figure 1), with functional mobility being the most frequently prioritised goal, irrespective of diagnoses (Table 3).

These results are in line with other studies using COPM in an old population [17-20,22]. The mean walking speed of 0.48 m/s in the study population indicates a frail sample [28]. As the participants had reduced walking speed and difficulties with indoor and outdoor ambulation, it was reasonable that functional mobility was such a common priority. Mobility includes the ability to perform specific movements such as walking and climbing stairs and is a prerequisite for performing IADL and for participation in many leisure and social occupations [30]. Moreover, physical activity embedded in everyday life, such as walking to the nearby grocery store, bank, or bus stop, is likely to be a sustainable source of exercise for older adults [31], as walking is the main physical activity in this age group [32]. The ability to walk about in one's neighborhood and maintain independence is also found to be essential for older adults' wellbeing and health [30]. It is therefore important for Occupational Therapists and other health professionals to routinely address mobility when exploring occupational problems in this age group.

The finding that participants are frailer and more often are living alone with increasing age is not surprising (Table 1), and reflects the trajectory of disability and mortality from the third to the fourth age of life [33]. Interestingly, satisfaction with own health and performance also increases significantly as participants age. This may be an example of what is described as the disability paradox in the literature [34], and may be explained as a response shift, which means that ambiguous or paradoxical findings can occur because of change in internal standards, values and conceptualisation [35]. In the current sample, such a shift may occur if reduced demands and expectations with increasing age induce a tendency to be satisfied with less.

Table 4 shows that older people had various priorities when it came to rehabilitation goals, and some of these cannot merely be ascribed to physical decline. For instance, women more often prioritised personal care and men quiet recreations, and people with high education prioritised

socialisation higher than those with low education. Hence, sex stereotypes and personal interests are also plausible explanations for these findings. Accordingly, younger health personnel and health personnel with other occupational preferences should exercise tolerance when working with older adults` rehabilitation goals.

Another study found that the very old had occupational preferences different from the younger old [24]. Therefore, in the current study, one might also have expected to find age differences when it came to occupational preferences, for instance, that people of advanced age prefer sedentary occupations to a higher degree within the sub-areas of quiet recreation and socialisation or that the younger older adults would prefer paid/unpaid work to a higher degree. However, no such differences were found in the current study (see Table 4). Interestingly, even if the functional capacity of the oldest old person was reduced, it did not reflect their priorities when it came to rehabilitation goals. An interpretation of these results may be that the oldest participants were a resourceful group, whose functional limitations did not hinder them. Another interpretation, as described earlier, is that people`s occupational priorities were associated with many factors, of which age was only one.

### **Rehabilitation goals within reablement**

It is usually assumed that achieving independence in occupations such as paid/unpaid work, quiet recreation, active recreation and socialisation to a lesser degree leads to reduced demand for home-based services than gaining independence in ADL. Nevertheless, our results show that within Norwegian reablement, participants were allowed to choose a wide variety of rehabilitation goals. Moreover, as can be seen in Table 2, many of the prioritised occupations within mobility, community management, active recreation and socialisation take place outside the home. An explanation for these findings may be that the motivational COPM interview really does endorse older adults to identify occupational problems and prioritise the most important of them, and that using such a person-centered strategy motivates older adults to work hard towards reaching their goals [36]. However, in an effort to maximise the benefits gained, policy-makers might be tempted by the promising results in several reablement studies [22,25,37] to narrow the older adults` choices to occupations that take place within the home and have the potential to reduce their need for healthcare assistance. Nonetheless, older adults` strong motivation and active engagement is less likely to occur if occupational choices are set by their healthcare providers and restricted to personal care and domestic chores [37].

It is debatable whether participants in reablement really are allowed to select the goals themselves. A qualitative study exploring COPM interviews in reablement found that the degree of participant decision-making in goal-setting varied [38]. Sometimes the process led to a goal ascribed to by the healthcare provider, sometimes it was participant–healthcare provider negotiated, and sometimes it was set by the participant. Similar results were found in another qualitative reablement study using the patient-specific instrument Patient-Specific Functional Scale, claiming that some of the healthcare providers put words in the mouths of the participants when formulating rehabilitation goals [39]. Hence, the COPM interview necessitates that healthcare providers master integrating both goal-oriented and person-centered communication, which requires advanced communication skills [36,38]. When using COPM in clinical practice and research, this may be an area requiring improvement.

Concerning clinical implications of the findings of the current study, it is vital to recognise that reablement takes place in the participant's own home and local community. This enables training in the actual context where the occupations naturally occur, whether inside or outside the home. When developing new interventions, these are important considerations to take into account. A clinical implication of the finding regarding older adults' choice of rehabilitation goals being associated with factors like health condition, sex, living status, education, walking speed and motivation, is to emphasise the need to individually tailor the intervention. The person-centeredness of reablement allows tailored interventions to assist older adults to meet their individual goals given their particular capabilities and difficulties [40]. Therefore, it is of great importance that reablement continues to be a person-centered intervention that embraces the possibility for the participant to prioritise meaningful occupations.

### **Methodological considerations**

The strength of this study is the large and heterogeneous sample comprising a multitude of various health conditions, which means that the results may be generalised beyond the scope of a specific diagnosis. The sample was drawn from 42 municipalities, both urban and rural, with approximately 15% of the Norwegian population living in them. Hence, the results are indeed generalisable to home-dwelling older adults with functional decline in Norway. However, since other countries may use instruments other than COPM for goal-setting and they may restrict which occupations participants can choose as rehabilitation goals, it is uncertain to what degree the results can be generalised to reablement services in other countries.



Even though we used the patient-specific instrument COPM in the current study, we do not know to what extent the participants really were allowed to identify and prioritise the goals themselves, and this is a weakness of the current study. Despite training in COPM provided by the research team, it is uncertain whether the communications skills of the healthcare providers were always good enough to encourage participant-set goals. However, the diversity and large number of goals identified in this study indicate a high degree of participant self-determination. Another limitation is the cross sectional design, which does not allow for drawing conclusions regarding cause and effect relationships.

## **Conclusion**

The current study provides robust evidence regarding which occupations are difficult but important to perform for older adults experiencing functional decline. Insight into older adults' goals and occupational preferences in rehabilitation is essential in order to individually tailor the intervention. The results demonstrate both abundance and diversity of occupational problems and prioritised goals of older adults. Older adults in Norway are allowed to prioritise goals beyond those which may lead directly to reduced demand for home-based services and take place inside the home. Their choice of rehabilitation goals within the categories of personal care, functional mobility, quiet recreation and socialisation are associated with factors such as health condition, sex, living status, education, walking speed and motivation, all of which underline the need for individual tailoring. The finding that functional mobility is a key priority among older adults regardless of health condition may indicate that participants see this as the foundation for being independent in other occupations concerned with self-care, productivity and leisure. It is therefore important for Occupational Therapists and other health professionals to routinely address mobility when exploring occupational performance in older adults. Likewise, it is important that rehabilitation continues to be a person-centered intervention.

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