



Work Package 4

National report

Norway

WP 4 EUNAAPA-questionnaire: Assessment Instruments for Physical Activity and Physical Functioning in Older People

BACKGROUND

In Norway fourteen experts answered the EUNAAPA questionnaire. All experts were contacted per phone and e-mail. Of these experts two, five and seven were recorded as experts in the field of physical activity, in the field of both physical functioning and in the field of both of physical activity and in the field of physical functioning respectively. Regarding organizational level setting five, five and four of the informants regard themselves as experts on national level, regional level and both national and regional level respectively. Ten of the respondents were physiotherapists and had in addition education at master or PhD level. Four have a master in Physical activity and one was Dr. Physical activity and health. Several of the experts found it difficult to fill in the questionnaires regarding the questions on how common the instruments are, the topic on translations and general opinion in the country, because they have not evidence based knowledge about this and found it difficult just to use their own imaginations or just guess. See appendix for illustration of currently used instruments in Norway.

Table 1. The association between sector, organizational level and setting (n=14)

	Governmental sector	Health care	Commercial sector	Education	Social sector
National level	1	5	1	4	0
Regional/ local level		6	1	3	0
Community –dwelling older adults	1	6	2	4	0
Institutionalized older person		5	0	2	0

The distribution of the experts regarding the different sectors, organizational level and setting is presented in Table 1. None of the respondents classified themselves in the social care sector.

PHYSICAL ACTIVITY

Table 2 shows how commonly used the different tests are in Norway (n=14)

Table 2. Different instruments currently used regarding Physical activity (n=14)

Instruments	Is the instrument currently used in your country		
	Yes	No	Don't know
Minnesota Leisure Time Physical Activity Questionnaire	1	1	12
Modified Baecke Questionnaire	1	0	13
Modified Dallosso Questionnaire	0	3	11
PAR, 7 days Physical Activity Recall/ Seven Day Recall	1	2	11
CHAMPS physical activity recall	1	3	8
CHAMPS' self-report physical activity questionnaire for older adults	1	3	8
PASE, The Physical Activity Scale for the Elderly	7	1	5
IPAQ, International Physical Activity Questionnaire	6	1	6
YPAS, Yale Physical Activity Survey	2	2	9
Zupthen Physical activity	1	3	9
FAI, Frenchay's Activity Index	3	2	8
Life Space	2	2	9
Walking habits	2	2	10
Pedometer	9	1	4
Accelerometer	6	1	6
Energy expenditure (METS)	6	1	6
Double labelled water	3	2	9

The reason why some of the tests were not used was most frequent “Not known” for example ‘Minnesota Leisure Time Physical Activity’, ‘Modified Dallosso Questionnaire, PAR’, ‘7 days Physical Activity Recall/ Seven Day Recall’, ‘IPAQ, International Physical Activity Questionnaire, YPAS’, ‘Yale Physical Activity Survey’, ‘Zupthen Physical activity’, ‘FAI, Frenchay’s Activity Index’, ‘Life Spice’ and ‘Walking Habits’.

Regarding ‘CHAMPS’ self-report physical activity questionnaire for older adults’ the reason was not known or not relevant/suitable. Regarding ‘Double labelled water’ two persons said the reason why not used was too expensive and another said “not known” and a third said too time-consuming.

‘PASE, The Physical Activity Scale for the Elderly’, ‘IPAQ, International Physical Activity Questionnaire’ and ‘Life Space’ are translated into Norwegian in a scientific way.

Regarding , ‘PASE’ 7 person said it was not very commonly used. Regarding ‘IPAQ, International Physical Activity Questionnaire’ 3 informants said it was not very commonly used and one said very common. Two persons answered that ‘FAI, Frenchay’s Activity Index’ and four persons characterised ‘Energy expenditure (METS)’ were not very commonly used. ‘Double labelled water’ was described as “not very common”. ‘Pedometer’, however, had the characteristic of not very commonly used of three persons and very common of one person. Regarding ‘accelerometer’ two persons found it not very common used.

General opinion regarding ‘PASE, The Physical Activity Scale for the Elderly’ was of five persons characterized with the category “ Fairly good” compared with four informants have the same characteristic of ‘IPAQ, International Physical Activity Questionnaire’ and one person has that characteristic of ‘FAI, Frenchay’s Activity Index’ and ‘Life Space’. Fairly

good was the opinion of one person regarding ‘Pedometer’. Regarding accelerometer the general opinion of one person was rather bad and three other said fairly good. Energy expenditure (METS) was classified as fairly good of two persons and very good of one person each. General opinion regarding Double labelled water was of one person “rather bad” and another “fairly good”.

The most frequently used instruments regarding physical activity were described to be ‘IPAQ, International Physical Activity Questionnaire’, ‘PASE, The Physical Activity Scale for the Elderly’ and ‘Pedometer’.

PHYSICAL FUNCTIONING

Endurance

Table 3 shows how commonly the different tests of endurance are used in Norway (n=14)

Table 3. Different instruments currently used regarding endurance (n=14)

	Is the instrument currently used in your country		
	Yes	No	Don't know
12-minutes walking	3	2	8
6-minutes walking	10	1	2
2-minutes walking	4	1	8
Endurance Shuttle walking test	4	2	7
Step test	6	1	7

Tests which were not mentioned in the questionnaire, but are used were:

- 'Åstrand ergometer test of VO₂ max'
- 'UKK walking'

One person suggests that '12-minutes walking' was not commonly used because of 'too time-consuming'.

One person presented the general opinion of "very good" regarding '12-minutes walking'. Regarding '6- minute walking' was categorised of 6 persons as "fairly good" and two other persons as "very good". The test '2- minute walking' was recorded as fairly good of two persons. 'Endurance Shuttle walking test' was classified as fairly good of three persons. Two persons described Step test as fairly good.

Regarding how commonly used 7 persons characterised '6-minutes walking' to be "very common". '2- minute walking' was recorded as "not very common" of 3 informants and one informant characterised this test as "very common". 'Endurance Shuttle walking test' was categorised as not very commonly used of two persons and very common of one person. Seven persons classified 'Step test' as not very commonly used and one person said that the reason was that the test requires special skills.

The most frequent used instruments were '6-minutes walking test', direct measure of 'VO₂ max' and 'Endurance Shuttle walking test'.

Mobility

Table 4 shows how commonly the different tests of mobility are used in Norway (n=14)

Table 4. Different instruments currently used regarding mobility (n=14)

	Is the instrument currently used in your country		
	Yes	No	Don't know
Get Up and Go Test	7	1	5
TUG	12	0	1
TUG manual	5	0	7
L test	1	2	10
Walking speed 30 m	3	1	8
Walking speed 10 m	7	0	6
Stops walking while talking	6	0	6
Functional ambulation	2	1	10
Dynamic Gait Index	3	1	8

Four persons said that the 'Get up and Go' test was not very commonly used while 2 persons said very common. Regarding 'TUG' nine persons said it was very commonly used and one person wrote not very commonly used. Regarding 'TUG manual' four persons said it was not very commonly used while one person said very common. Three persons reported that 'Walking speed 30 m' was not very commonly used. 'Walking speed 10 m' was of one person characterised as not very commonly used and four other person characterised this test as very commonly used. 'Stops walking while talking' is of three persons characterised as not very commonly used and as very commonly used. 'Functional ambulation' was of two persons reported as not very commonly used. Three persons characterised the 'Dynamic Gait index' as not very commonly used. One person reported that the reason why 'Walking speed 30 m' not used was that it was difficult to find a 30 m straight line.

One person reported the tests 'Walking speed 30 m' to be very good, walking speed 10m as fairly good and TUG as fairly good too. The general opinion of one person about 'TUG manual' was fairly good and 'Stops walking while talking' was of one person characterized as rather bad.

Regarding why not used, one said the 'Get up and Go' was not relevant/suitable.

Two persons reported that the 'Get up and Go' was translated into Norwegian language in a scientific way compared to five person reported that 'TUG' was translated into Norwegian language in a scientific way. Regarding 'TUG manual' three persons reported it to be translated in a scientific way. Two persons reported 'Walking speed 10 m' to be translated in a scientific manner. 'Dynamic Gait Index, was of two persons said to be scientifically translated.

Four persons' general opinion regarding 'Get up and Go' test was that the test was fairly good. Regarding 'TUG' four persons characterised it as fairly good while three persons characterised it as very good. 'TUG manual' was characterised as fairly good of two persons and very good of one person. 'Walking speed 10 m' was characterised as fairly good of two persons and very good of two other persons, 'Stop walking while talking' was of one person characterised as rather bad, and four other persons characterised this test as fairly good. 'Functional ambulation' was as a general opinion described as fairly good. 'Dynamic Gait index 'was reported as rather bad or fairly good of one person each.

Further comments to some of the tests were:

- 'Get up & Go' and 'TUG' were "Easy to use and understand
- 'TUG' is used in UK .
- 'Stop walking while talking' and 'TUG manual' are comparable with ADL.

- 'Walking speed 10 m' was important because used in UK.

Regarding the question about the three most frequently used instrument only 'TUG' and '10 m walking speed test' were reported.

Balance

Table 5 shows how commonly the different tests of balance are used in Norway (n=14)

Table 5. Different instruments currently used regarding balance (n=14)

	Is the instrument currently used in your country?		
	Yes	No	Don't know
Functional Reach	8	3	1
Timed Unsupported Steady Standing – TUSS	1	1	10
Solec test	2	2	9
One leg stance	9	1	3
Tandem stance	7	1	5
Romberg test	9	0	2
FICSIT 3-balance scale	3	0	10
FICSIT 4-balance scale	3	1	9
Berg's Balance scale	12	0	1
Figure of Eight	6	0	7
Modified Figure of Eight	2	1	10
Step test	7	0	6
The 180 Degree Turn	3	2	8

Two person characterised 'Functional Reach' as not very commonly used and three persons as very common. Solec test test was reported to be not very commonly used of one person. One

person reported 'One leg stance' to be not very common, four persons as very common. 'Tandem stance' was of four persons reported to be very common. Three persons reported 'Romberg test' to be not very common and four other persons to be very common. 'FICSIT 3-balance scale' was categorized as not very common of two persons and 'FICSIT 4-balance scale' got the same characteristic of three persons. 'Berg's Balance Scale' was reported to be not very common of one person and very common of six persons. 'Figure of Eight' was of six persons described as not very common. 'Modified Figure of Eight' was reported to be not very commonly used of two persons. while 'Step test' got that characteristic of four persons.

Two persons had the general opinion regarding 'Functional Reach' as rather bad, four other as fairly good and still one other as very good. 'One leg stance' was reported to be rather bad of one person, of two other as fairly good and of a third as very good. 'Tandem stance' was of one person reported as rather bad, another as fairly good and of one other person as very good. 'Romberg test' was of three persons described as rather bad, while of four persons as fairly good. 'FICSIT-3' and 'FICSIT-4' were of one person recorded as fairly good and another person as very good. 'Berg's Balance Scale' was described as fairly good of four persons and very good of four persons. Four persons reported that 'Figure of Eight' is a fairly good test and one person reported it as a very good test. Regarding 'Step test' one person thought the test to be fairly good and another very good.

Why 'Timed Unsupported Steady Standing' and 'The 180 Degree Turn' were not used was because these tests were not known.

Further comments on 'Functional Reach' were that it is comparable to ADL and of 'Romberg test' that it was used in UK (one person of each). Regarding 'FICSIT-3' one further comment was "for frailty elderly" and 'FICSIT-4' predictive value for nursing home. 'Berg's Balance

Scale’ was commented as easy to use of one and another as used in UK. One person mentions the ceiling effect related to ‘Berg’s Balance Scale’.

‘One leg stance’ reported of two persons to be translated into Norwegian scientifically, the same with ‘Tandem stance’ was reported of two persons to be translated into Norwegian. Three persons reported ‘Romberg test’ to be translated into Norwegian in scientific way. Four persons reported ‘Berg’s Balance Scale’ to be translated into Norwegian in a scientifically way.

The three most frequently used instruments were ‘Berg’s Balance Scale’, One leg stance’ and ‘Romberg test’ or Tandem.

Range of motion:

Table 6 shows how commonly the different tests of range of motion are used in Norway (n=14)

Table 6. Different instruments currently used regarding range of motion (n=14)

	Is the instrument currently used in your country		
	Yes	No	Don't know
Hand in neck	5	0	8
Hand in back	4	0	9
Pour out of Pot	2	1	9

‘Hand in neck’ was reported as not very commonly used of one person while very commonly used of three other persons. ‘Hand in the back’ was reported to be very commonly used of two persons. Only one person described ‘Pour out of pot’ as very commonly used

Hand in neck was reported to be fairly good of three persons as well as hand in back, while only one person reported pour out of pot to be fairly good.

Dexterity:

Table 7 shows how commonly the two tests of dexterity are used in Norway (n=14)

Table 7. Different instruments currently used regarding dexterity (n=14)

	Is the instrument currently used in your country		
	Yes	No	Don't know
Box and Block Test	3		10
Nine Hole Peg Test	3		10

‘Box and Block Test’ was of one person described as not very commonly used in UK compared to Nine ‘Hole Peg Test’ which one person described as very common and used in UK. Regarding the question about the three most frequently used instrument only ‘TUG’ and ‘10 m walking speed test’ were reported. Nobody answered the question about the three most frequently used instruments of ‘Dexterity’.

Muscle strength

Table 8 shows how commonly the different tests of muscle strength are used in Norway (n=14)

Table 8. Different instruments currently used regarding muscle strength (n=14)

	Is the instrument currently used in your country		
	Yes	No	Don't know
Climbing boxes	2	2	9
Chair stand once	1	2	10
Chair stand 3 times	1	3	9
Chair stand 5 times	1	2	9
Chair stand 10 times	1	2	10
Chair stand 30 sec	8	3	2
Grip Strength	9	1	3

‘Chair stand once’ was of one person described as not very commonly used. ‘Chair stand 3 times’ was described as not very commonly used of two persons and very commonly of two other persons. ‘Chair stand 5 times’ was described as very commonly used test of three persons. ‘Chair stand 10 times’ was of two persons described as not very commonly used. Four persons described ‘Chair stand 30 sec’ as not very commonly used and two other described the same test as very commonly used.

The reason why chair stand once was not used was of one person reported to be poor measurement properties. .

One person’s general opinion of ‘Climbing boxes’ was that the test was very good. One person described ‘Chair stand once’ as rather bad while another described that test as very good. The tests ‘Chair stand 3 times’ and ‘Chair stand 5 times’ were described as very good, fairly good and rather bad of one person. Three persons described ‘Chair stand 30 sec’ as fairly good and

two other persons described the same test as very good. ‘Grip Strength’ was reported as very good of two persons and fairly good of one person.

‘Grip Strength’ was of five informants described as not very commonly used and of one as very common.

Three persons reported that ‘Grip Strength’ was translated into Norwegian by scientific methods.

Further comment related to ‘Grip Strength’ was that the test is used in UK.

The three most frequently used instruments were ‘Chair stand 3 times’, ‘Chair stand 5 times’ and Climbing Boxes’.

Overall index test

Table 4 shows how commonly the overall index tests are used in Norway (n=14)

Table 9. Different overall index related to physical function (n=14)

	Is the instrument currently used in your country		
	Yes	No	Don't know
Physical fitness field test	1	1	11
Clinical Outcome Variables	2	1	10
Short Physical Performance Battery	3	1	9
Nursing Home Disability Instrument	1	1	11
Timed-Functional Movements	1	1	11
Physical Performance Test	2	1	10

Tinetti Performance-Oriented Mobility Assessment	4	1	8
Functional Fitness	5	0	8
AAHPERD Fitness Task Force	1	1	11
Functional Fitness in Daily Functioning	1	1	10
Physical Performance and Mobility Examination	0	1	11
Elderly Mobility Scale	4	2	10
Modified Elderly Mobility scale	1	1	11
Groningen Fitness Test	1	1	10
General Motor Function Assessment	6	0	7

‘Physical Fitness Field Test’, ‘Clinical Outcome Test’ and ‘Modified Elderly Mobility Scale’ were of one participant described as not very common compared to two persons that used this description of ‘Physical Performance Test’ and ‘Groningen Fitness Test’ Assessment’ while three persons have the same characteristic of ‘Tinetti Performance-Oriented Mobility Assessment’. Four persons reported that the tests ‘Functional Fitness Test’ and ‘General Motor Function Assessment’ were not very commonly used. One person reported ‘Elderly Mobility Test’ to be not very commonly used and another reported the same test to be very commonly used.

Not known was the reason why Timed-Function Movements, ‘AAHPERD Fitness Task Force’, ‘Physical Performance and Mobility Examination’ ‘Elderly Mobility Scale’ and ‘Modified Elderly Mobility Scale’ were not used.

The general opinion of ‘Physical Fitness Field Tests’ and ‘Nursing Home Disability Instrument’ were of one person described as very good. Functional Fitness was characterized as fairly good of one person. ‘Clinical Outcome Variables’ was described as fairly good and very good of one person each respectively. Fairly good was the opinion of one informant regarding Physical Performance and two informants regarding ‘Tinetti Performance-Oriented Mobility Assessment’. The general opinion of one person regarding ‘Elderly Mobility Scale’ was that this test was rather bad while another reported the same test to be very good. Fairly good was the general opinion of two persons regarding ‘General Motor Function Assessment’. The answer of the question regarding the three most frequently used instruments were ‘Functional Fitness’, ‘Clinical Outcome Variables’, ‘Physical Performance Test’.

Activities of daily living

Table 10 shows how commonly the different tests of Activities of daily living are used in Norway (n=14)

Table 10. Different instruments of Activity of daily living currently used (n=14)

	Is the instrument currently used in your country		
	Yes	No	Don't know
Activities of Daily Living Index	4	1	8
Barthel Index	8	0	5
Bristol Activities of Daily Living Scale	1	2	10
Cleveland Scale for Activities of Daily Living (CSADL)	7	1	4
Combination ADL-IADL	1	1	11
Functional Activities Questionnaire (FAQ)	4	0	9
Functional Independence Measure (FIM)	6	0	7

Instrumental Activity Measure (IAM)	0	1	11
Katz ADL	5	1	6
ADL Staircase	1	1	10
Lawton Instrumental Activities of Daily Living Scale	1	1	10
Nottingham Extended Activities of Daily Living Scale	2	1	9
The Older Americans Resources and Services Multidimensional Functional Assessment Questionnaire –IADL	2	0	10

One person reported ‘Activities of Daily Living Index’ to be “not very commonly used whereas another said very common. ‘Barthel Index’, ‘Bristol Activities of Daily Living Scale’, ‘Combination ADL-IADL’, ‘ADL Staircase’, ‘Nottingham Extended Activities of Daily Living Scale’ and ‘The Older Americans Resources and Services Multidimensional Functional Assessment’ and ‘Questionnaire –IADL were of one person reported to be not very commonly used. Four persons reported ‘Functional Activities Questionnaire’ to be not very commonly used. Two persons reported ‘Functional Independence Measure’ to be “not very commonly used whereas two other persons reported the same test to be very commonly used. Regarding ‘Katz ADL’ two persons reported not very commonly used while another person reported very commonly used.

The reason why ‘Functional Independence Measure (FIM),’ ‘Activities of Daily Living Index’, ‘Bristol Activities of Daily Living Scale’, ‘Cleveland Scale for Activities of Daily Living’, ‘Combination ADL-IADL’ was not used was of one person said to be not known.

‘Barthel Index’ and ‘Functional Independence Measure’ are translated into Norwegian in a scientific manner.

The general opinion of one person of ‘Activities of Daily Living Index’ and ‘Bristol Activities of Daily Living Scale’ was that these tests were very good. Five persons characterised ‘Barthel Index’ as fairly good whereas one person had that characteristic of ‘Combination ADL-IADL’ and three persons of the test ‘Functional Activities Questionnaire’. Two persons reported ‘Functional Independence Measure’ to be fairly good and very good respectively. One person thought that ‘Katz ADL’, ‘ADL Staircase’ and ‘Lawton Instrumental Activities of Daily Living Scale’ were fairly good. ‘Nottingham Extended Activities of Daily Living Scale’ were reported to be fairly good of two persons. ‘The Older Americans Resources and Services Multidimensional Functional Assessment Questionnaire –IADL’ were reported as fairly good and very good respectively of one person.

The three most used instruments were ‘Barthel Index’, ‘Nottingham Extended Activities of Daily Living Scale’ and ‘Katz ADL’

National Guidelines

Guidelines regarding fall prevention and rehabilitation were mentioned, however, without giving more specific reference.

Conclusion

‘Pedometer’, a Physical Activity Scale, was of most informants reported to be currently used. Regarding physical functioning related to endurance, mobility, balance, range of motion, muscle strength, overall index related to physical functioning and Activities of daily living the following tests were of most informants reported to be currently used: ‘6-minutes walk’

'TUG', 'Berg's Balance Scale', 'Hand in the neck', 'Grip strength', 'General Motor Function Assessment' and 'Barthel Index' respectively.