EUROPEAN REPORT

Work Package 4

Expert Survey regarding Assessment Instruments
on Physical Activity and Physical Functioning
in Older People

Kerstin Frändin, leader of Work Package 4, and Elisabeth Rydwik, Sweden,
in cooperation with Astrid Bergland, Nina Waaler Loland and Lisa Forsén, Norway

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INTRODUCTION

In Europe, elderly people are becoming an increasingly important target group when it comes to health promotion and prevention of unnecessary functional decline on the one hand, and rehabilitation and preservation of function on the other.

Assessment is critical to decide on treatment and is the basis for an evaluation about effectiveness of a program or a specific service. The targets of assessment boil down to risk factors and outcomes of various interventions. The key to good assessment is using a strong conceptual model. This model should identify the specific attributes of interest. The question of what to assess should be extended to include whom to assess. Here too, the answer depends on the context and the purpose. It is also important to consider the costs of assessment.

The measurement of physical function is useful in identifying individuals at risk and in measuring outcome in intervention studies aimed at reducing physical frailty and increasing mobility.

The different methods can also be categorized according to whether they provide a direct or indirect (e.g. self-reported) observation of physical activity or assess body motion, a physiological adaptation to physical activity. Depending on the stage of health and age, different functional measures are needed in order to discriminate functional status and to detect changes in status. The two primary assessment techniques include questionnaire-based measures of self-reported function and objective or performance-based measures of functional tasks. These two measures have been shown to be moderately correlated when using self-reported and performance-based measures [1].

Physical activity is defined as "any bodily movement produced by skeletal muscle that results in energy expenditure" [2]. Although the measurement of physical activity has a long history, traceable to a pedometer designed by Leonardo da Vinci nearly 500 years ago, it represents a persistent conundrum in the fields of epidemiological and clinical medicine. According to Dishman [3] there is today still no consensus regarding a "golden standard" for the measurement of physical activity.

The International Classification of Functioning, Disability and Health (ICF) provides us with a common understanding of functioning according to a bio-psycho-social model [4]. This classification can serve as a globally accepted language to communicate about functioning at body, person and society levels. Using the ICF definitions, the umbrella term "functioning" with its components body functions and structures, activities and participation becomes a central perspective for health professionals. It denotes the positive aspects of the interaction between an individual (with a particular level of general health) and that individual's contextual factors (environmental and personal factors). Physical function measures have gained increasing acceptance for the clinical evaluation of older persons [5].

In conclusion, to be able to offer adequate and preferably individually tailored training programs, there is a need of instruments and tests that have been scientifically evaluated and that have a documented high quality for their respective purposes. An instrument must be right for its purpose (base for intervention, evaluation of treatment, description, screening, prediction to mention some) and for the person or group of people to be tested (there is a big range from healthy and fit elderly people in the society to multi-diseased nursing home residents). Today, a great number of instruments and tests are used in European countries, some internationally spread and others locally developed and used only within a small area.

One of the overall objectives of the European Network for Action on Ageing and Physical Activity (EUNAAPA), addressed by Work Package 4 (WP4), is to offer advice concerning the quality of the different ways of assessing physical activity and physical functioning in older people. The first step in this process was to give an overview of instruments currently used in Europe, which has been executed by means of the inventory presented below. The

second step will be critical reviews addressing the different areas of Physical Activity and Physical Functioning. The leader of WP4 is Karolinska Instutet, Stockholm, Sweden.

This European report summarizes information regarding instruments currently used in the participating countries, received both from the combined data files as from the national reports (see attachments).

METHODS

Questionnaire

A questionnaire was constructed by the Swedish and Norwegian EUNAAPA groups. It consisted of nine sections: Physical Activity, and eight sections of Physical Functioning: Endurance, Mobility, Balance, Range of Motion, Dexterity, Muscle Strength, Overall Indexes, and Activities of Daily Living (ADL). A great number of instruments were included in each section, and the questions following each instrument concerned issues such as if it is currently used, how common it is and if it has been translated (see attachment). Most answer alternatives were locked, but there were also possibilities to give comments. In addition, questions were asked about other instruments used, and about the existence of guidelines.

The questionnaire and the survey process was discussed at a core group meeting of WP4 in Stockholm, attended by members from Germany (1), Ireland (1), Portugal (2), Norway (3) and Sweden (3).

Participants

Eighteen countries, associated and collaborating EUNAAPA partners, were initially included in the study. Fourteen countries are included in the results presented, but additional data from Denmark, who started late with their data collection, are included in certain sections.

Expert selection

Expert selection was based on the instructions and sampling matrix provided by the WP4 leader (Table 1) and a minimum of eight experts was to be selected in each country. Selection partly took place by means of convenience sampling. Experts known to the EUNAAPA partners were listed and then put into the fields that suited their background most. Simultaneously, institutions working in the relevant sectors were approached and asked to name experts willing and able to participate in the survey. This was especially necessary for the four matrix fields related to experts with a governmental background.

Procedure

The initial contact with experts in the respective countries was made through telephone calls. The reason for this was to be able to clarify the objectives of the questionnaire and the survey process, but also to ensure the experts' willingness to participate. The questionnaire supplied by the WP4 leader was then sent to the experts either as a paper copy or as a PDF document by E-mail to be printed out by the experts. In some countries, a translation to the local language was made. Partners were invited to contact the WP4 leader Kerstin Frändin if they had questions regarding the survey. All questionnaires were to be answered during the month of March and returned to the responsible member in each country, who then saw to it that the

data were put into a data file and sent to Stockholm. Data files (both SPSS and EXCEL) were provided by the Norwegian Institute of Public Health to ensure that all countries handled their data in the same way, but also to make it possible to combine all data into one common file for the final overall analysis. In addition, each partner was supposed to produce a national report with comments and conclusions and send it to Stockholm.

Table 1: Sampling matrix

	Community – dwelling older persons			
National level	Government	Health and social care	Commercial sector	Academics Professional Education
Regional/ local level	Government	Health and social care	Commercial sector	Academics Professional Education
	Institutionalised older persons			
National level	Government	Health and social care	Commercial sector	Academics Professional Education
Regional/ local level	Government	Health and social care	Commercial sector	Academics Professional Education

RESULTS

Experts' Self-Rating

Respondents were asked to self-rate their field of expertise, organizational level setting and sector. All in all, 133 experts took part in the survey (Table 2). The number of experts differed from four (Poland and Portugal) to fourteen (The Netherlands and Norway).
Both fields (physical activity and physical functioning) and both organizational levels (national and regional/local) are well-represented in the sample. Concerning setting, community-dwelling was better represented compared to institutionalized older persons (76.9% and 42.9% respectively). The health care and educational sectors were the best represented sectors (57% and 44% respectively).

Table 2. Characteristics of the countries (%).

	Field		Organization level			Setting			Sector		
	PA expert	PF expert	National	Regional/Local	Community dwelling	Institutionalised	Governmental	Health care	Commercial	Educational	Social care
Germany (n=11)	72.7	72.7	63.6	54.5	72.7	45.5	9.1	36.4	9.1	36.4	9.1
Greece (n=11)	63.6	63.6	63.6	72.7	90.9	18.2	0	72.7	9.1	72.7	18.2
Sweden (n=9)	55.6	88.9	33.3	77.8	100	12.5	0	77.8	11.1	66.7	0
Belgium (n=12)	66.7	50.0	41.7	66.7	91.7	41.7	16.7	58.3	8.3	33.3	33.3
Poland (n=4)	100.0	25.0	75.0	25.0	25.0	0	0	25.0	0	100	50.0
Norway (n=14)	57.1	76.9	57.1	69.2	78.6	46.2	7.7	57.1	15.4	46.2	0
Netherlands (n=14)	57.1	78.6	81.3	31.3	75.0	62.5	18.8	87.5	0	31.3	0
Italy (n=11)	63.6	81.8	45.5	63.6	81.8	63.6	18.2	36.4	9.1	27.3	9.1
UK (n=10)	50.0	60.0	80.0	40.0	80.0	50.0	20.0	70.0	30.0	30.0	20
Finland (n=8)	37.5	75.0	87.5	37.5	100.0	50.0	25.0	50.0	0	37.5	12.5
Portugal (n=4)	75.0	100	25.0	75.0	100.0	0	0	25.0	25.0	75.0	0
Austria (n=9)	33.3	55.6	33.3	77.8	44.4	33.3	22.2	33.3	11.1	0	33.3
France (n=9)	77.8	22.2	33.3	77.8	66.7	55.6	0	66.7	0	44.4	11.1
Czech Rep. (n=7)	85.7	57.1	14.3	85.7	42.9	57.1	0	42.9	14.3	85.7	0
Total (mean) (n=133)	**61.1**	**65.9**	**54.8**	**60.4**	**76.9**	**42.9**	**11.2**	**57.0**	**9.7**	**44.0**	**12.7**

PA=Physical Activity, PF=Physical Functioning

Physical Activity

Self-reported

Table 3 shows the instruments based on self report currently used in the different countries [6-18]. The most used instruments were IPAQ and PASE (40.9% and 30.5% respectively) [9, 17]. The least used instrument was Modified Dallosso Questionnaire (3.1%), used only in three countries [10]. In general, the variations between the countries were big.

The knowledge of translation of instruments among the experts was low, 79% of the experts (range 57-91%) answered *Do not know* regarding the different instruments. Table 4 shows the instruments that have been translated into other languages. IPAQ, PASE, Modified Baecke

(MB) and 7 days Physical Activity Recall (PAR) were the most translated instruments [7, 9, 17, 18]. With the exception of IPAQ [9], the number of instruments that have been translated in a scientific way was even lower.

Table 3. Physical Activity instruments (self reported) currently used in the countries (N=133) (%) [6-18].

	Min	MB	MDQ	PAR	CHA	PAS	IPAQ	YPAS	ZPA	FAI	LS	WH
Germany	18.2	18.2	9.1	27.3	18.2	36.4	36.4	27.3	9.1	9.1	18.2	0
Greece	9.1	45.5	0	18.2	9.1	27.3	18.2	9.1	0	9.1	0	18.2
Sweden	0	0	0	22.2	0	55.6	44.4	0	0	55.6	22.2	44.4
Belgium	0	50.0	0	16.7	0	0	41.7	0	0	25.5	0	0
Poland	0	0	0	25.0	0	0	50.0	0	0	0	50	75
Norway	7.7	7.7	0	7.7	7.7	53.8	53.8	15.4	0	23.1	15.4	14.3
Nether-lands	20	33.3	0	33.3	13.3	53.3	42.9	0	64.3	33.3	0	6.7
Italy	27.3	9.1	0	18.2	0	27.3	54.5	9.1	0	0	0	9.1
UK	37.5	12.5	12.5	62.5	25.0	25.0	50.0	12.5	0	25.0	0	12.5
Finland	28.6	14.3	0	28.6	0	14.3	42.9	0	0	0	14.3	28.6
Portugal	0	25.0	0	0	0	0	25.0	0	0	0	0	0
Austria	0	0	0	0	0	0	11.1	0	0	0	25.0	12.5
France	12.5	37.5	25.0	12.5	0	62.5	14.3	0	0	0	25.0	14.3
Czech Rep.	14.3	0	0	0	0	14.3	85.7	0	0	0	0	14.3
Total (mean)	**13.2**	**20.2**	**3.1**	**20.2**	**6.2**	**30.5**	**40.9**	**6.3**	**7.9**	**15.6**	**10.2**	**14.8**

CHA=CHAMPS, Min=Minnesota Leisure Time Physical Activity Questionnaire, MB=Modified Baecke, MDQ=Modified Dallosso Questionnaire, PAR=7 days Physical Activity Recall, PAS=PASE (Physical Activity Scale for the Elderly), IPAQ=International Physical Activity Questionnaire, YPAS=Yale Physical Activity Survey, ZPA=Zupthen Physical Activity, FAI=Frenchay's Activity Index, WH=Walking habits

Table 4. Translation of the different Physical Activity instruments (self-reported) in the different countries.

	Min		MB		MDQ		PAR		CHAMPS		PASE		IPAQ		YPAS		ZPA		FAI		LS		WH	
	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST
Germany			x	x	x		x		x		x	x	x	x			x				x			
Greece			x	x			x				x	x	x	x									x	x
Sweden							x	x			x	x	x	x					x		x	x	x	x
Belgium			x	x			x						x	x					x	x				
Poland							x	x					x	x							x		x	
Norway	x										x	x	x	x							x		x	
Netherlands	x	x	x	x			x	x	x	x	x	x	x	x			x	x	x	x			x	x
Italy	x		x				x	x			x	x	x	x	x				x					
UK	x		x		x	x	x		x		x		x	x	x	x	x				x			
Finland	x						x						x	x							x		x	
Portugal			x	x									x	x										
Austria			x		x		x														x			
France	x		x	x	x	x					x	x	x	x							x	x	x	
Czech Republic	x										x		x	x	x								x	
Total	7	1	9	6	4	2	10	4	3	1	9	7	13	13	3	1	3	1	4	2	8	2	8	3

Min= Minnesota Leisure Time Physical Activity Questionnaire, MB= Modified Baecke, MDQ=Modified Dallosso Questionnaire, PAR=7 days Physical Activity Recall, PASE= Physical Activity Scale for the Elderly, IPAQ=International Physical Activity Questionnaire, YPAS=Yale Physical Activity Survey, ZPA=Zupthen Physical Activity, FAI=Frenchay 's Activity Index, WH= Walking habits, T=Translation, ST=Scientific Translation

Performance based instruments

The most used instrument was Pedometer (62.5%), followed by METS and Accelerometer (50.8% and 48.8%) (Table 5) [19-23]. It is interesting to note, however, that the picture differed enormously between the countries. For example, the use of Pedometer differed from 0-100% (Austria versus Poland and The Czech Republic respectively).

Table 5. Physical Activity instruments (performance-based) currently used in the countries (N=133) (%) [19-24].

	Pedometer	Accelerometer	METS Energy expenditure	Double labelled water
Germany	45.5	27.3	18.2	18.2
Greece	54,5	45.5	36.4	9.1
Sweden	77.8	44.4	33.3	22.2
Belgium	83.3	58.3	75.0	25.0
Poland	100	50.0	100	0
Norway	57.1	53.8	46.2	21.4
Netherlands	77.3	73.3	57.1	33.3
Italy	63.6	54.5	45.5	9.1
UK	75.0	50.0	62.5	57.1
Finland	28.6	28.6	85.7	28.6
Portugal	50.0	50.0	50.0	25.0
Austria	0	0	11.1	0
France	71.4	75.0	50.5	37.5
Czech Republic	100	57.1	85.7	0
Total (mean)	62.5	48.8	50.8	21.1

Regarding translation of the instruction for the different instruments an average of 66% (55-84%) of the experts answered *"Do not know"*. The Pedometer and METS were the most translated instruments (Table 6) [19-22].

Table 6. Translation of the different Physical Activity instruments (performance based) in the different countries.

	PM		AM		METS		DLW	
	T	ST	T	ST	T	ST	T	ST
Germany		x						
Greece	x	x	x		x	x		
Sweden	x		x		x		x	
Belgium	x		x	x	x		x	
Poland	x	x			x	x		
Norway	x	x	x	x	x			
Netherlands	x	x	x	x	x	x	x	x
Italy	x				x	x	x	
UK	x				x		x	
Finland	x	x	x		x	x	x	
Portugal			x					
Austria					x			
France	x	x		x	x	x	x	x
Czech Republic	x		x		x	x		
Total	11	7	7	4	12	7	7	2

PM=Pedometer, AM=Accelerometer, METS=Energy Expenditure METS, DLW=Double Labelled Water, T=Translation, ST=Scientific Translation

The general opinion of the five most dominating instruments regarding Physical Activity, both self-reported and performance-based, is shown in Figure 1. For further information about the different countries, see National Reports.

*Figure 1. Number of experts responding to the four different grades.*
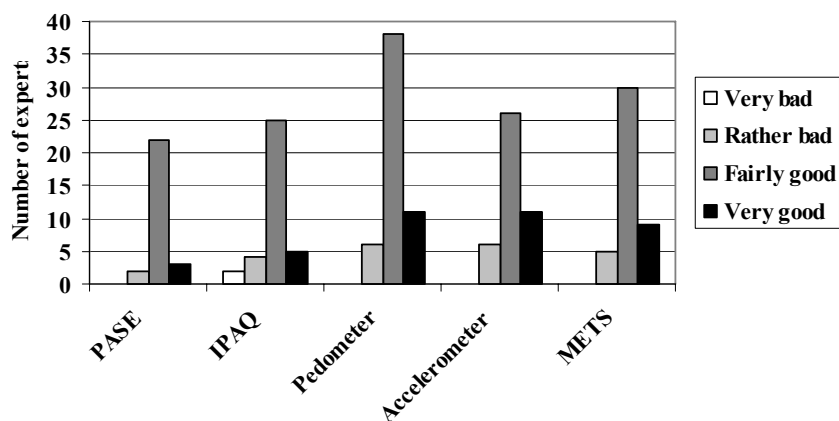
The proportion of experts responding was 29%, 36%, 51%, 42% and 42 % for PASE, IPAQ, Pedometer, Accelerometer and METS respectively. The remaining experts were not aware of the general opinion in the different countries.
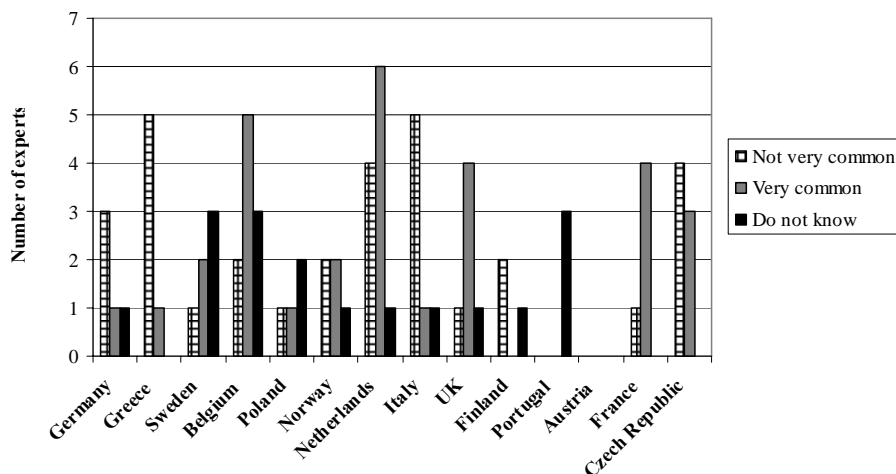
Figure 2 a-c shows how common the three most dominating instruments, IPAQ, Pedometer and METS are, according to 38%, 58% and 45% of the experts respectively.

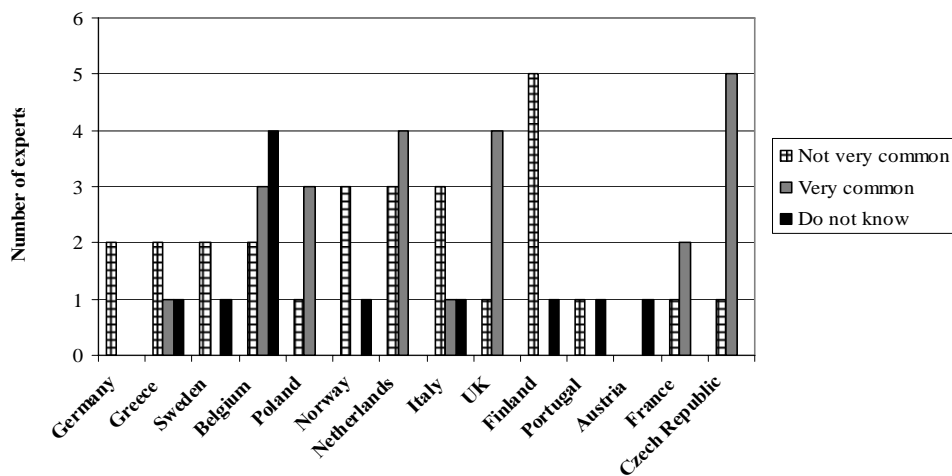*Figure 2 a-c. Shows number of experts responding to the question "how common is the instrument".*

a) IPAQ
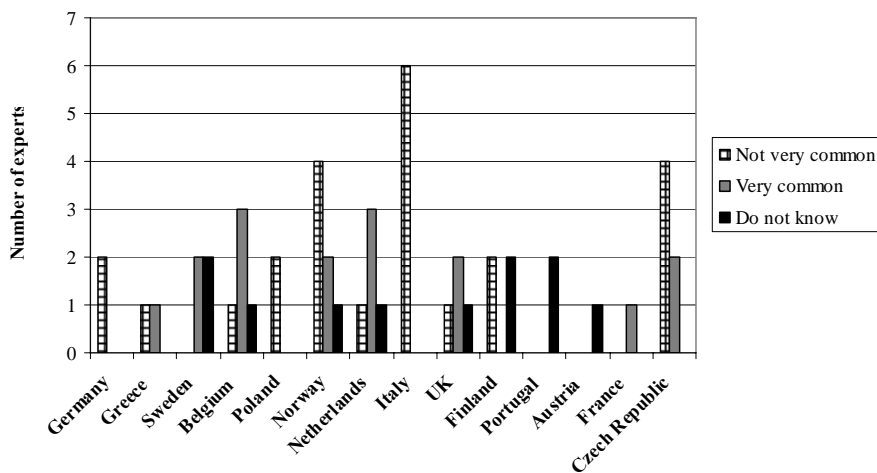
b) Pedometer

c) METS

Instruments added by some countries
(more instruments can be found in the National Reports)

- LASA Physical Activity Questionnaire (LAPAQ) [25]
- Short Questionnaire to Assess Health-enhancing physical activity (SQUASH) [26]
- The Tecumseh Community Health Study Questionnaire ([27]
- The Swedish scale [28]
- The Modified Swedish scale [29, 30]
- HSfE PAQ: Health Survey for England Physical Activity Questionnaire [31].
- GPPAQ: General Practice Physical Activity Questionnaire [32].

Physical Functioning

Endurance

Most of the five instruments were well used (Table 7) [33-37]. The dominating instrument was 6-minute walking test (70%), which was used in all countries. Poland was the leading user regarding the 12-, 6-, and 2-minute walking tests [34-36], while Portugal used only the 6-minute walking test but also the Step test. The Step test has also been called the Canadian Aerobic Fitness Test [33].

Table 7. Endurance instruments currently used in the countries (N=133) (%) [33-37].

	12-minute walking	6-minute walking	2-minute walking	Endurance Shuttle walking test	Step test
Germany	36.4	72.7	45.5	0	18.2
Greece	45.5	45.5	9.1	9.1	36.4
Sweden	37.5	88.9	33.3	33.3	77.8
Belgium	41.7	66.7	25.0	33.3	25.0
Poland	75.0	100	75.0	25.0	100
Norway	23.1	69.2	30.8	30.8	42.9
Netherlands	40.0	86.7	46.7	53.3	40
Italy	63.6	81.8	45.5	9.1	54.5
UK	33.3	55.6	33.3	33.3	55.6
Finland	50.0	75.0	25.0	2.5	37.5
Portugal	0	50.0	0	0	25.0
Austria	42.9	50.0	12.5	0	25.0
France	42.9	100	14.3	12.5	33.3
Czech Republic	42.9	28.6	42.9	14.3	85.7
Total (mean)	40.9	70.0	31.8	21.5	44.2

Regarding translation of the instruction for the different instruments an average of 58% (33-74%) of the experts answered *"Do not know"*. Six-minute walking test [35] was the most common instrument to be translated and also in a scientific way (Table 8).

Table 8. Translation of the different Endurance instruments in the different countries.

	12-minutes walking		6-minutes walking		2-minutes walking		Endurance Shuttle Walking Test		Step Test	
	T	**ST**	**T**	**ST**	**T**	**ST**	**T**	**ST**	**T**	**ST**
Germany			x	x	x	x			x	
Greece	x	x	x	x	x	x			x	
Sweden	x	x	x	x	x	x	x	x	x	x
Belgium	x		x	x	x	x	x		x	
Poland	x	x	x	x	x	x			x	x
Norway	x		x	x	x		x		x	x
Netherlands	x	x	x	x	x	x	x	x	x	x
Italy	x	x	x	x	x	x	x	x	x	x
UK	x		x		x		x		x	
Finland	x		x	x	x	x	x		x	x
Portugal			x	x						
Austria	x		x	x	x				x	
France	x	x	x	x	x		x	x	x	x
Czech Republic	x	x	x	x	x	x			x	x
Total	12	7	14	13	13	9	8	4	13	8

T=Translation, ST=Scientific Translation

The general opinion of the three most dominating instruments regarding Endurance is shown in Figure 3. For further information about the different countries, see National Reports.

*Figure 3. Number of experts responding to the four different grades.*
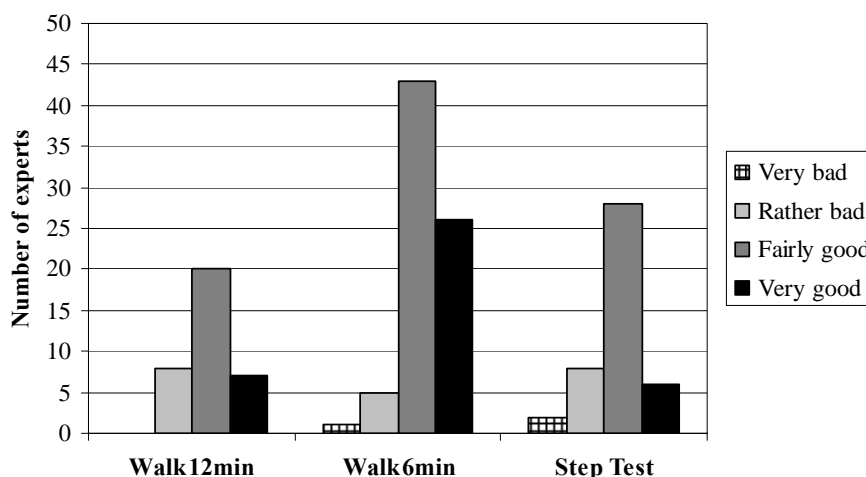
The proportion of experts responding was 35%, 68% and 41% for Walk 12 min, Walk 6 min and Step Test respectively.
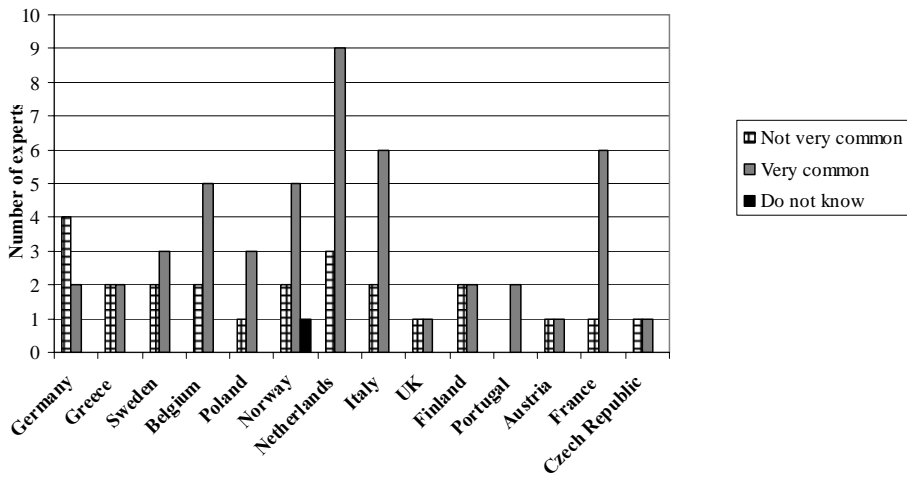Figure 4 a-c shows how common the three most dominating instruments, 12-minute walk, 6-minute walk and Step Test, are according to 37%, 64% and 41% of the experts respectively.

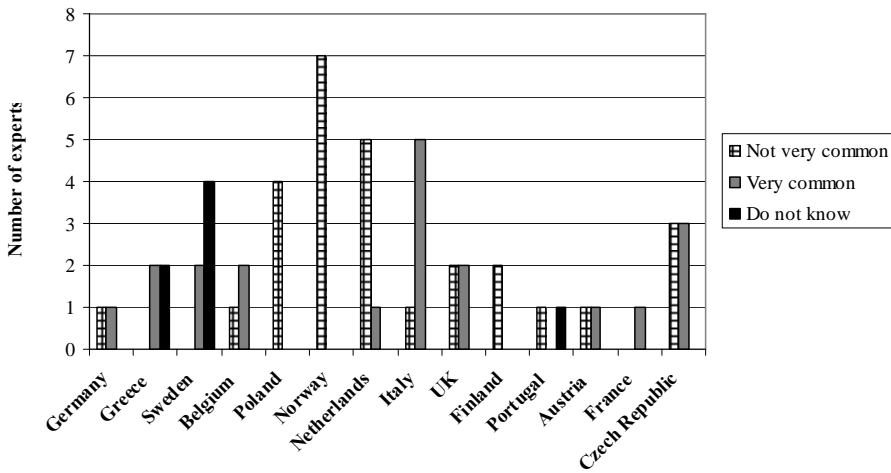*Figure 4 a-c. Number of experts responding to the question "how common is the instrument".*

a) 12-minute walk
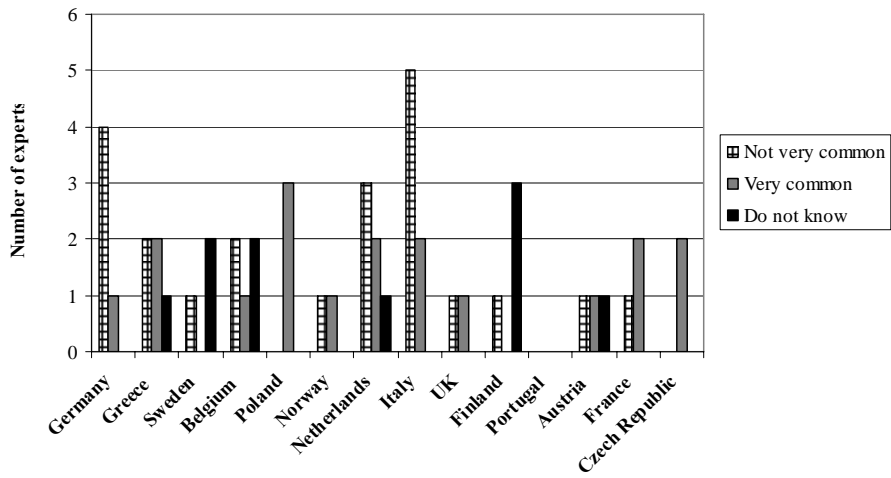
b) 6-minute walk

c) StepTest

Instruments added by some countries
(more instruments can be found in the National Reports)

- Groningen walking test [38]
- 2-km Walking test [39]

Mobility

The most used instruments were Timed up and Go, Get up and Go, and Walking Speed 10m (66.7%, 59.1%, and 45.8% respectively) (Table 9 [40-42].
The L-test was the least used (12.5%) [43]. Portugal exclusively used Walking Speed 10m.

Table 9. Mobility instruments currently used in the countries (N=133) (%) [29, 40-49].

	GUG	TUG	TUG-man	L Test	WS-30m	WS-10	SWWT	FA	DGI
Germany	63.6	90.9	30.0	9.1	18.2	72.7	90.0	0	10.0
Greece	72.7	63.6	9.1	0	27.3	45.5	27.3	9.1	27.3
Sweden	77.8	88.9	75.0	0	77.8	66.7	77.8	33.3	11.1
Belgium	50.0	50.0	8.3	0	16.7	25.0	25.0	16.7	16.7
Poland	100	50.0	50.0	0	0	0	25.0	0	50.0
Norway	53.8	92.3	38.5	7.7	30.8	53.8	46.2	15.4	25.0
Netherlands	73.3	80.0	6.7	0	13.3	53.3	33.3	33.3	20.0
Italy	27.3	54.5	0	0	36.4	9.1	18.2	0	9.1
UK	44.4	77.8	0	0	44.4	44.4	33.3	0	37.5
Finland	62.5	62.5	0	0	0	75.0	37.5	0	25.0
Portugal	0	0	0	0	0	50.0	0	0	0
Austria	33.3	44.4	0	0	25.0	37.5	12.5	0	0
France	100	88.9	37.5	12.5	0	66.7	66.7	14.3	14.3
Czech Republic	57.1	14.3	0	0	14.3	14.3	14.3	0	0
Total (mean)	59.1	66.7	17.2	2.3	23.8	45.8	38.5	11.1	17.5

GUG=Get Up and GO, TUG=Timed Up and Go, TUG-man=TUG manual, WS-30m=Walking speed 30 m, WS-10m=Walking speed 10 m, SWWT=Stops Walking While Talking, FA=Functional Ambulation, DGI=Dynamic Gait Index.

Regarding translation of the instruction for the different instruments an average of 68% (31-100%) of the experts answered *"Do not know"*. Get Up and Go, Timed Up and Go and Walking speed 10m were the most translated instruments (Table 10).

Table 10. Translation of the different Mobility instruments in the different countries.

	GUG		TUG		TUG-man		L-test		WS-30m		WS-10m		SWWT		FA		DGI	
	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST
Germany	x	x	x	x	x	x			x		x	x	x	x				
Greece	x	x	x	x	x	x			x	x	x	x	x	x			x	x
Sweden	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x
Belgium	x	x	x	x	x						x	x	x	x	x	x	x	x
Poland	x	x	x		x													
Norway	x	x	x	x	x	x					x		x				x	x
Netherlands	x	x	x	x	x	x			x	x	x	x	x		x	x	x	x
Italy	x	x	x	x	x				x	x	x	x	x				x	
UK	x		x						x		x		x				x	
Finland	x	x	x	x					x		x	x	x					
Portugal																		
Austria	x		x						x		x							
France	x	x	x	x	x	x					x	x	x	x			x	x
Czech Republic	x	x	x						x		x							
Total	13	11	13	9	9	6	0	0	9	4	12	8	10	5	3	3	8	6

GUG=Get Up and GO, TUG=Timed Up and Go, TUG-man=TUG manual, WS-30m=Walking speed 30 m, WS-10m=Walking speed 10 m, SWWT=Stops Walking While Talking, FA=Functionl Ambulation, DGI=Dynamic Gait Index, T=Translation, ST=Scientific Translated

The general opinion of the four most dominating instruments regarding Mobility is shown in Figure 5. For further information about the different countries, see National Reports.

Figure 5. Number of experts responding to the four different grades.
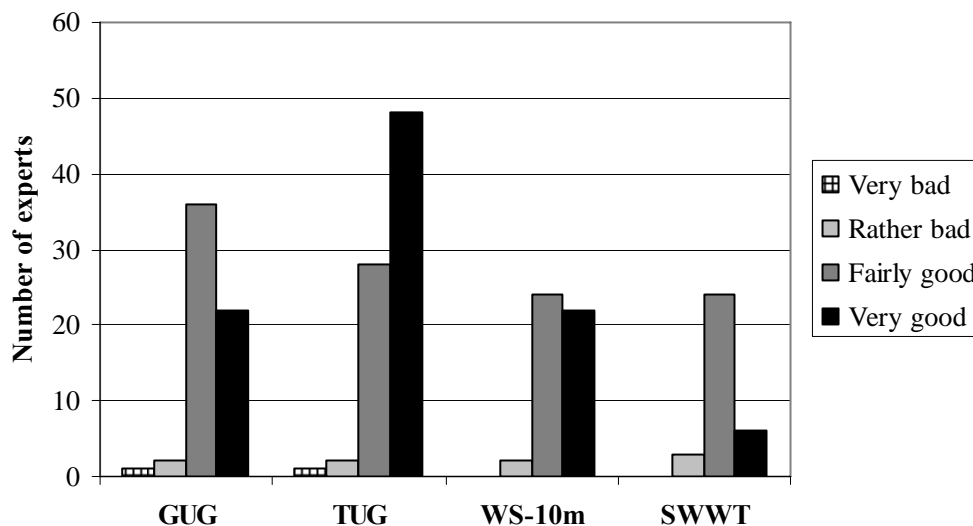

The proportion of experts responding was 61%, 72%, 49% and 35% for Get Up and Go (GUG), Timed up and Go (TUG), Walking speed 10m (WS-10m) and Stops Walking While Talking (SWWT) respectively.
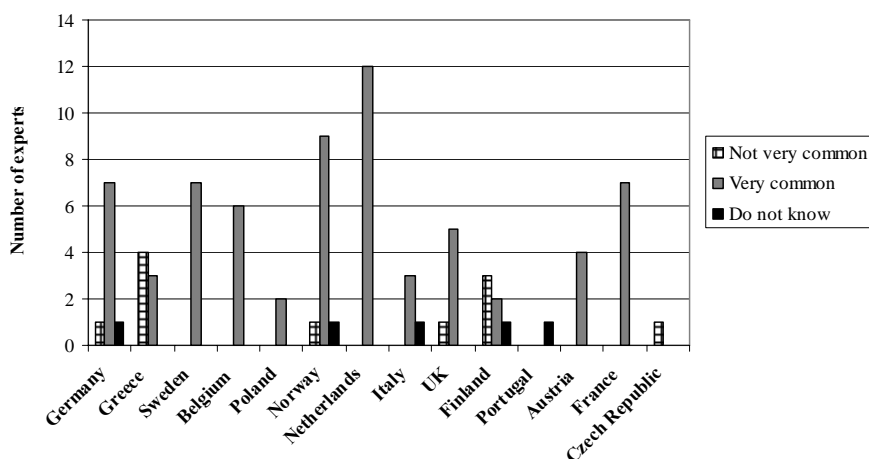
Figure 6 a-c shows how common the three most dominating instruments, Get Up and Go, Timed Up and Go and 10m walking speed, are according to 57%, 62% and 42% of the experts respectively.

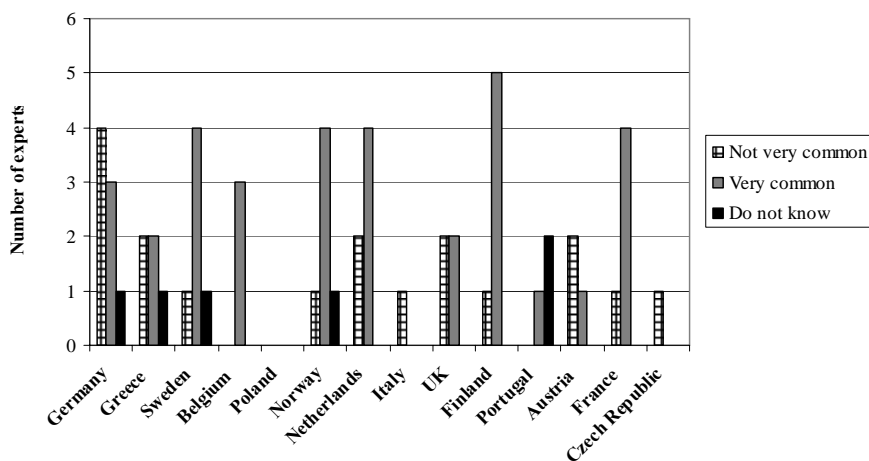*Figure 6 a-c. Number of experts responding to the question "how common is the instrument".*

a) Get Up and Go
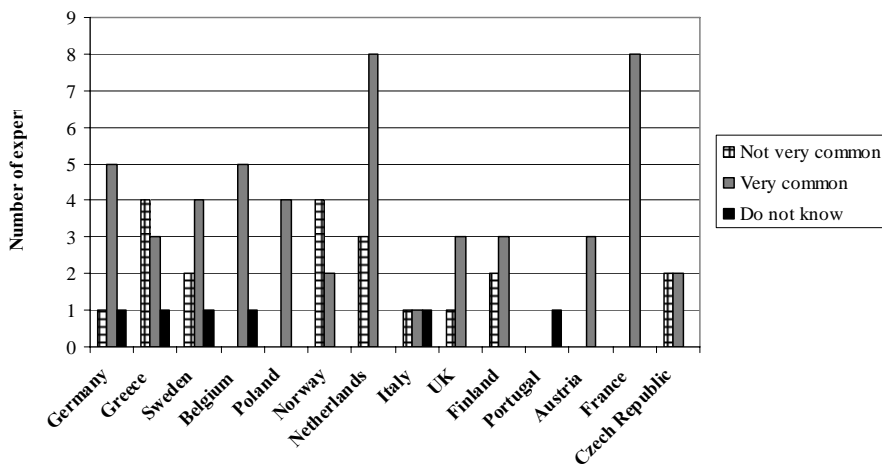
b) Timed Up and Go

c) 10m Walking Speed

Instruments added by some countries
(more instruments can be found in the National Reports)

- Dual task 10m [50]
- Walk-and-count-test [51, 52]
- Walking Speed 4m [53]
- Walking speed 15m [54]
- Eurofit [39]

Balance

The most used instruments were Romberg and One-Leg Stance, followed by Berg's Balance Scale and Functional Reach (68.5%, 63.4%, 58%, and 55% respectively) (Table 13) [55-58]. While certain countries used practically all tests suggested, others used very few. The Solec test was the least used (4.6%) [59].

Regarding translation of the different instruments an average of 70% (34-95%) of the experts answered *"Do not know"*. Berg's Balance Scale, Romberg, One-Leg Stance and Functional Reach were translated to most languages (Table 14) [55-58].

The general opinion of the five most dominating instruments regarding Balance is shown in Figure 9. For further information about the different countries, see National Reports.

Figure 9. Number of experts responding to the four different grades.
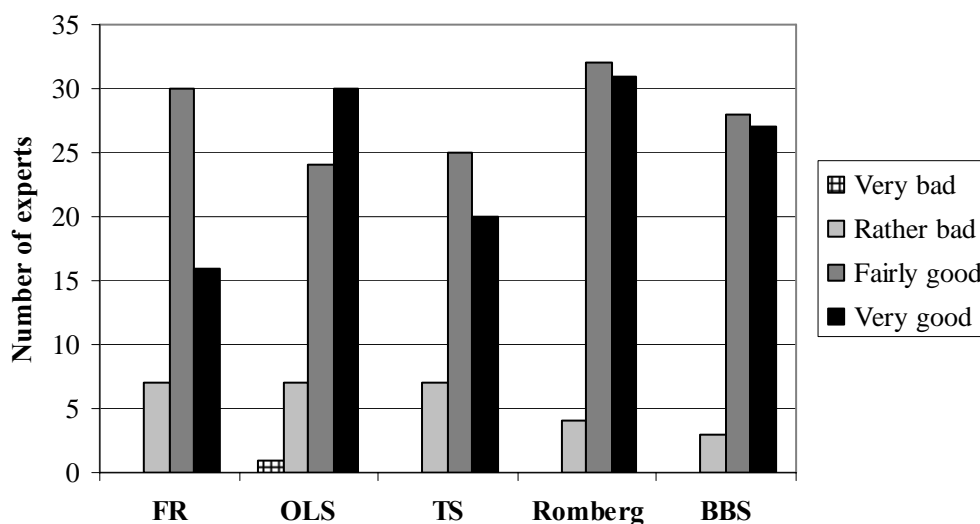
The proportion of experts responding was 54%, 58%, 50%, 61% and 60% for Functional Reach (FR), One-Leg Stance (OLS), Tandem Stance (TS), Romberg and Berg's Balance Scale (BBS) respectively.
Figure 10 a-c shows how common the three most dominating instruments, One-Leg Stance, Romberg and Berg's Balance scale, are according to 60%, 65% and 56% of the experts respectively.

Table 13. Balance instruments currently used in the countries N=133 (%) [55-66].

	FR	TUSS	Solec test	OLS	TS	Romb	FICSIT-3	FICSIT-4	BBS	Fig-8	Fig-8 m	Step	180°
Germany	63.6	9.1	0	54.5	81.8	90.9	40.0	40	63.6	20.0	0	30.0	22.2
Greece	54.5	9.1	9.1	81.8	36.4	72.7	0	0	54.5	36.4	9.1	45.5	36.4
Sweden	88.9	0	11.1	77.8	44.4	77.8	11.1	11.1	88.9	77.8	55.6	66.7	22.2
Belgium	58.3	16.7	0	50.0	41.7	41.7	0	0	41.7	8.3	8.3	33.3	8.3
Poland	75.0	50.0	0	100	50.0	100	75.0	25.0	100	0	0	100	100
Norway	66.7	8.3	15.4	76.9	46.2	81.8	23.1	23.1.	92.3	46.2	15.4	50	23.1
Netherlands	73.3	26.7	6.7	66.7	60.0	73.3	6.7	6.7	80	26.7	6.7	46.7	35.7
Italy	9.1	9.1	0	36.4	36.4	72.7	9.1	0	18.2	18.2	0	9.1	9.1
UK	77.8	55.6	11.1	44.4	33.3	55.6	22.2	22.2	44.4	11.1	11.1	11.1	44.4
Finland	50.0	0	0	75.0	87.5	75.0	0	0	75.0	25.0	0	37.5	37.5
Portugal	0	0	0	25.0	25.0	25.0	0	0	25.0	0	0	25.0	0
Austria	12.5	0	0	50.0	44.4	37.5	0	0	33.3	0	0	0	11.1
France	87.5	25.0	0	100	75.0	85.7	0	0	50.0	0	0	28.6	37.5
Czech Republic	14.3	57.1	0	42.9	28.6	57.1	0	28.6	28.6	0	0	42.9	14.3
Total (mean)	55.0	17.8	4.6	63.4	50.4	68.5	11.6	10.8	58.0	22.5	8.5	36.2	26.6

FR=Functional Reach, TUSS=Timed Unsupported Steady Standing, OLS=One-Leg stance, TS=Tandem Stance, Romb=Romberg, FICSIT-3=FICSIT 3-balance scale, FICSIT-4 FICSIT 4-balance scale, BBS=Berg's Balance scale, Fig-8=Figure of eight test, Fig-8m=Modified Figure of eight test, Step=Step test, 180° =The 180 Degree Turn.


Table 14. Translation of the different Balance instruments in the different countries.

|	FR T	FR ST	TUSS T	TUSS ST	Solec test T	Solec test ST	OLS T	OLS ST	TS T	TS ST	Romberg T	Romberg ST	FICSIT-3 T	FICSIT-3 ST	FICSIT-4 T	FICSIT-4 ST	BBS T	BBS ST	Fig-8 T	Fig-8 ST	Fig-8 m T	Fig-8 m ST	Step Test T	Step Test ST	180° T	180° ST
Germany	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	
Greece	x	x					x	x	x	x	x	x					x	x	x	x	x		x	x	x	
Sweden	x	x					x	x	x	x	x	x					x	x	x	x	x	x	x	x	x	x
Belgium	x	x	x	x			x	x	x	x	x	x					x	x					x	x		
Poland	x						x	x	x		x	x	x		x		x						x		x	x
Norway	x	x					x	x	x	x	x	x				x	x	x	x		x		x		x	x
Netherlands	x	x	x	x			x	x	x		x	x					x	x	x	x	x		x	x	x	
Italy	x	x	x				x	x	x	x	x	x	x				x	x					x	x	x	x
UK	x	x	x	x	x		x		x		x		x		x		x	x	x		x		x		x	
Finland	x						x		x	x	x	x					x	x	x	x			x		x	
Portugal											x						x									
Austria	x						x		x		x	x					x	x								
France	x	x	x				x	x	x	x	x	x					x	x					x	x	x	x
Czech Republic	x		x	x			x		x		x					x	x						x	x	x	
Total	13	9	6	4	1	0	13	10	13	8	14	11	4	2	3	2	14	11	6	4	3	0	11	7	11	4

FR=Functional Reach, TUSS=Timed Unsupported Steady Standing, OLS=One Leg stance, TS=Tandem Stance, Romb=Romberg, FICSIT-3=FICSIT 3-balance scale, FICSIT-4=FICSIT 4-balance scale, BBS=Berg's Balance scale, Fig-8=Figure of eight test, Fig-8m=Modified Figure of eight test, Step=Step test, 180° =The 180 Degree Turn, T=Translation, ST=Scientific Translation.

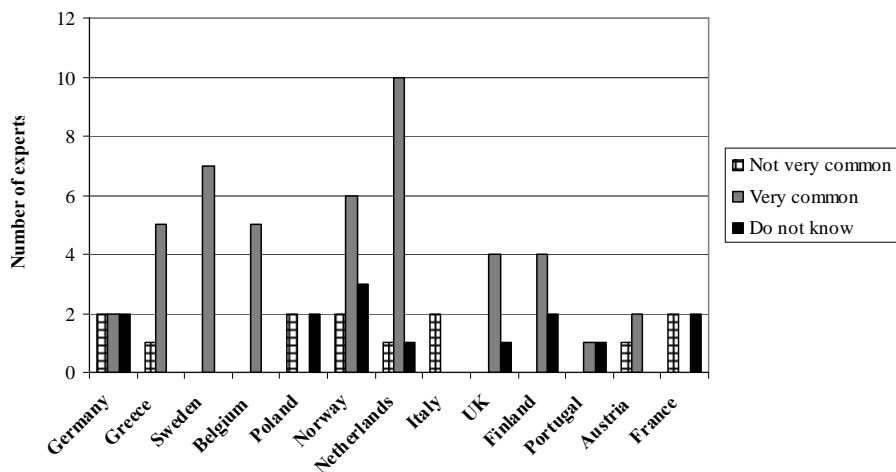*Figure 10 a-c. Number of experts responding to the question "how common is the instrument".*

a) One Leg Stance
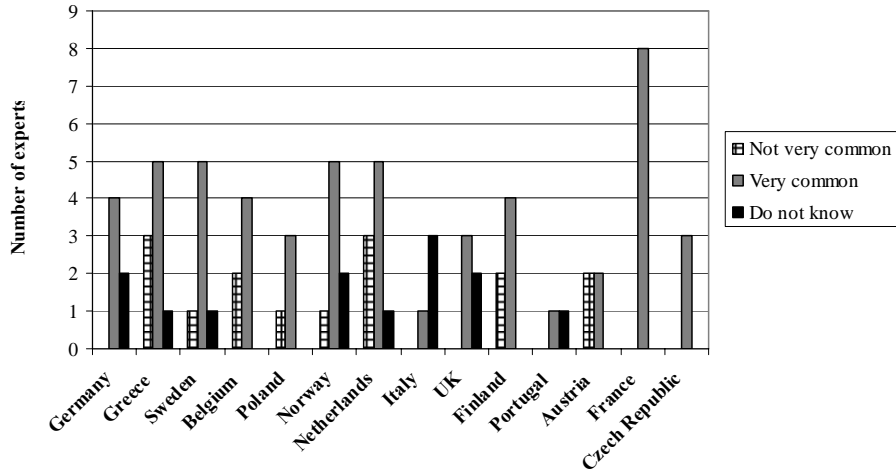
b) Romberg
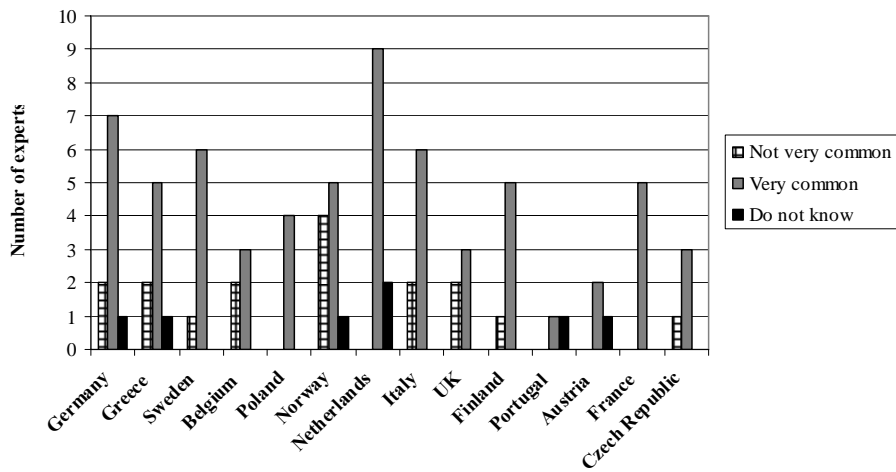
c) Berg's Balance Scale

Instruments added by some countries
(more instruments can be found in the National Reports)

- Backwards walk [67]
- Flamingo Test [68]

Range of Motion/Dexterity

Hand in Neck and Hand in Back were the most used range of motion tests [69, 70]. Sweden was the leading user of both tests, but with the exception of Portugal these tests were used in almost all the countries, in Belgium and UK however to a low extent (Table 11).
The Nine Hole Peg Test was the more used of the two Dexterity tests (Table 11) [71].
Regarding translation of the instruction for the different instruments an average of 80% (66-97%) of the experts answered *"Do not know"*. Hand in Back, closely followed by Hand in Neck, was the most translated instrument (Table 12) [69, 70].

Table 11. Range of Motion and Dexterity instruments currently used in the countries (N=133) (%) [69-72].

	Range of Motion			Dexterity	
	Hand in Neck	Hand in Back	POOP	BBT	NHPT
Germany	10.0	10.0	0	10.0	0
Greece	27.3	18.2	0	0	9.1
Sweden	88.9	88.9	22.2	22.2	50.0
Belgium	8.3	8.3	0	0	16.7
Poland	75.0	75.0	0	50.0	75.0
Norway	38.5	30.8	15.4	23.1	23.1
Netherlands	28.6	28.6	0	6.7	46.7
Italy	18.2	9.1	0	0	0
UK	11.1	11.1	0	11.1	33.3
Finland	62.5	62.5	12.5	62.5	25.0
Portugal	0	25.0	0	0	0
Austria	33.3	37.5	0	0	11.1
France	57.1	62.5	0	12.5	12.5
Czech Republic	14.3	14.3	0	14.3	14.3
Total (mean)	32.0	31.3	3.9	13.1	21.7

*POOP=Poor Out of Pot, BBT=Box and Block test, NHPT=Nine Hole Peg Test.*

Table 12. Translation of the different Range of Motion and Dexterity instruments in the different countries.

| | Range of motion | | | | | | Dexterity | | | |
| | HIN | | HIB | | POOP | | BBT | | NHBT | |
	T	ST	T	ST	T	ST	T	ST	T	ST
Germany										
Greece	x		x						x	
Sweden	x	x	x	x	x	x			x	x
Belgium	x		x						x	x
Poland	x		x						x	
Norway	x		x		x				x	
Netherlands	x		x				x		x	x
Italy	x	x	x	x						
UK	x		x				x		x	
Finland	x		x		x		x	x	x	x
Portugal			x							
Austria	x		x						x	
France	x	x	x	x			x	x		
Czech Republic	x		x						x	
Total	12	3	13	3	3	1	4	2	10	4

POOP= Poor Out of Pot, BBT= Box and Block test, NHPT=Nine Hole Peg Test, T=Translation,
ST=Scientific Translation

The general opinion of the three most dominating instruments regarding Range of Motion and Dexterity is shown in Figure 7. For further information about the different countries, see National Reports.

*Figure 7. Number of experts responding to the four different grades.*
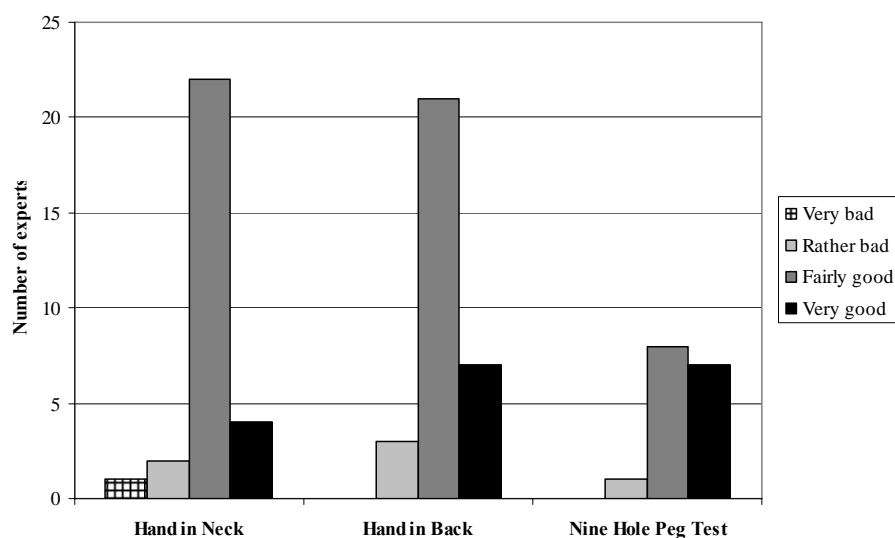
The proportion of experts responding was 29%, 33%, and 18% for Hand in Neck, Hand in Back and the Nine Hole Peg Test respectively.
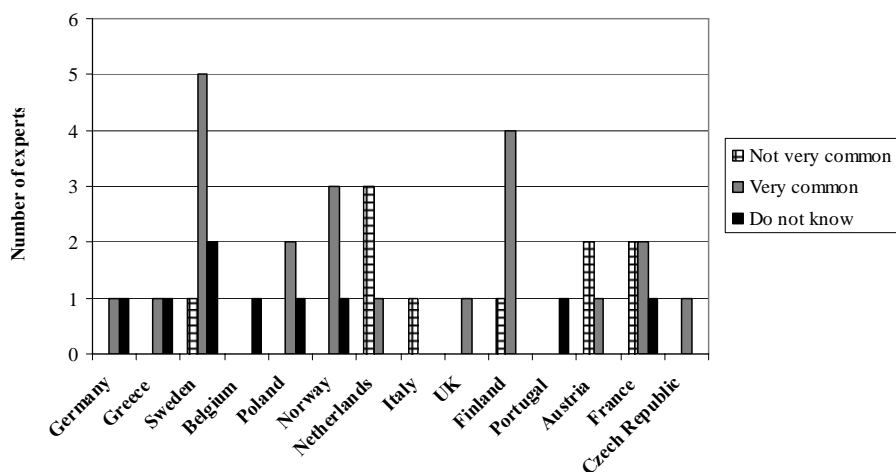
Figure 8 a-c shows how common the three most dominating instruments, Hand in Neck, Hand in Back and Nine Hole Peg test, are according to 31%, 30% and 22% of the experts respectively.

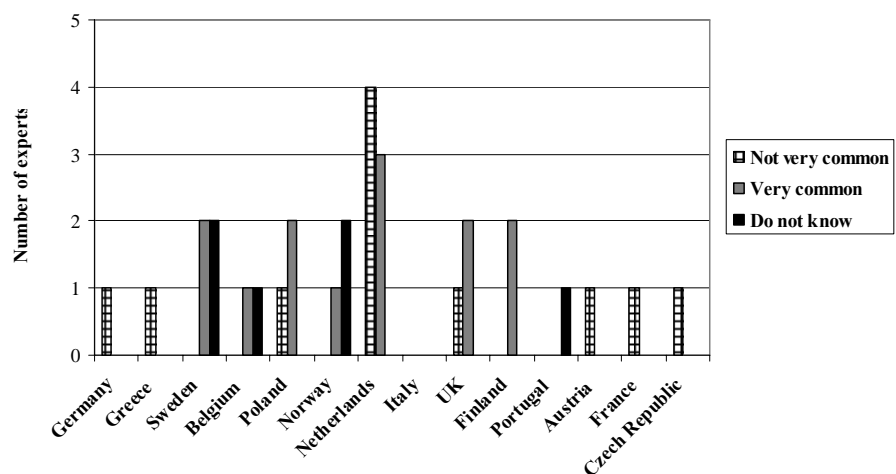*Figure 8 a-c. Number of experts responding to the question "how common is the instrument".*

a) Hand in Neck
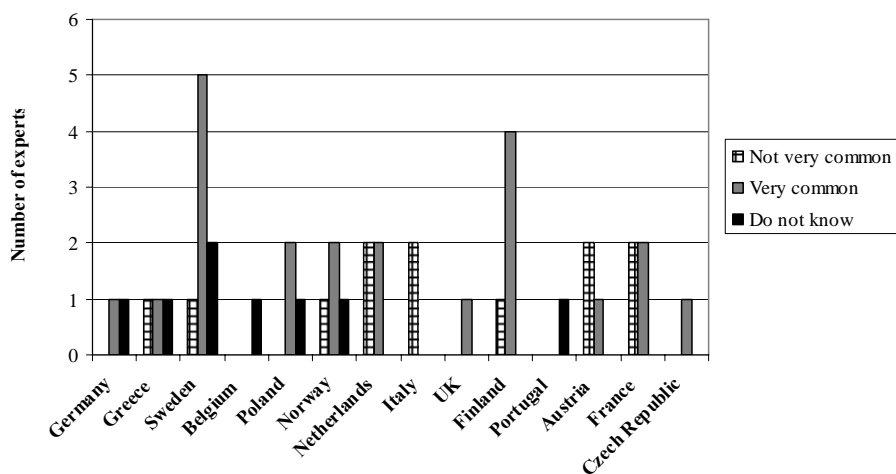
b) Hand in Back

c) Nine Hole Peg Test

Instruments regarding ROM added by some countries (more instruments can be found in the National Reports)

- Shoulder flexibility test [39]
- Back scratch test [73]
- Sit and reach [39]
- Side-bending-trunk [39]
- Finger-toe [73]

Instruments regarding dexterity added by some countries (more instruments can be found in the National Reports)

- Block transfer test [74]
- Plate tapping [39]
- Key in the lock test [75]

Muscle Strength

As seen in Table 15, Grip Strength dominated as the test most used [76]. Climbing Boxes was used exclusively in Sweden and Finland [29]. Of the different Chair Stand tests [49, 73, 77-80], a repetition of 10 times was the least used [78]. Austria had overall low figures.

Table 15. Muscle Strength instruments currently used in the countries (N=133) (%) [29, 49, 73, 76-80].

	CB	CS-1	CS-3	CS-5	CS-10	CS-30s	GS
Germany	27.3	33.3	60.0	81.8	10.0	9.1	72.7
Greece	9.1	27.3	18.2	18.2	9.1	18.2	63.6
Sweden	55.6	33.3	33.3	33.3	22.2	33.3	55.6
Belgium	0	33.3	16.7	25.0	8.3	33.3	75.0
Poland	0	100	25.0	25.0	60.0	75.0	75.0
Norway	15.4	7.7	23.1	23.1	15.4	61.5	69.2
Netherlands	6.7	20.0	26.7	40.0	26.7	26.7	66.7
Italy	9.1	36.4	27.3	18.2	9.1	45.5	63.6
UK	11.1	55.6	44.4	25.0	37.5	37.5	88.9
Finland	57.1	85.7	14.3	100	0	57.1	100
Portugal	25.0	0	50.0	25.0	0	50.0	75.0
Austria	0	11.1	11.1	33.3	0	0	11.1
France	12.5	22.2	12.5	50.0	25.0	75.0	88.9
Czech Republic	14.3	42.9	14.3	14.3	14.3	42.9	42.9
Total (mean)	16.2	32.6	26.4	36.4	15.6	37.2	67.2

CB=Climbing Boxes, CS-1=Chair Stand once, CS-3=Chair Stand 3 times, CS-5=Chair Stand 5 times, CS-10=Chair Stand 10 times, CS-30s=Chair Stand 30 sec, GS=Grip Strength.

Regarding translation of the different instruments an average of 71% (46-88%) of the experts answered *"Do not know"*. Instruction for Grip Strength was the most translated.

Table 16. Translation of the different Muscle Strength instruments in the different countries.

	CB		CS-1		CS-3		CS-5		CS-10		CS-30s		GS	
	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST
Germany	x				x		x	x	x	x	x		x	x
Greece	x		x	x	x	x	x	x	x		x	x	x	x
Sweden	x	x	x	x	x	x	x	x			x		x	x
Belgium			x	x			x				x	x	x	x
Poland			x								x	x	x	
Norway	x				x		x						x	x
Netherlands			x	x	x		x		x	x	x	x	x	x
Italy			x	x	x	x	x		x		x	x	x	x
UK	x		x		x		x		x		x		x	
Finland	x	x	x		x		x	x			x	x	x	x
Portugal	x				x		x				x	x	x	x
Austria			x		x		x						x	
France			x	x			x	x	x	x	x	x	x	x
Czech Republic	x	x	x		x		x		x		x		x	x
Total	8	3	11	6	11	3	13	5	7	3	12	8	14	11

CB=Climbing Boxes, CS-1=Chair Stand once, CS-3=Chair Stand 3 times, CS-5=Chair Stand 5 times, CS-10= Chair Stand 10 times, CS-30s=Chair Stand 30 sec, GS=Grip Strength, T=Translation, ST=Scientific Translation

The general opinion of the five most dominating instruments regarding Muscle Strength is shown in Figure 11. For further information about the different countries, see National Reports.

*Figure 11. Number of experts responding to the four different grades.*
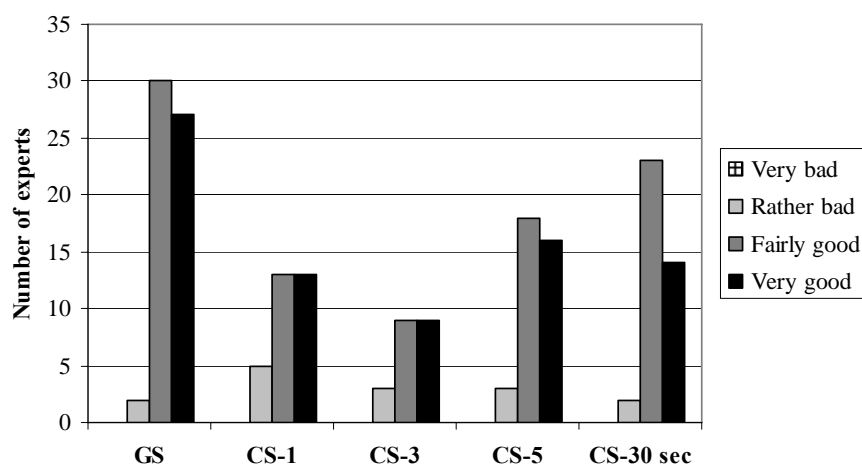
The proportion of experts responding was 55%, 31%, 22%, 37% and 38% for Grip Strength (GS), Chair Stand once (CS-1), Chair Stand 3 times (CS-3), Chair Stand 5 times (CS-5) and Chair Stand 30 sec (CS-30sec) respectively.
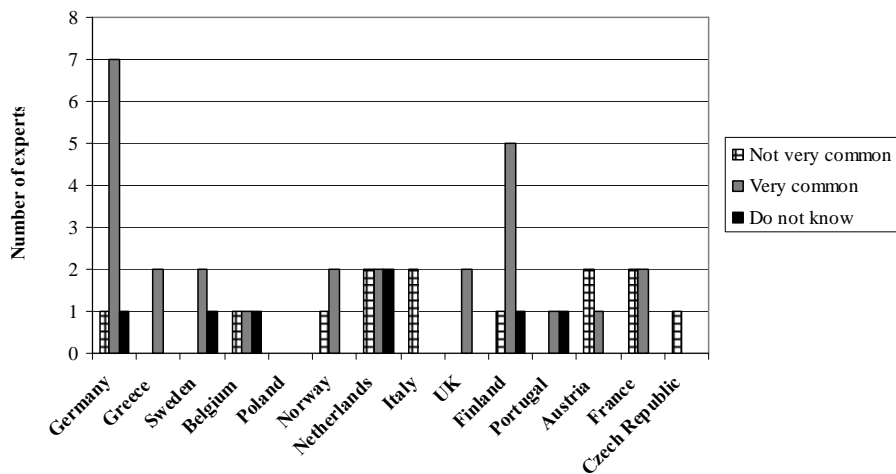
Figure 12 a-c shows how common the three most dominating instruments, Grip Strength, Chair Stand 5 times and Chair Stand 30 sec, are according to 62%, 35% and 36% of the experts respectively.

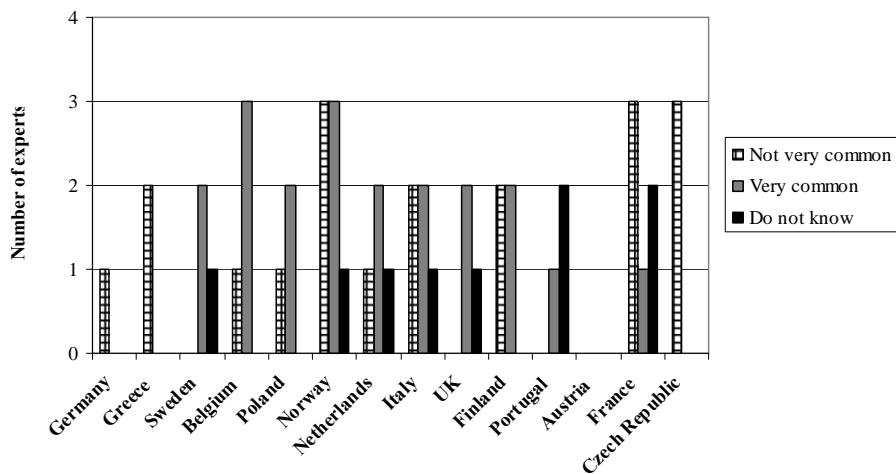*Figure 12 a-c. Number of experts responding to the question "how common is the instrument".*

a) Grip Strength
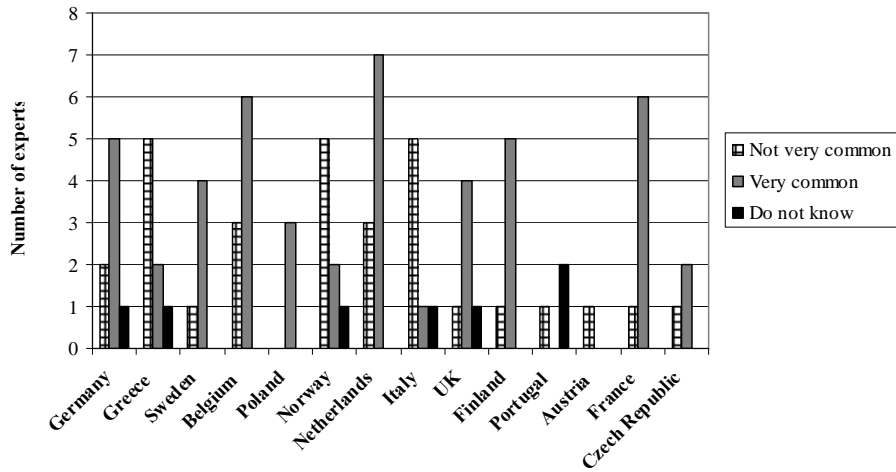
b) Chair-Stand 5 Times

c) Chair-stand 30 Seconds

Instruments added by some countries
(more instruments can be found in the National Reports)

- Stair ascending 12 steps [81, 82]
- Stair descending 12 steps [81, 82]
- Arm curl test [73, 83]
- Dynamic Sit-ups [39]
- Bent-arm-hang [39]

Overall indexes

The index the most used was Tinetti's Performance Oriented Mobility Assessment (50%), followed by Functional Fitness (27.9%), Elderly Mobility Scale (27.9%) and Short Physical Performance Battery (26%), (Table 17) [73, 84-87]. The least used was Modified Elderly Mobility Scale (3.1%) [87].

Regarding translation of the different instruments an average of 81% (53-95%) of the experts answered *"Do not know"*. Tinetti's Performance Oriented Mobility Assessment was the most translated instrument [86], closely followed by Functional Fitness (Table 18) [73].

The general opinion of the five most dominating instruments regarding Overall indexes is shown in Figure 13. For further information about the different countries, see National Reports.

Figure 13. Number of experts responding to the four different grades.
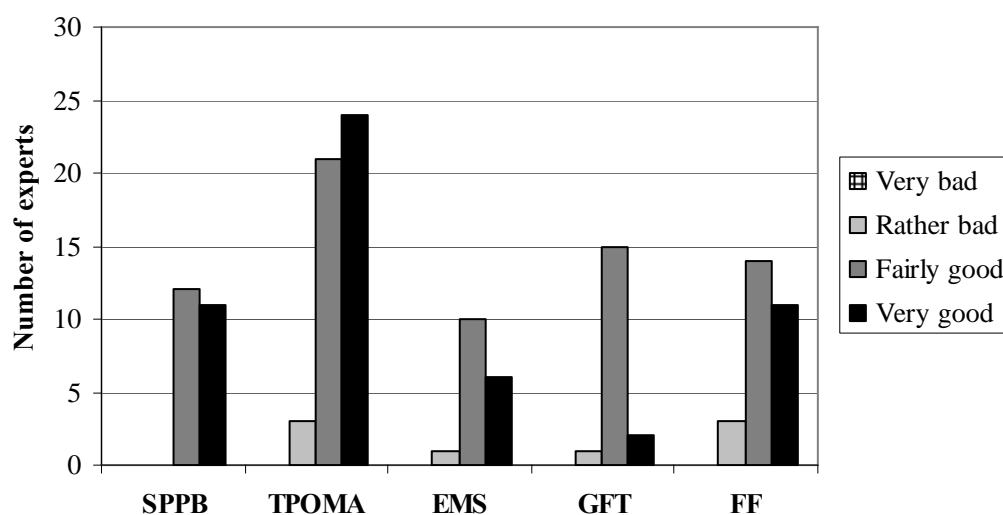
The proportion of experts responding was 24%, 48%, 18%, 20% and 12% for Short Physical Performance Battery (SPPB), Tinetti's Performance Oriented Mobility Assessment (TPOMA), Elderly Mobility Scale (EMS), Groningen Fitness Test (GFT) and Functional Fitness (FF) respectively.
Figure 14 a-c shows how common the three most dominating instruments, Tinetti's Performance Oriented Mobility Assessment, Functional Fitness and Elderly Mobility scale are, according to 48%, 26% and 25% of the experts respectively.

Table 17. Overall indexes currently used in the countries (N=133) (%) [73, 74, 84-98].

	PFFT	COV	SPPB	NHDI	TFM	PPT	TPOMA	FF	AFTF	FFDF	PPME	EMS	MEMS	GFT	GMF
Germany	9.1	9.1	54.5	10.0	0	20	72.7	30	30.0	0	18.2	18.2	0	20.0	9.1
Greece	9.1	0	18.2	0	0	18.2	45.5	9.1	27.3	0	0	0	0	0	0
Sweden	0	44.4	22.2	11.1	11.1	11.1	11.1	0	0	0	11.1	33.3	0	0	55.6
Belgium	0	0	8.3	0	0	16.7	41.7	8.3	8.3	0	8.3	8.3	8.3	25.0	8.3
Poland	75.0	0	50.0	0	50.0	0	100	75.0	0	0	25.0	75.0	25.0	0	0
Norway	7.7	15.4	23.1	8.3	8.3	16.7	30.8	38.5	7.7	7.7	0	30-8	7.7	15.4	38.5
Netherlands	0	0	23.1	14.3	6.7	33.3	80	33.3	13.3	6.7	7.1	46.7	0	93.3	20.0
Italy	9.1	0	9.1	9.1	9.1	9.1	36.4	36.4	18.2	18.2	0	27.3	0	9.1	0
UK	11.1	22.2	33.3	11.1	0	22.2	44.4	11.1	22.2	0	0	55.6	0	0	11.1
Finland	0	0	85.7	0	0	14.3	85.7	42.9	0	0	0	28.6	0	0	0
Portugal	0	0	0	0	0	0	0	75.0	25.0	25.0	0	0	0	0	0
Austria	0	0	11.1	0	11.1	11.1	44.4	0	0	0	11.1	22.2	0	0	11.1
France	37.5	0	42.9	14.3	14.3	0	87.5	50	12.5	12.5	28.6	28.6	0	25.0	12.5
Czech Republic	0	0	0	0	0	28.6	14.3	42.9	28.6	0	0	28.6	14.3	0	28.6
Total (mean)	8.5	7.1	26.0	6.3	6.3	16.5	50	27.9	14	4.7	7	27.9	3.1	18.6	15.4

PFFT=Physical Fitness Field Test, COV=Clinical Outcome Variables, SPPB=Short Physical Performance Battery, NHDI=Nursing Home Disablity Instrument, TFM=Timed Functional Movement, PPT=Physical Performance Test, TPOMA=Tinetti's Performance Oriented Mobility Assessment, FF=Functional Fitness, AFTF=AAHPERD Fitness Task Force, FFDF=Functional Fitness in Daily Functioning, PPME=Physical Performance and Mobility Examination, EMS=Elderly Mobility Scale, MEMS=Modified Elderly Mobility Scale, GFT=Groningen Fitness Test, GMF=General Motor Function Assessment.

Table 18. Translation of the different Overall indexes in the different countries.

	PFFT		COV		SPPB		NHDI		TFM		PPT		TPOMA		FF		AFTF		FFDF		PPME		EMS		MEMS		GFT		GMF	
	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST
Germany					x	x					x		x	x	x															
Greece	x	x			x	x					x	x	x	x	x	x	x													
Sweden			x	x																			x				x	x	x	x
Belgium											x	x	x	x	x												x	x		
Poland	x	x			x							x	x	x	x	x					x		x		x					
Norway	x		x		x				x		x		x		x								x		x				x	x
Netherlands					x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	
Italy	x	x			x		x	x	x	x	x		x	x	x	x	x		x				x	x			x	x		
UK	x		x		x						x		x		x		x						x							
Finland					x	x					x		x	x	x	x							x	x						
Portugal															x	x														
Austria					x						x		x	x							x		x	x						
France	x	x			x	x			x		x		x	x	x	x					x	x	x	x						
Czech Republic															x	x							x	x	x					
Total	6	4	3	1	10	5	4	2	4	2	8	3	12	9	12	8	4	1	2	1	4	2	9	5	3	0	3	3	3	2

PFFT=Physical Fitness Field Test, COV=Clinical Outcome Variables, SPPB=Short Physical Performance Battery, NHDI=Nursing Home Disablity Instrument, TFM=Timed Functional Movement, PPT=Physical Performance Test, TPOMA=Tinetti's Performance Oriented Mobility Assessment, FF=Functional Fitness, AFTF=AAHPERD Fitness Task Force, FFDF=Functional Fitness in Daily Functioning, PPME=Physical Performance and Mobility Examination, EMS=Elderly Mobility Scale, MEMS=Modified Elderly Mobility Scale, GFT=Groningen Fitness Test, GMF=General Motor Function Assessment, T=Translation, ST=Scientific Translation

Figure 14 a-c. Number of experts responding to the question "how common is the instrument".
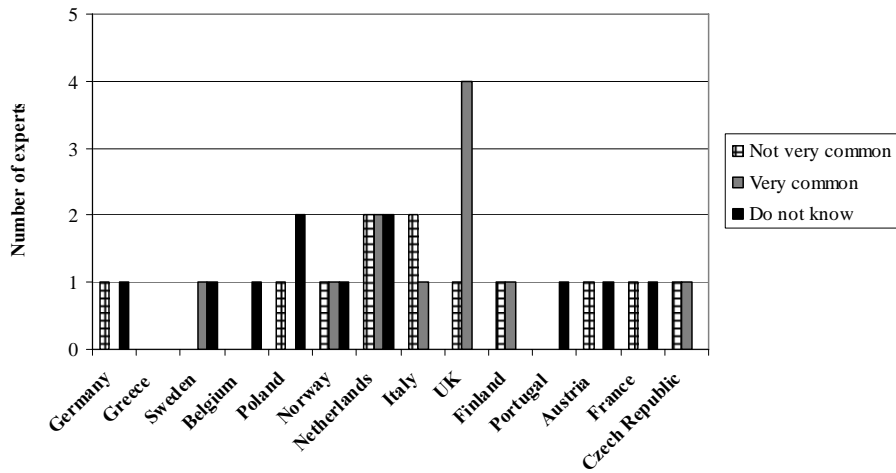
a)Tinetti's Performance Oriented Mobility Assessment
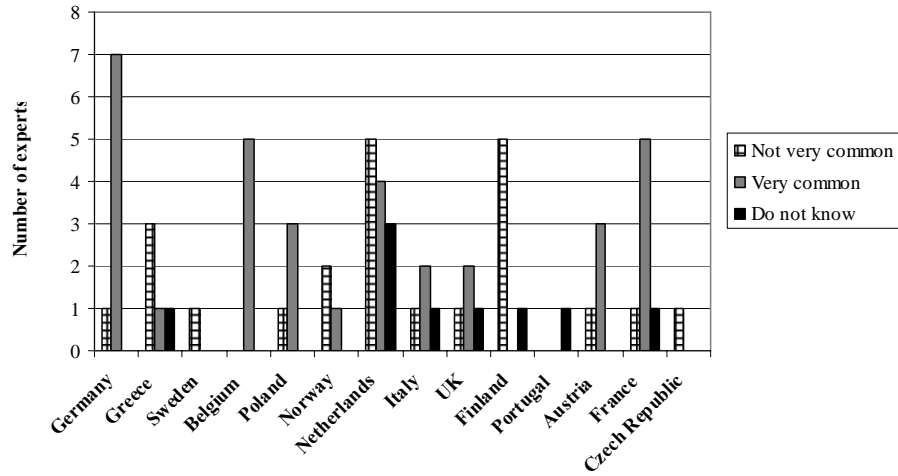
b) Functional Fitness
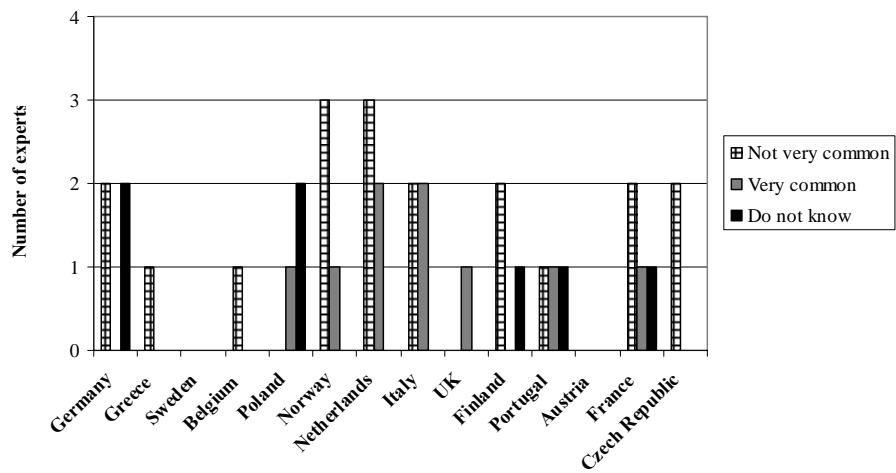
c) Elderly Mobility Scale

Instruments added by some countries (more instruments can be found in the National Reports)

-    Disability Rating Index [99]
-   Austrian Geriatric Basis Assessment [100]

ADL-instruments

Three instruments dominated - Barthel Index (65.6%), Katz ADL-index (56.1%) and the so called ADL-index (44.9%) (Table 19) [101-103]. Portugal reported use of only one instrument - Functional Activities Questionnaire [104]. Cleveland Scale for Activities of Daily Living was the least used (3.9%) [105].

Regarding translation of the different instruments an average of 72% (33-95%) of the experts answered *"Do not know"*. Functional Independence Measure, Katz ADL-index, Barthel and ADL-index were the most translated instruments (Table 20) [101-103, 106].

The general opinion of the four most dominating instruments regarding ADL is shown in Figure 15. For further information about the different countries, see National Reports.

Figure 15. Number of experts responding to the four different grades.
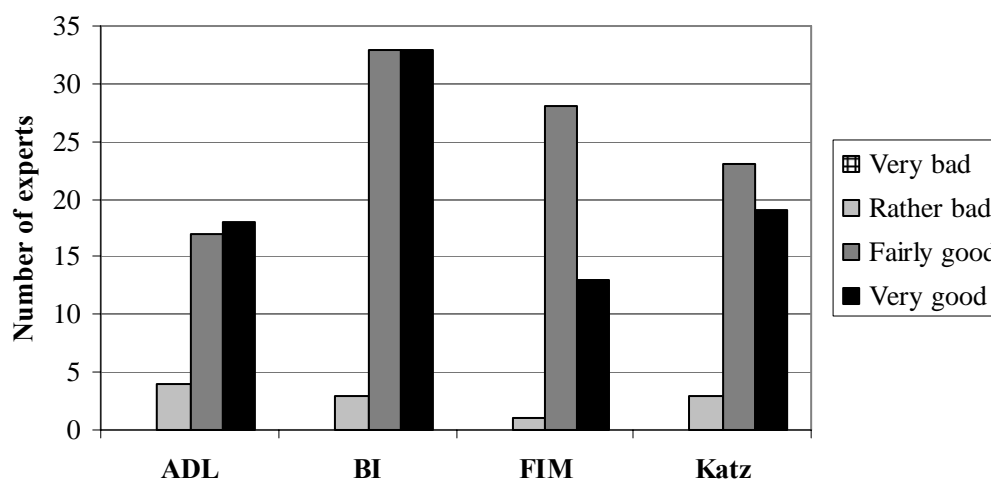
The proportion of experts responding was 43%, 66%, 44% and 45% for ADL-index (ADL), Barthel Index (BI), Functional Independence Measure (FIM) and Katz ADL-index (KATZ) respectively.
Figure 16 a-c shows how common the three most dominating instruments, ADL-index, Barthel Index and Katz index are, according to 42%, 61% and 40% of the experts respectively.

Table 19. ADL instruments currently used in the countries (N=133)(%) [101-113].

	ADL	BI	BADLS	CSADL	CADL-IADL	FAQ	FIM	IAM	KATZ	ADLS	LIADL	NEADL	OARSIADL
Germany	54.5	72.7	0	0	30	36.4	27.3	0	63.6	0	72.7	9.1	9.1
Greece	90.9	54.5	0	9.1	27.3	45.5	9.1	9.1	36.4	0	36.4	0	27.3
Sweden	37.5	88.9	0	11.1	0	44.4	88.9	44.4	88.9	6.7	22.2	11.1	11.1
Belgium	33.3	50.0	0	0	16.7	8.3	33.3	0	58.3	0	8.3	16.7	0
Poland	75.0	100	25.0	0	75	0	25.0	0	100	50	100	75	0
Norway	30.8	61.5	7.7	0	7.7	30.8	38.5	0	38.5	7.7	7.7	15.4	15.4
Netherlands	42.9	86.7	13.3	6.7	40.0	33.3	53.3	7.1	53.3	6.7	20.0	20	0
Italy	9.1	63.6	9.1	9.1	36.4	18.2	27.3	27.3	72.7	0	54.5	0	0
UK	50.5	66.7	66.7	12.5	25.0	33.3	77.8	12.5	55.6	12.5	37.5	88.9	44.4
Finland	57.1	87.5	12.5	0	50	12.5	75.0	12.5	87.5	12.5	50	0	12.5
Portugal	0	0	0	0	0	25.0	0	0	0	0	0	0	0
Austria	66.7	66.7	11.1	0	12.5	22.2	55.6	0	22.2	0	33.3	0	11.1
France	50.0	50.0	0	0	25	14.3	37.5	0	66.7	0	77.8	28.6	0
Czech Rep.	28.6	42.9	16.7	0	28.6	57.1	14.3	0	42.9	0	0	0	0
Total (mean)	44.9	65.6	10.9	3.9	25.8	28.5	42.0	8.6	56.1	9.3	35.1	16.9	9.9

ADL=Activity of Daily Living, BI=Barthel Index, BADSL=Bristol Activity of Daily Living Scale, CSADL=Cleveland Scale for Activities of Daily Living, CADL-IADL=Combination ADL-IADL, FAQ=Functional Activities Questionnaire, FIM=Functional Independence Measure, IAM=Instrumental Activities Measures, ADLS=ADL-Staircase, LIADL=Lawton Instrumental Activity of Daily Living Scale, NEADL=Nottingham Extended Activities of Daily Living Scale, OARS-IADL=The Older American Resources and Service Multidimensional Functional Assessment Questionnaire.

Table 20. Translation of the different ADL instruments in the different countries.

	ADL		BI		BADLS		CSADL		CADL-IADL		FAQ		FIM		IAM		KATZ		ADLS		LIADL		NEADL		OARS	
	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST	T	ST
Germany	x	x	x	x					x	x	x	x	x	x			x	x			x	x				
Greece	x	x	x	x					x	x	x	x	x	x	x		x	x			x	x			x	x
Sweden	x	x	x	x									x	x	x	x	x	x	x	x						
Belgium	x	x	x	x					x				x	x			x	x			x	x	x	x		
Poland	x	x	x	x	x				x				x				x	x	x		x	x	x			
Norway	x	x	x	x	x	x			x		x		x	x			x	x	x		x		x		x	
Netherlands	x	x	x	x	x	x			x		x	x	x	x	x	x	x	x	x	x	x		x			
Italy	x		x	x			x		x	x	x	x	x	x	x	x	x	x			x					
UK	x		x		x		x		x		x		x	x	x		x				x		x		x	
Finland	x		x	x	x				x		x		x	x	x		x		x		x				x	
Portugal																										
Austria	x		x						x		x	x	x	x			x	x			x				x	
France	x	x	x						x	x	x	x	x				x	x			x	x	x	x		
Czech Republic	x		x						x		x		x	x			x									
Total	13	8	13	9	5	2	2	0	12	4	10	6	13	11	6	3	13	10	5	2	11	6	5	2	5	1

ADL=Activity of Daily Living, BI=Barthel Index, BADSL=Bristol Activity of Daily Living Scale, CSADL=Cleveland Scale for Activities of Daily Living, CADL-IADL= Combination ADL-IADL, FAQ=Functional Activities Questionnaire, FIM=Functional Independence Measure, IAM=Instrumental Activities Measures, ADLS=ADL-Staircase, LIADL=Lawton Instrumental Activity of Daily Living Scale, NEADL=Nottingham Extended Activities of Daily Living Scale, OARS-IADL=The Older American Resources and Service Multidimensional Functional Assessment Questionnaire, T=Translation, ST=Scientific Translation

Figure 16 a-c. Number of experts responding to the question "how common is the instrument".
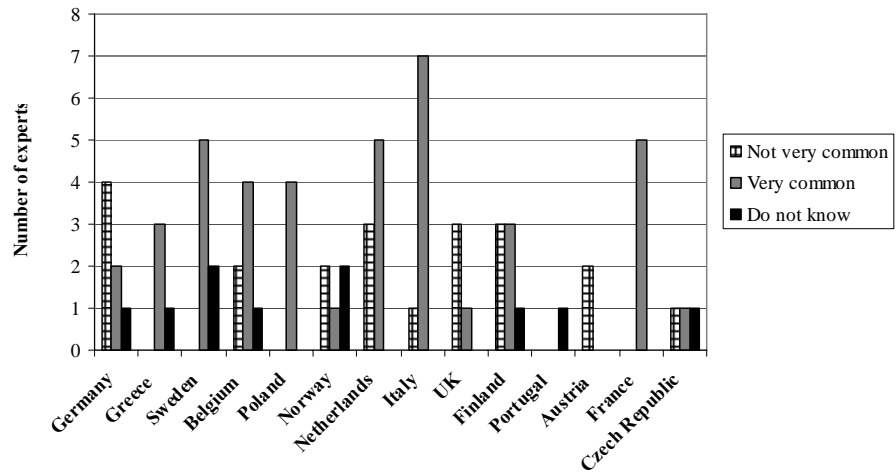
a) ADL-Index
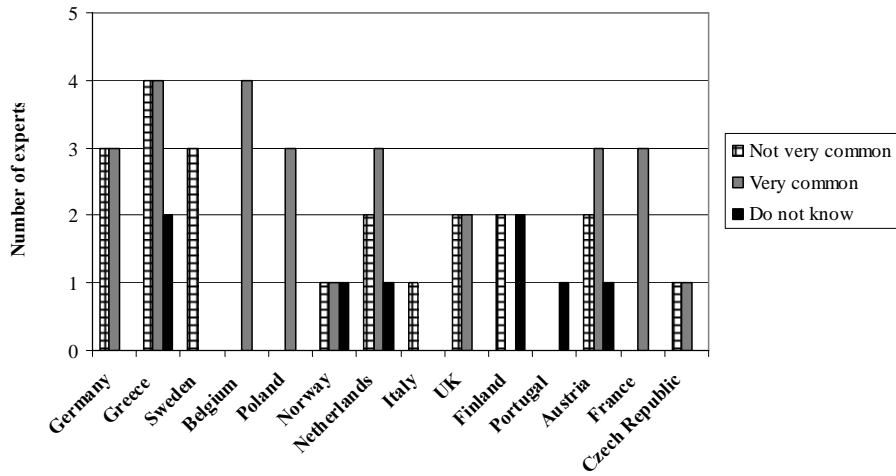
b) Barthel
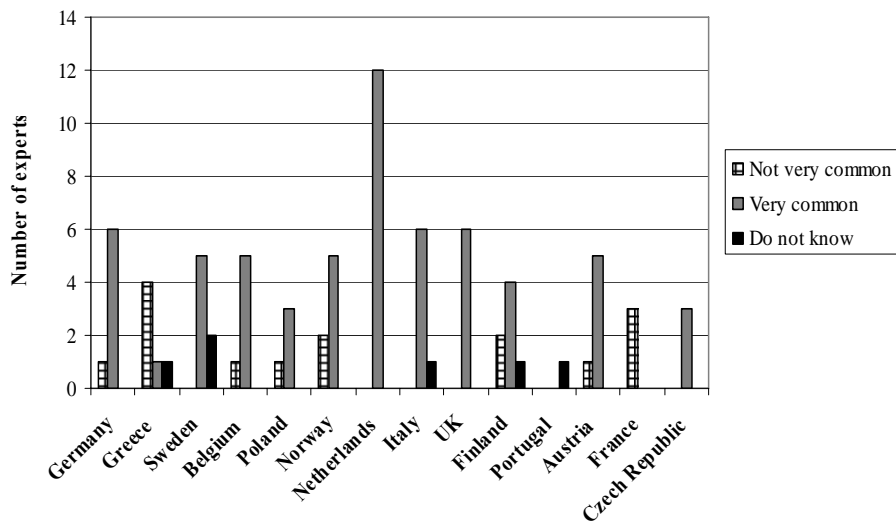
c) Katz

Instruments added by some countries (more instruments can be found in the National Reports)

- Assessment of Motor and Performance Skills (AMPS) [114]
- Groningen Activity Restriction Scale (GARS) [115]
- ADL- taxonomy [116]
- COPM: Canadian Occupational Performance Measure [117]
- Edmans ADL index: [118]

Guidelines

In most countries no guidelines were mentioned, or experts claimed that they had no knowledge of the existence of guidelines. In some cases, guidelines seem to have been understood as manuals.

In *Germany*, four major guidelines were listed, addressing both physical activity and physical functioning. Two of those concerned prevention of falls.

In *United Kingdom*, two examples were given regarding physical activity, while four sets of guidelines on physical functioning were identified of which two concerned prevention of falls.

In *Belgium*, most experts were uncertain, but three instruments recommended regarding physical performance were mentioned.

In The Netherlands, most experts had no knowledge of guidelines. A few instruments were listed both regarding physical activity and functioning.

In *Poland*, experts claimed that there are guidelines, of which a few instruments are recommended in a book of geriatrics.

In *Finland*, no guidelines on physical activity were mentioned, but a few instruments regarding physical functioning were listed.

For detailed information, please see National Reports.

DISCUSSION

This report gives an overview of the instruments most used in Europe today for the assessment of older people, based on results from the following countries: Austria, Belgium, Czech Republic, Finland, France, Germany, Greece, Italy, Norway, Portugal, Poland, United Kingdom, Sweden, The Netherlands, and to some extent, Denmark.

The selection of experts was a convenience sampling, not randomised, mainly based on the EUNAAPA members' overview of the field, and for practical reasons the number was kept to a minimum of eight. Finding experts with a governmental background proved to be very difficult in most countries (see National Reports and Table 2), and differentiating between organisational levels turned out to be a bit problematic as many respondents considered themselves to be experts for both the national and regional levels.

Several countries reported difficulties in getting experts to participate, and two countries got only four experts to respond. However, all sectors on both levels have been covered by the survey, and on the total file there are data from 133 experts. The experts also turned out to have different professions in different countries. Most countries involved physiotherapists, physical educators and the like, while Poland mainly chose medical doctors/professors. As a consequence of the weaknesses described above, we cannot claim that the results of this inventory are representative for each country involved.

The survey was not meant to be a scientific study, and the questionnaire aimed at being easy to answer and at presenting a broad list of instruments to consider. Some experts found it to be too long, while others meant that they were given a useful list of instruments that they previously did not know about. We chose to present as many instruments as possible in order to remind experts of the existence of all those instruments. If we had just asked them to name instruments, there would have been a risk that many important instruments had been forgotten and missed. Although the questionnaire was comprehensive, the questions posed in relation to each of the instruments were identical.

In general, a lack of knowledge in Europe concerning a great number of assessment instruments was revealed, and it became obvious that in many countries only a few instruments are being used. Different experts within the same country sometimes gave different answers to the same question, and even if certain instruments are used, they are probably not systematically used by all experts or even by experts of the same sector.

In their National Reports, Portugal and Austria commented on the very low level of knowledge demonstrated in their respective countries. In Austria, there is a lack of academic institutions in this field, and experts working within the health care or social care systems are most familiar with the instruments. This is in contrast with the majority of countries, where the highest level of knowledge is found within the academic sector.

In some countries there was some confusion regarding the instrument "step test", that was included in two sections, Endurance and Balance, but with different purpose and performance. One clarifying reference was missing, but has been added in the present report. Regarding Physical Activity, the two tests "CHAMPS physical activity recall" and "CHAMPS self-report physical activity questionnaire for older adults" that were mentioned have turned out to be the same.

It should also be noted, that while PASE was actually constructed especially for elderly people, IPAQ, as the one most used, was not.

In some countries, a great number of additional instruments have been added (see also National Reports). As the focus of our inventory was functional tests, suggested test involving different kinds of equipment, as i.e. force plates, have not been included in this report. Instruments, that were constructed mainly for younger age groups or for patients with a specific diagnose, have also been excluded.

Many of the instruments added are being used exclusively in one country. This may partly be explained by the fact that those instruments have been developed in that specific country and hence, are well known and used by people working in the area.

This report might lead to an increased knowledge in Europe of good instruments that need to be translated to other languages, and a heightened awareness of other measures that need to be taken on the various levels. Further recommendations of assessment instrument to be used for the different groups of elderly people and for the different purposes described in the Introduction will eventually be offered in a Best Practice Report, based also on the reviews mentioned above.

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