

EUNAAPA – Work Package 4

**Expert Survey on Assessment Instruments  
for  
Physical Activity and Physical Functioning in  
Older People:**

**National Report**

**FCT** Fundação para a Ciência e a Tecnologia  
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR

## 1 Introduction

The following report attends to summarize the collected data and outline the experts' selection procedures. In this brief report we explain the difficulties to cover all the different areas, as well as to receive the questionnaire mailed.

## 2 Methods

### 2.1 Expert Selection

The national survey was conducted between 19 February and 16 April 2007. Experts were selected according to the instructions and to the sampling matrix suggested by the project coordinator.

*Table 1 – Sampling matrix*

	Community-dwelling older adults				Institutionalized older people			
National level	Government [Expert G] [Expert F]	Health care/ social care [Expert H]	Commercial sector	Academics/ Professional Education Expert B Expert E	Government	Health care/ social care [Expert M]	Commercial sector	Academics/ Professional Education
Regional/ Local level	Government [Expert K] [Expert L]	Health care/ social care Expert D [Expert J]	Commercial sector Expert C	Academics/ Professional Education Expert A	Government	Health care/ social care [Expert I]	Commercial sector	Academics/ Professional Education

Final participants presented in bold

[ ] Experts excluded from the sample, because they return the questionnaire after the “second” deadline

Field without expert

The selection of participants was mostly a convenience sampling. In the next table we describe the sampling matrix for Portugal. Obviously, the participants were selected because they have certain characteristics, described in table 2. However, we cannot forget that there are pragmatic concerns about the location and availability of participants because it's possible that other sites and people with similar characteristics exist.

It was especially difficult select experts in the governmental sector (national and local level) because in Portugal it not exist a governmental institution responsible for physical activity/functioning in older people.

We selected 13 experts as potential respondents, covering 9 of the 16 fields standardized for WP4. Unfortunately, finding respondents connected with institutionalized older people proved to be difficult, because the experts originally approached were unable to fill out the questionnaire as well to recommend another expert on this area. Only 2 of the 8 fields relating to institutionalized setting could be filled, however the expert I (Local level) originally approached felt unable to complete the questionnaire but recommended a physiotherapist who was able to take part in the survey.

Unfortunately this expert didn't return the questionnaire. The other expert (National level) mailed the questionnaire in time but several sections were unfilled. We decide to exclude this subject from the final sample.

We were constrained to expand the deadline for the return of the questionnaires because the participants' exceeded the frame time to fill out the questionnaire and to send it back. On the other hand, we had the same problem with some other experts on the community-dwelling older adults' area. The experts **F, G, H, J, K** and **L** didn't return the questionnaire in time to be included in this analysis, even after we expand the deadline and after several contacts via telephone. In an attempt to make easier to dispatch the questionnaire by mail, we included one envelop with our address and already with a postage stamp to free the experts from any expenses. However, all strategies were ineffective to accomplish our goal: collect the maximum information covering the area the best as possible.

For all this reasons, the final sample includes only 5 subjects. Because this is a small sample, not all the cells of the matrix were filled (see table 2).

*Table 2 - Expert self rating*

		Expert A	Expert B	Expert C	Expert D	Expert E
Setting	Community-dwelling older adults	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Institutionalized older adults					
Organizational level	National level		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
	Regional/local level	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Field	Physical activity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Physical functioning	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Sector	Governmental sector					
	Health care			<input checked="" type="checkbox"/>		
	Commercial sector				<input checked="" type="checkbox"/>	
	Educational sector	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Social care sector					

As demonstrate in Table 2, both fields (physical activity and physical functioning) and both organizational levels (national and regional/local) are represented, but on the other hand, only one setting (community-dwelling older adults) is portray in the sample. Additionally, not all sectors were fully represent, being for that reason excluded the governmental and social care sectors.

As suggested, we enclosed a letter in our native language informing the experts about the general purpose of the project, the importance of the survey and the reasons why they have been selected. At the same time we delineated the deadline for the return of the questionnaire. In order to check that all experts understand the questions, we also enclose a translation to our language of all the questions presented in the questionnaire.

As described above, the deadline was re-defined and we were unable to maintain the stepwise method suggested by the work package leader. Table 3 shows some modifications on the checklist.

*Table 3 - Modified Checklist*

Item	Deadline	done
1. Contact the possible experts per telephone and announce the mailed questionnaire. Ensure commitment of the expert.	February 19	<input checked="" type="checkbox"/>
2. Mail the questionnaire to the experts with a given time frame ( <b>March 9</b> ) to return the questionnaire.	February 23	<input checked="" type="checkbox"/>
3. Remind the experts if the questionnaire has not been returned in time	March 9	<input checked="" type="checkbox"/>
4. Remind one more time some experts , because the questionnaire has not been returned and re-define a new deadline (March 19)	March 16	<input checked="" type="checkbox"/>
5. Summarize the data available	March 22	<input checked="" type="checkbox"/>
6. Deliver National report (small version) by E-mail to Kerstin Frändin	March 23	<input checked="" type="checkbox"/>
7. Summarize the new data available	April 16	<input checked="" type="checkbox"/>
8. Deliver National report (final version) by E-mail to Kerstin Frändin	April 20	<input checked="" type="checkbox"/>
9. Send copies of all questionnaires included in the report to Britt Mari Hellner	March 20	<input checked="" type="checkbox"/>
10. Deliver actualized National report (also data file) by e-mail to Kerstin Frändin	May 31	<input checked="" type="checkbox"/>

### 3 Results

#### 3.1 Instrument currently used

Table 4 shows the number of tests identifies as “currently used in my country”, by each expert in all the different sections. The number of tests known to be currently in use in Portugal is small.

However, this result might be attribute to the small number of respondents and consequently to the lack of information regarding all the different areas of expertise.

Therefore, in section G experts do not name a single test as being currently used in Portugal, and in section F only one expert know one test to be currently in use.

*Table 4 – Tests classified as “currently used in my country” by experts*

Section	Expert				
	A	B	C	D	E
B: Physical Activity	4	3	4	0	7
C: Physical Functioning - Endurance	1	2	0	0	4
D: Physical Functioning - Mobility	1	1	0	0	1
E: Physical Functioning - Balance	4	0	0	0	1
F: Physical Functioning – Range of Motion	0	1	0	0	0
G: Physical Functioning - Dexterity	0	0	0	0	0
H: Physical Functioning – Muscle Strength	4	4	1	0	2
I: Physical Functioning – Overall Index Tests	1	3	1	0	5
J: Physical Functioning – Activities of Daily Living	0	1	0	0	6
Overall (84 tests)	15	16	6	0	26

Additionally, the results achieve in the question “how common is it” are summarize in table 5.

Based on the following overview, from a total of 35 tests in the survey, 16 tests are considered to be “very common” in Portugal.

Table 5 – Categories of answer to the question “how common is it” selected for each one tests rated “currently used”

Section	Test name	Number of experts rating instrument as:		
		“very common”	“not very common”	“don’t know”
B	Modified Baecke Questionnaire	1	1	
	PAR, 7 days Physical Activity Recall	1		
	IPAQ, International Physical Activity Questionnaire	1		1
	Pedometer			3
	Accelerometer	1	1	1
	Energy expenditure (METs)		1	2
	Double labelled water		1	1
C	12-minutes walking			1
	6-minutes walking	2		1
	2-minutes walking		1	
	Step test	1	1	
D	Get up and Go Test			1
	Walking speed 10 m	1		1
E	One leg stance	1		
	Tandem stance		1	
	Romberg test	1		
	Berg’s Balance scale	1		
	Step test	1		
F	Hand in back			1
H	Climbing boxes			1
	Chair stand 3 times	1		1
	Chair stand 5 times	1		
	Chair stand 30 sec	1		2
	The Grip Strength		1	3
I	Physical fitness field tests			1
	Tinetti Performance-Oriented Mobility Assessment			1
	Functional Fitness	1	1	2
	AAHPERD Fitness Task Force			2
	Functional Fitness in Daily Functioning			2
J	Activities of Daily Living (ADL) index			1
	Combination ADL/IADL			1
	Functional Activities Questionnaire (FAQ)		1	1
	Functional Independence Measure (FIM)	1		
	Katz ADL			1
	Lawton Instrumental Activities of Daily Living Scale			1

### 3.2 Test not used and main reasons

Only two experts report the reason why the instrument is not used. One expert considered that the instrument *Double labelled water* is “to expensive”. However, another expert report that the same instrument it’s actually use, although not specify how common. The other expert reports that the instrument Minnesota Leisure Time Physical Activity Questionnaire is “not relevant/suitable”. Our survey lacked detailed data pertaining to participant’s knowledge about this topic and subsequently, such data can not be fully understood.

### 3.3 Translation

The following instruments were identified has been translated into Portuguese: *Modified Baecke Questionnaire*, *PAR – 7 Days Physical Activity Recall/Seven Day Recall*, *IPAQ (International Physical Activity Questionnaire)*, *Pedometer*, *Accelerometer*, *Energy expenditure*, *Double labeled water*, *12-minutes walking*, *6-minutes walking*, *2-minutes walking*, *Step test*, *Get Up and Go Test*, *Romberg test*, *Berg’s Balance scale*, *Step test*, *Hand in back*, *Climbing boxes*, *Chair stand 3 times*, *Chair stand 5 times*, *Chair stand 30 sec*, *The Grip Strength*, *Physical fitness tests*, *Tinettis Performance-Oriented Mobility Assessment*, *Functional Fitness*, *AAHPERD Fitness Task Force*, *Functional Fitness in Daily Functioning*, *Activities of Daily Living (ADL) index*, *Combination ADL/IADL*, *Functional Activities Questionnaire (FAQ)*, *Functional Independence Measure (FIM)*, *Katz ADL*, and *Lawton Instrumental Activities of Daily Living Scale*. On the other hand, only in 22 tests the scientific procedures were used for the translation (*Modified Baecke Questionnaire*, *IPAQ (International Physical Activity Questionnaire)*, *Pedometer*, *Accelerometer*, *Energy expenditure*, *Double labeled water*, *6-minutes walking*, *Step test*, *Get Up and Go Test*, *Step test*, *Chair stand 30 sec*, *The Grip Strength*, *Physical fitness tests*, *Tinettis Performance-Oriented Mobility Assessment*, *Functional Fitness*, and *AAHPERD Fitness Task Force*, *Activities of Daily Living (ADL) index*, *Combination ADL/IADL*, *Functional Activities Questionnaire (FAQ)*, *Functional Independence Measure (FIM)*, *Katz ADL*, and *Lawton Instrumental Activities of Daily Living Scale*).

### 3.4 Opinion

Table 6 shows the general opinion of instruments, ranging from “very good” to “don’t know”. The general opinion from the majority of the instruments is “fairly good”, but in other circumstances they consider not to have knowledge about this topic. The option “very bad” was never selected.

Table 6 – General expert’s opinion of instruments

Section	Test name	Number of experts rating general opinion of instruments as:			
		“very good”	“fairly good”	“rather bad”	“don’t know”
B	Modified Baecke Questionnaire		2		
	PAR, 7 days Physical Activity Recall			1	
	IPAQ, International PA Questionnaire		2		
	Pedometer	1			2
	Accelerometer	1	2		
	Energy expenditure (METS)		1	1	1
	Double labelled water	1	1		1
C	12-minutes walking	1			
	6-minutes walking	3			
	2-minutes walking		1		
	Step test	1	1		
D	Get up and Go Test	1			
	Walking speed 10 m		1		1

E	One leg stance		1		
	Tandem stance		1		
	Romberg test		1		
	Berg's Balance scale			1	
	Step Test		1		
F	Hand in back		1		
H	Climbing boxes				1
	Chair stand 3 times				2
	Chair stand 5 times				1
	Chair stand 30 sec	1	1		1
	The Grip Strength	1	1		2
I	Physical fitness field tests	1			
	Tinetti's Performance-Oriented Mobility Assessment	1			
	Functional Fitness	1	2		1
	AAHPERD Fitness Task Force	1			1
	Functional Fitness in Daily Functioning				2
J	Activities of Daily Living (ADL) index	1			
	Combination ADL/IADL	1			
	Functional Activities Questionnaire (FAQ)	1			1
	Functional Independence Measure (FIM)		1		
	Katz ADL	1			
	Lawton Instrumental Activities of Daily Living Scale	1			

### 3.5 Other Instruments

On the following table we can observe the additional instruments named by experts, as well as the respective references. Only on the sections C, D, E, H and I the experts were able to supply other test's references.

*Table 7 - Other instruments used in Portugal*

Section	Instrument name	References
C	Cooper (12 min)	
	1Mile test	Kline et al 1987
	2km walking test	Oja, P et al. 1991
	PAC (Standardized test of fitness)	Operation Manual, 1986
D	5 min walking test	Péloquin et al, 1998
	Walking Speed 4m	Rantanen, T. et al 1999
	Self-paced step test	Petrella et al 1998
	Walking speed 15m	Gür & Çakin, 2003
	Self-selected walking pace	Cunningham, DA. et al 1982
E	Flamingo Test	Rodriguez, FA, Gusi, N et al. 1998
	Computerized dynamic Posturography	
	Balance Master – Neurocom	
H	Stair ascending 12 steps	Gür et al 2002
	Stair descending 12 steps	Gür et al 2002
I	Activity level of functional fitness in elderly (ALFFE)	Vogelaere, P. 1995

### 3.6 Guidelines (section K)

The majority of experts did not name a single guideline (national, local or professional) regarding physical activity and/or functioning instruments. Only one expert named a national guideline on Physical Activity Instruments concerning the use of the *accelerometers*.

## 4 Conclusions

Our modest sample size limited our ability to fully summarize the relationship between all variables. Moreover, the results might not be representative of the entire country, especially on the institutionalized setting.

Because of the reduced dimension of the sample, comparisons by sections or by area would be powerless, and for that reason we do not discuss those results. For the same reason, the three most used instruments are not presented, because only a few instruments on each section were mentioned.

We highlight the small number of instruments recognized by Portuguese experts. However, it is possible that if our sampling matrix were more representative, the results might differ.