



Work Package 4

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

## National Report Italy

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## 1 Introduction

The EUNAAPA project's work package No. 4 (Assessment of Physical activity and Physical Functioning in older People) is aimed at producing an inventory and a critical review of current instruments for physical activity and physical functioning assessment among older people among countries involved in the network.

## 2 Methods

### 2.1 Expert Selection

#### *Sampling Procedure*

The national survey for Italy was conducted between 20 February and 12 April 2007. Experts selection was based on the instruction and sampling matrix provided by the work package leader (see table 1). Selection partly took place by means of convenience sampling. Experts known to the authors were listed and then put into the fields that suited their background most.

*Table 1: Sampling matrix for Italy*

	Community-dwelling older adults				Institutionalized older persons			
	Government	Health Care/ social care	Commercial sector	Academics/ Professional Education	Government	Health Care/ social care	Commercial sector	Academics/ Professional Education
National level	1		1	1		1		1
		1		1	1	1		2

### 2.2 Expert Self-Rating

In order to double-check the *ex ante* allocation of experts to certain fields of the matrix, respondents were asked to self-rate their organizational level, field of expertise, setting, and sector (see table 2). The rating shows that both settings (community-dwelling and institutionalized older adults), both organizational levels (national and regional/local), and both fields (physical activity and physical functioning) are well-represented in the sample. With respect to the sectors, however, it must be noted only one expert comes from the commercial sector. If the sampling matrix is taken as a standard, all sectors have been covered by the survey. While all experts gave non-ambiguous information on their sector, the self rating shows that there is a certain overlap concerning the expertise in the different settings, organizational levels, and especially fields: 5 out of 11 respondents claim to be experts for both settings and 4 out of 11 consider themselves to be knowledgeable in both physical activity and physical functioning. On the other hand only one subject rated himself expert at both the organizational level

Table 2: Expert self rating

	Setting		Organizational level		Field		Sector				
	Community-dwelling older adults	Institutionalized older adults	National level	Regionnal/ local level	Physical activity	Physical functioning	Governmental sector	Health care	Commercial sector	Academic/ educational sector	Social sector
Expert A	x		x		x	x				x	
Expert B	x			x	x	x				x	
Expert C	x	x		x	x	x	x				
Expert D	x	x		x	x	x					x
Expert E		x		x		x					
Expert F	x	x	x	x	x	x				x	
Expert G		x		x		x		x			
Expert H	x	x		x		x		x			
Expert I	x		x		x				x		
Expert J	x	x	x		x		x				
Expert L	x		x		x	x		x			

## 2.3 Data Collection

As agreed upon at the special meeting of WP4 in January 2007, the initial contact with the survey subjects was made by phone in order to explain the objectives of the questionnaire and to ensure the expert's compliance and understanding of the survey process. The questionnaire supplied by the work package leader was sent to the expert either as a hardcopy by mail or as a PDF document by e-mail, to be printed out by the respondents. All subjects were asked to complete the questionnaire by 31 March and send it back to the national partner by mail. In relation to several concerns about the length and difficulties in filling the questionnaire survey procedures were answered also by telephone. Indeed, in an effort to speed up the implementation of the survey, a number of experts was interviewed by telephone a few days after receiving the questionnaire. The respective questionnaires were completed by the interviewer.

## 3 Results

### 3.1 Frequently used and common tests

The number of tests known to be currently in use in Italy varies significantly between respondents, ranging from 4 out of a total of 84 tests in the survey (expert C) to 34 out of 84 (expert G). There are particularly pronounced differences in section B (Physical Activity): While 5 experts did not name a single test, 2 rated 10 and 13, respectively, as "currently used".

Table 3: Number of tests rated "used in my country" by respondent

	1	2	3	4	5	6	7	8	9	10	11
	Expert A	Expert B	Expert C	Expert D	Expert E	Expert F	Expert G	Expert H	Expert I	Expert J	Expert L
Section B: Physical Activity (17 tests)	4	5	1	2	1	2	1	2	7	4	7
Section C: Physical Functioning - Endurance (5 tests)	2	2	0	2	2	1	2	1	2	0	2
Section D: Physical Functioning - Mobility (9 tests)	2	2	0	2	1	2	5	2	0	0	1
Section E: Physical Functioning - Balance (13 tests)	0	2	1	2	1	3	7	2	3	0	4
Section F: Physical Functioning - Range of Motion (3 tests)	0	0	0	0	1	0	2	0	0	0	0
Section G: Physical Functioning - Dexterity (2 tests)	0	0	0	0	0	0	0	0	0	0	0
Section H: Physical Functioning - Muscle Strength (7 tests)	2	2	0	5	0	3	3	4	1	0	3
Section I: Physical Functioning - Overall Index Tests (15 tests)	1	2	0	4	0	4	7	1	0	0	2
Section J: Physical Functioning - Daily Living (13 tests)	3	1	2	3	5	4	7	3	0	4	4
<b>Overall (84 tests)</b>	<b>14</b>	<b>16</b>	<b>4</b>	<b>20</b>	<b>11</b>	<b>19</b>	<b>34</b>	<b>15</b>	<b>13</b>	<b>8</b>	<b>23</b>

Table 4 gives a combined overview over the tests that experts consider to be currently in use in Italy as well as their assessment of how common these tests are. While a test that is rated as “currently used” by a large number of respondents does not necessarily imply that this test is also “very common”, the figures below show that the tests that score highest in one category also appear in top positions in the other. Judging from this table, the *6 and 12 minutes walking test*, the *Romberg Test*, the *Katz ADL*, the *Barthel questionnaire*, the *Grip test* and *Pedometer use* are the most common tests currently used in Italy.

Table 4: Tests rated as “currently used” and “very common”

Test name	Number of expert rating test as "currently used"	Number of expert rating test as "very common"
6-minutes walking	9	6
Katz ADL	8	7
Romberg stance	8	6
Barthel Index	7	6
12-minutes walking	7	2
Pedometer, The Grip Strength	7	1
Step test, Lawton IADL	6	5
TUG (Timed Up and Go)	6	3
Accelerometer	6	1
IPAQ	6	0
Energy expenditure (METS), 2-minutes walking	5	1
Tandem stance, Combination ADL-IADL	4	3
Tinetti Performance-Oriented Mobility Assessment, Functional Fitness	4	2
Walking speed 30 m, One leg stance, Chair stand once	4	1
Functional Independence Measure (FIM)	3	3
Minnesota Leisure-time PA Questionnaire, Get Up and Go Test, Elderly Mobility Scale, IAM	3	1
PASE, Chair stand 3 times	3	0
Functional Activities Questionnaire (FAQ)	2	1
PAR, Stop walking while talking, Berg's Balance Scale, Figure of Eight, Hand in Neck, Chair stand 5 times, AAHPERD Fitness Task Force, Functional Fitness in Daily Functioning	2	0
Chair stand 30 sec	1	2
Functional Reach, Step test*, Physical fitness field tests	1	1
Modified Baecke Questionnaire, YPAS, Walking habits, Double Labelled water, Endurance Shuttle test, Walking speed 10 m, Dynamic Gait index, TUSS, Ficsit 3-balance scale, The 180 Degree Turn, Hand in Back, Climbing boxes, Chair stand 10 times, Short Physical Performance Battery, Nursing Home Disability Instrument, Physical Performance Test, Groningen Fitness Test, Activities of Daily Living (ADL) index, Bristol Activities of Daily Living Scale, Cleveland Scale for Activities of Daily Living	1	0
Modified Dalloso Questionnaire, CHAMPS, CHAMPS questionnaire for older adults, Zupthen Physical Activity, FAI, Life Space, TUG manual, L Test, Functional ambulation, Solec test, FICSIT 4-balance scale, Modified Figure of Eight, Pour out of Pot, Box and Block test, Nine Hole Peg Test, Clinical Outcome Variables, Timed-Functional Movements, Physical Performance and Mobility Examination, Modified Elderly Mobility Scale, General Motor Function Assessment, ADL Staircase, Nottingham Extended Activities of Daily Living Scale, OARS-IADL	0	0

### 3.2 Tests not used

Only 1 questionnaire was rated as “not used in Italy ” by 3 respondents each, while 2 experts each rated 2 tests as not being used. A large number were rated by a single expert

Table 5: Tests rated as “not used”

Number of experts indicating that the instrument was not used in Italy	Test name
1	PAR, CHAMPS, IPAQ, Pedometer, Double Labelled Water, 12-minutes walking, Walking speed 30 m, Walking speed 10 m, Stop walking while talking, Functional Reach, One leg stance, Tandem stance, Romberg stance, The 180 Degree Turn, Hand in back, Pour out of Pot, Chair stand 10 times, Chair stand 30 sec, Tinetti Performance-Oriented Mobility Assessment, AAHPERD Fitness Task Force, Groningen Fitness Test
2	Endurance Shuttle Test, Step Test
3	Minnesota Leisure-time PA Questionnaire

The results for this item, however, are not always congruent with the previous section especially when we considered the options of a single experts. In this way we suggest not to take into account this choice as relevant while selection by 2 or 3 respondents could be more informative.

Table 6: Tests most probably not in use in Italy

This condition do not apply to our data.

### 3.3 Main reasons why tests are not used

Assessing why tests are not used in Italy is difficult if one only looks at the “why not” questions of the questionnaire. In the entire survey (i.e. for all tests and by all respondents), only 25 answers were given. In 24 cases, experts indicated that a test was not used because it was “not known”. Only in one case, a test was rated as “too time-consuming”.

The picture might become slightly clearer if one takes into account the disadvantages of certain tests mentioned in the experts’ comments (see 3.4). This might be problematic, however, as a negative comment on a test does not necessarily imply that the expert who made this comment rated the test as “not used”.

### 3.4 Test Ratings

Table 6 shows the respondents’ ranking of the tests in the survey.<sup>2</sup> The tests with the best overall

rankings are very similar to the most used list. 6 minutes walking, ADL, IADL, Romberg and Barthel obtain the best cumulative ranking.

Table 6: Tests rated “very good” or “fairly good”

Test name	Number of experts rating general opinion of tests as "very good"	Number of experts rating general opinion of tests as "fairly good"
6-minutes walking, Katz ADL	5	3
Lawton IADL	4	2
Romberg stance	3	4
Barthel Index	3	3
TUG, FIM,	3	0
Functional Fitness	2	2
Tandem stance, Tinetti Performance-Oriented Mobility Assess	2	1
12-minutes walking	1	5
IPAQ	1	4
Walking speed 30 m, Elderly Mobility Scale	1	2
Get Up and Go Test, One leg stance, Berg's Balance scale, Chair stand once, Chair stand 5 times, The Grip Strenght	1	1
Double Labelled water, FICSIT 3-balance scale, Step test*, Short Physical Performance Battery, Physical Performance Test, FAQ, IAM	1	0
Accelerometer, Step test	0	5
Pedometer, Energy expenditure (METS), 2-minutes walking, Chair stand 30 sec	0	4
Combination ADL-IADL	0	3
PASE	0	2
Minnesota Leisure-time PA Questionnaire, PAR, Endurance Shuttle Test, Walking speed 10 m, Stop walking while talking, Functional Reach, Figure of Eight, The 180 Degree Turn, Hand in neck, Hand in back, Chair stand 3 times, Chair stand 10 times, Phisical fitness field tests, Nursing Home Disability Instrument, Groningen Fitness Test, Activities of Daily Living (ADL) index, Cleveland Scale for Activities of Daily Living	0	1
Modified Baecke Questionnaire, Modified Dalloso Questionnaire, CHAMPS, CHAMPS questionnaire for older adults, YPAS, Zupthen Physical Activity, FAI, Life Space, Walking habits, TUG manual, L Test, Functional ambulation, Dinamic Gait index, TUSS, Solec Test, FICSIT 4-balance scale, Modified Figure of Eight, Pour out of Pot, Box and Block test, Nine Hole Peg Test, Climbing boxes, Clinical Outcome Variables, Timed-Functional Movements, AAHPERD Fitness Task Force, Functional Fitness in Daily Functioning, Physical Performance and Mobility Examination, Modified Elderly Mobility Scale, General Motor Function Assessment, Bristol Activities of Daily Living Scale, ADL Staircase, Nottingham ADL, OARS-IADL	0	0

<sup>2</sup> The ranking follows the principle of an Olympic medal count: The table was first sorted by the number of times a test was rated “very good”, then by number of times rated “fairly good”.

Table 8 summarizes the tests rated either “very bad” or “rather bad” by the respondents. None test was while the list of rather bad includes several tests.

Table 8: Tests rated “very bad” or “rather bad”

Test name	Number of experts rating general opinion of tests as "very bad"	Number of experts rating general opinion of tests as "rather bad"
12-minutes walking, Step test, Walking speed 30 m	0	2
Pedometer, Accelerometer, Double Labelled Water, 2-minutes walking, Endurance Shuttle Test, Walking speed 10 m, Stop walking while talking, Functional Reach, One leg stance, Tandem stance, The 180 Degree Turn, Hand in neck, Hand in back, Chair stand 3 times, Chair stand 10 times, Chair stand 30 sec, The Grip Strenght, Tinetti Performance-Oriented Mobility Assessment, Groningen Fitness Test, Barthel Index	0	1

\* Test was also rated as being generally considered “fairly good” or “very good” by at least one respondent

Moreover, in their comments, some of the tests were criticized for various reasons:

- too expensive: *Double Labelled Water*
- too time consuming: *Tinetti Performance-Oriented Mobility Assessment, Groningen Fitness test*
- special skills required: *Step test, Endurance Shuttle Test*
- poor measurements properties: *Romberg Test, Pour Out of Pot*
- not know: *Pedometer, Hand in Back*
- not relevant /suitable: *12-minutes walking, Step test, Walking speed 30 m, Walking speed 10 m, Stop walking while talking, Functional Reach, One leg stance, Tandem stance*
- limited target group: *IPAQ* (not relevant for target), *Endurance Shuttle Test* (not suitable for older people)
- general problems: the *IPAQ* was rated as too time consuming for epidemiologic studies; the *Energy Expenditure (METS)* was rated as difficult to use on large sample; *The 180 Degree Turn* was rated as not to use alone; *Chair stand 10 times* and *Chair stand 30 sec* were rated as needed to much repetitions, **continua**

### 3.5 Translation:

Table 9 gives an overview of the tests and instruments that respondents rated as “translated into Italian”, while table 10 indicates which tests were most frequently rated as translated by means of scientific procedures. It appears that the number of test of which the translation into Italian has been known is large while those subjected to scientific procedure are restricted to 5-6.

Table 8: Tests translated into Italian

Test name	Number of experts indicating that the instrument has been translated into Italian
Katz ADL	8
IPAQ, 6-minutes walking, Barthel Index	7
Pedometer, 12-minutes walking, Lawton ADL	6
Accelerometer, Step test, Romberg stance, Chair stand 30 sec, The Grip Strenght, Tinetti Performance-Oriented Mobility Assessment	5
Minnesota Leisure-time PA Questionnaire, Energy Expend. (METS), 2-minutes walking, Combination ADL-IADL	4
Endurance Shuttle Test, Get Up and Go Test, Timed Up and Go, Walking speed 30 m, One leg stance, Tandem stance, Chair stand once, Functional Fitness,FIM	3
PAR, PASE,Stop walking while talking, Functional Reach, Berg's Balance scale, Hand in neck, Chair stand 3 times, AAHPERD Fitness Task Force, Elderly Mobility Scale, Instrumental Activity Measures (IAM)	2
Modified Baecke Questionnaire, YPAS, Double Labelled Water, Walking speed 10 m, Dinamic Gait index, TUSS, FICSIT 3-balance scale, Step test*, The 180 Degree Turn, Hand in back, Chair stand 5 times, Chair stand 10 times, Physical fitness field tests, Short Physical Performance Battery, Nursing Home Disability Instrument, Physical Performance Test, Functional Fitness in Daily Functioning, Groningen Fitness Test, General Motor Function Assessment, Activities of Daily Living (ADL) index, Cleveland Scale for Activities of Daily Living, FAQ	1

Table 9: Tests translated by means of scientific procedures

Test name	Number of experts indicating that scientific procedures were used for translation
6-minutes walking	5
Barthel Index, Katz ADL, Lawton IADL	4
Step test, Walking speed 30 m, Romberg stance, Chair stand 30 sec, Tinetti Performance-Oriented Mobility Assess.	3
PASE, IPAQ, Energy expenditure (METS), 12-minutes walking, 2-minutes walking, Get Up and Go Test, Timed Up and Go, Functional Reach, Berg's Balance scale, The Grip Strenght, Combination ADL-IADL	2
PAR, Endurance Shuttle Test, Walking speed 10 m, One leg stance, Tandem stance, Step test*, The 180 Degree Turn, Hand in neck, Chair stand once, Chair stand 3 times, Physical fitness field tests, Nursing Home Disability Instrument, Functional Fitness, Elderly Mobility Scale,Groningen Fitness Test, FAQ, FIM, IAM	1

### 3.6 Comparison of expert groups

The following section contains a comparison of the different expert groups, differentiated by sector, organizational level, and setting. Only the question “*Is this instrument currently used in your country?*” was taken into consideration for this part of the data analysis. For all other survey questions, the number of answers was too small to allow for a further subdivision of the sample.

#### 3.6.1 Comparison by Sector

Table 11 gives an overview over the number of tests rated “used in my country” by all experts combined, divided by sectors. The experts’ self-rating was used to allocate respondents to the different sectors.<sup>3</sup> Given in parentheses is the theoretical maximum value for the sector, which would be achieved if all experts in the sector would rate all 84 tests in the survey as “used” (e.g. health care sector (n=4): max = 4·84 = 336).

Table 11: Number of tests rated “used in my country” by all experts combined, by sector

Governmental Sector (n=2) (max=168)	Health Care Sector (n=4) (max=336)	Commercial Sector (n=1) (max=84)	Academic Sector (n=3) (max=252)	Social Care Sector (n=1) (max=84)
12 7,15%	83 24,70%	13 15,48%	49 19,44%	20 23,81%

It is striking that the only respondent from the governmental sector only rated a single instrument as “currently used” – the lowest figure in the entire survey. However, due to the small n in the governmental and commercial sector (both n=1), a detailed comparison seems advisable only between the health care and the academic sector (both n=4).

At a theoretical maximum of 336 tests for both sectors, 120 tests were rated “used” by academic experts compared to 89 by the health care experts. As table 12 illustrates, both the mean (M=30.00, SD=17.30) and the median (Md=32.50) are higher for the academic sector than for the health care sector (M=22.25, SD=15.90, Md=22.00).

The detailed comparison of means and medians for the various sections of the survey shows that there is a considerable difference between the two groups in Section B (Physical Activity): The mean is considerably higher for the academic sector (M=6.00, SD=7.12) than for the health care sector (M=2.25, SD=2.63). The same applies to the Median (academic sector: Md=5.00, health care sector: Md=2.00). Another section with a strong contrast is Section J (Activities of Daily Living). Again, the figures for the academic sector (M=5.00, SD=1.83, Md=5.00) are higher than those for the health care sector (M=2.50, SD=3.00, Md=2.00). In sections C, D, H, and I of the survey, the difference between the two sectors is much less pronounced, although the figures for the academic sector are slightly higher. In sections E, F, and G, there hardly any discernable difference between the academic and the health care sector. In the cases of sections F and G, this might be partly caused by the small number of tests covered in these parts of the survey.

Table 12: Number of tests rated “used in my country”: means and medians (health care and academic sector only).

Section		Health Care Sector (n=4)	Academic Sector (n=3)
Section B: Physical Activity (17 tests)	Mean	2,75	3,66
	(SD)	(2,87)	(1,53)
	Median	1,50	4,00
Section C: Physical Activity (5 tests)	Mean	1,75	1,66
	(SD)	(0,50)	(0,58)
	Median	2,00	2,00
Section D: Physical Activity (9 tests)	Mean	2,25	2,00
	(SD)	(1,89)	(0,00)
	Median	1,50	2,00
Section E: Physical Activity (13 tests)	Mean	3,50	1,66
	(SD)	(2,64)	(1,53)
	Median	3,00	2,00
Section F: Physical Activity (3 tests)	Mean	0,75	0,00
	(SD)	(0,96)	(0,00)
	Median	0,50	0,00
Section G: Physical Activity (2 tests)	Mean	0,00	0,00
	(SD)	(0,00)	(0,00)
	Median	0,00	0,00
Section H: Physical Activity (7 tests)	Mean	2,50	2,33
	(SD)	(1,73)	(0,58)
	Median	3,00	2,00
Section I: Physical Activity (15 tests)	Mean	2,50	2,33
	(SD)	(3,11)	(1,53)
	Median	1,50	2,00
Section J: Physical Activity (13 tests)	Mean	4,75	2,66
	(SD)	(1,70)	(1,53)
	Median	4,50	3,00
<b>Overall (84 tests)</b>	Mean	20,75	16,33
	(SD)	(10,14)	(2,52)
	Median	19,00	16,00

### 3.6.2 Comparison by organizational level

In their self-rating, many of the respondents allocated themselves both to the national and regional/local level, which is why the original allocation in the sampling matrix was used to divide respondents into two groups. Table 13 gives an overview over the number of tests rated “used in my country” by all experts combined, sorted by organizational level.

Table 13: Number of tests rated „used in my country“ by all experts combined, by organizational level

National Level (n=5) (max=420)	Regional/Local Level (n=6) (max=504)
77 18,33%	100 19,84%

The number of respondents is n=5 for both organizational levels, which leads to a theoretical maximum number of tests rated “used” of 420 in both cases. The experts on the national level rate a total of 146 tests as “currently used in Germany” compared to 87 tests for the regional/local experts. As illustrated in table 14, the overall means and medians, which are both higher for the national than for the regional/local expert group.

In the case of the national experts, the median (Md=35.00) is considerably higher than the mean (M=29.20, SD=18.03). A detailed analysis of the national experts shows that the figures for one respondent in this group were much lower than for the other four.

Likewise, the median (Md=9.00) is considerably lower than the mean (M=17.40, SD=13.13) for the regional/local experts. As the figures for the individual respondents in this group show, two regional/local experts rated far more tests as “currently” used than the other three.

Table 15 also shows that national experts rate more tests as “used” and consequently reach higher means than their regional counterparts in all survey sections. Once more, there is a considerable difference for section B (Physical Activity), with M=6.00 (SD=5.96) and Md=5.00 for the national level compared to M=0.80 (SD=1.79) and Md=0.80 for the regional/local level. Once more, the difference is least discernable in sections F and G, which might once more be partly due to the small number of tests in these two parts of the survey.

Table 14: Number of tests rated “used in my country”: means and medians, by organizational level

Section		National Level (n=5)	Regional/Local Level (n=6)
Section B: Physical Activity (17 tests)	Mean	4,80	2,00
	(SD)	(2,16)	(1,55)
	Median	4,00	1,50
Section C: Physical Activity (5 tests)	Mean	1,40	1,50
	(SD)	(0,89)	(0,83)
	Median	2,00	2,00
Section D: Physical Activity (9 tests)	Mean	1,00	2,00
	(SD)	(1,00)	(1,67)
	Median	1,00	2,00
Section E: Physical Activity (13 tests)	Mean	2,00	2,50
	(SD)	(1,88)	(2,26)
	Median	3,00	2,00
Section F: Physical Activity (3 tests)	Mean	0,00	0,50
	(SD)	(0,00)	(0,84)
	Median	0,00	0,00
Section G: Physical Activity (2 tests)	Mean	0,00	0,00
	(SD)	(0,00)	(0,00)
	Median	0,00	0,00
Section H: Physical Activity (7 tests)	Mean	1,80	2,33
	(SD)	(1,30)	(2,06)
	Median	2,00	2,50
Section I: Physical Activity (15 tests)	Mean	1,40	2,33
	(SD)	(1,67)	(2,73)
	Median	2,00	1,50
Section J: Physical Activity (13 tests)	Mean	3,00	3,50
	(SD)	(1,73)	(2,17)
	Median	4,00	3,00
<b>Overall (84 tests)</b>	Mean	15,40	16,67
	(SD)	(5,77)	(10,07)
	Median	14,00	15,50

### 3.6.3 Comparison by Setting

As in the case of organizational levels, many of the respondents allocated themselves both to the community-dwelling and institutionalized setting, which is why the original allocation in the sampling matrix was used to divide respondents into two groups. One respondent had to be excluded from the analysis as the expert had been sampled for both settings. This led to n=7 for the community-dwelling and n=2 for the institutionalized setting. As the latter figure is too small for a meaningful statistical analysis, the following results have to be treated with caution.

Table 15: Number of tests rated „used in my country“ by all experts combined, by setting

Community-dwelling Older People (n=6) (max=504)	Institutionalized Older People (n=5) (max=420)
89 17,66%	88 20,00%

Table 15 gives an overview over the number of tests rated “used in my country” by all experts combined, sorted by setting. The figures seem to suggest that experts for the institutionalized setting rate far more tests as “currently used” (77 out of a maximum of 168, amounting to 45.83%) than experts for the community-dwelling setting (133 out of 588, 22.61%). As shown in table 16, the mean is M=38.50 (SD=2.21) for the institutionalized setting compared to M=19.00 (SD=17.04) for the community-dwelling setting. The low median (Md=9.00) for the community-dwelling setting suggests that there are some outliers within this group. A detailed analysis shows that 3 out of 7 experts for community-dwelling older people rated far fewer tests as “currently used” than the rest of the group. Consequently, the medians are preferred to the means in the following comparison of the various sections of the survey.

The analysis shows that experts for the institutionalized setting rate more tests as “currently used” than experts for the community-dwelling setting in all sections except for sections F and G (Md=0.00 for both groups). The difference is particularly stark in section B (institutionalized setting: Md=7.00, community-dwelling setting: Md=0.00), section I (institutionalized setting: Md=6.00, community-dwelling setting: Md=1.00), and section J (institutionalized setting: Md=6.00, community-dwelling setting: Md=3.00). As mentioned above, however, due to the small n in the institutionalized setting it is questionable how much these results can tell us about the difference between the two groups.

Table 16: Number of tests rated “used in my country”: means and medians, by setting

Section		Community-dwelling Older People (n=6)	Institutionalized Older People (n=5)
Section B: Physical Activity (17 tests)	Mean	4,83	1,40
	(SD)	(1,94)	(0,55)
	Median	4,50	1,00
Section C: Physical Activity (5 tests)	Mean	1,50	1,40
	(SD)	(0,84)	(0,89)
	Median	2,00	2,00
Section D: Physical Activity (9 tests)	Mean	1,17	2,00
	(SD)	(0,98)	(1,87)
	Median	1,50	2,00
Section E: Physical Activity (13 tests)	Mean	1,83	2,80
	(SD)	(1,60)	(2,49)
	Median	2,00	2,00
Section F: Physical Activity (3 tests)	Mean	0,00	0,60
	(SD)	(0,00)	(0,89)
	Median	0,00	0,00
Section G: Physical Activity (2 tests)	Mean	0,00	0,00
	(SD)	(0,00)	(0,00)
	Median	0,00	0,00
Section H: Physical Activity (7 tests)	Mean	2,00	2,20
	(SD)	(1,41)	(2,17)
	Median	2,00	3,00
Section I: Physical Activity (15 tests)	Mean	1,00	3,00
	(SD)	(0,89)	(3,00)
	Median	1,00	4,00
Section J: Physical Activity (13 tests)	Mean	2,50	4,20
	(SD)	(1,64)	(1,92)
	Median	3,00	4,00
<b>Overall (84 tests)</b>	Mean	14,83	17,60
	(SD)	(4,87)	(11,24)
	Median	14,50	19,00

## **4 Discussion/Conclusions**

### **4.1 Sampling and Expert Selection**

The main insight to be derived from the sampling process is that it is difficult to find experts on physical activity/physical functioning in the elderly from Italian national governmental institutions. This is most probably due to the structure of the Health system in Italy where the responsibility of preventive medicine has been completely related to the regional level. Indeed we would like to emphasise that the background for inclusion of physical activity in the health program is quite recent in Italy and this could also affected the knowledge of potential experts.

On the other hand since we have used a very restricted criteria for selection the group of respondents was rather homogeneous with respect to their knowledge on the current use of tests and assessment instruments in Italy and they were able to represent well the situation in our country

### **4.2 General Results**

While a rather clear ranking of tests that are currently and commonly used in Italy can be drawn up from the tables it comes out from those that the tests well known and largely used are related to the simples physical activities ( mainly walking) and only in the elderly with large physical deficit other tests, addressed to the minimal physical ability in every day life are applied ( as ADL or IADL, Barthel, etc).

### **4.3 Comparison of expert groups**

Results of the comparison of different sectors/levels should be cautiously interpreted due to the small sample sizes. Academic and Health/ social care experts seem to give the best quality of response and they reveal a wider knowledge about test application and use.

## Appendix A: Statistics by Section

### Section B: Physical Activity

Table B.1: Tests most frequently used

Number of experts rating test as "currently used"	Test name
7	Pedometer
6	IPAQ, Accelerometer
5	Energy Expenditure (METS)
3	Minnesota Leisure-time PA Questionnaire, PASE
2	PAR
1	Modified Baecke Questionnaire, YPAS, Walking habits, Double labelled water
0	Modified Dalloso Questionnaire, CHAMPS, CHAMPS Questionnaire for older adults, Zupthen Physical Activity, FAI, Life Space

Table B.2: Tests most frequently rated as "very common"

Number of experts rating test as "very common"	Test name
1	Minnesota Leisure-time PA Questionnaire
1	Pedometer
1	Accelerometer
1	Energy expenditure (METS)

Table B.3: Test Ratings

Test name	Number of general experts rating general opinion as "very good"	Number of general experts rating general opinion as "fairly good"
IPAQ	1	4
Double labelled water	1	0
Accelerometer	0	5
Pedometer, Energy expenditure (METS)	0	4
PASE	0	2
Minnesota Leisure-time PA Questionnaire, PAR	0	1

Test name	Number of general experts rating general opinion as "very bad"	Number of general experts rating general opinion as "rather bad"
Pedometer	0	1
Accelerometer	0	1
Double labelled water	0	1

\* Test was also rated as being generally considered "fairly good" or "very good" by at least one respondent

**Section C: Physical Functioning – Endurance**

*Table C.1: Tests most frequently used*

Number of experts rating test as "currently used"	Test name
9	6-minutes walking
7	12-minutes walking
6	Step test
5	2-minutes walking
1	Endurance Shuttle Walking Test

*Table C.2: Tests most frequently rated as "very common"*

Number of experts rating test as "very common"	Test name
6	6-minutes walking
5	Step test
2	12-minutes walking
1	2-minutes walking

*Table C.3: Test Ratings*

Test name	Number of general experts rating general opinion as "very good"	Number of general experts rating general opinion as "fairly good"
6-minutes walking	5	3
12-minutes walking	1	5
Step test	0	5
2-minutes walking	0	4
Endurance Shuttle walking Test	0	1

**Section D: Physical Functioning – Mobility**

*Table D.1: Tests most frequently used*

Number of experts rating test as "currently used"	Test name
6	TUG (Timed Up and Go)
4	Walking speed 30 m
3	Get Up and Go Test
2	Stop walking while talking
1	Walking speed 10 m, Dynamic Gait index
0	TUG manual, L Test, Functional ambulation

*Table D.2: Tests most frequently rated as "very common"*

Number of experts rating test as "very common"	Test name
3	TUG (Timed Up and Go)
1	Walking speed 30 m, Get Up and Go Test

*Table D.3: Test Ratings*

Test name	Number of general experts rating general opinion as "very good"	Number of general experts rating general opinion as "fairly good"
TUG (Timed Up and Go)	3	0
Walking speed 30 m	1	2
Get Up and Go Test	1	1
Walking speed 10 m, Stop walking while talking	0	1

Test name	Number of general experts rating general opinion as "very bad"	Number of general experts rating general opinion as "rather bad"
Walking speed 30 m	0	2
Walking speed 10 m, Stop walking while talking	0	1

\* Test was also rated as being generally considered "fairly good" or "very good" by at least one respondent

**Section E: Physical Functioning – Balance**

*Table E.1: Tests most frequently used*

Number of experts rating test as "currently used"	Test name
8	Romberg stance
4	One leg stance, Tandem stance
2	Berg's Balance scale, Figure of eight
1	Stop walking while talking
1	Functional Reach, TUSS, FICSIT 3-balance scale, Step test*, The 180 Degree Turn
0	Solec test, FICSIT 4-balance scale, Modified Figure of Eight

*Table E.2: Tests most frequently rated as "very common"*

Number of experts rating test as "very common"	Test name
6	Romberg stance
3	Tandem stance
1	Functional Reach, One leg stance, Step test*

*Table E.3: Test Ratings*

Test name	Number of general experts rating general opinion as "very good"	Number of general experts rating general opinion as "fairly good"
Romberg stance	3	4
Tandem stance <sup>2</sup>	2	1
One leg stance, Berg's Balance scale	1	1
FICSIT 3-balance scale, Step test*, The 180 Degree Turn	1	0

Test name	Number of general experts rating general opinion as "very bad"	Number of general experts rating general opinion as "rather bad"
Functional Reach, One leg stance, Tandem stance, The 180 Degree Turn	0	1

\* Test was also rated as being generally considered "fairly good" or "very good" by at least one respondent

## Section F: Physical Functioning – Range of Motion

Table F.1: Tests most frequently used

Number of experts rating test as "currently used"	Test name
2	Hand in Neck
1	Hand in Back
0	Pour Out of Pot

Table F.3: Test Ratings

Test name	Number of general experts rating general opinion as "very good"	Number of general experts rating general opinion as "fairly good"
Hand in Neck, Hand in Back	0	1

Test name	Number of general experts rating general opinion as "very bad"	Number of general experts rating general opinion as "rather bad"
Hand in Neck, Hand in Back	0	1

\* Test was also rated as being generally considered "fairly good" or "very good" by at least one respondent

## Section G: Physical Functioning – Dexterity

Nessun test utilizzato

## Section H: Physical Functioning – Muscle Strength

Table H.1: Tests most frequently used

Number of experts rating test as "currently used"	Test name
7	The Grip Strenght
5	Chair Stand 30 sec
4	Chair Stand Once
3	Chair Stand 3 Times
2	Chair Stand 5 Times
1	Climbing boxes, Chair Stand 10 Times

Table H.2: Tests most frequently rated as "very common"

Number of experts rating test as "very common"	Test name
2	Chair Stand 30 sec
1	Chair Stand Once, The Grip Strenght

Table H.3: Test Ratings

Test name	Number of general experts rating general opinion as "very good"	Number of general experts rating general opinion as "fairly good"
Chair Stand Once, Chair Stand 5 Times, The Grip Strenght	1	1
Chair Stand 30 Sec	0	4
Chair Stand 3 Times, Chair Stand 10 Times	0	1

Test name	Number of general experts rating general opinion as "very bad"	Number of general experts rating general opinion as "rather bad"
The Grip Strenght, Chair Stand 30 Sec, Chair Stand 3 Times, Chair Stand 10 Times	0	1

\* Test was also rated as being generally considered "fairly good" or "very good" by at least one respondent

## Section I: Physical Functioning – Overall Index Tests

Table I.1: Tests most frequently used

Number of experts rating test as "currently used"	Test name
4	Tinetti's Performance-oriented Mobility Assessment, Functional Fitness
3	Elderly Mobility Scale
2	AAPHERD, Functional Fitness in Daily Functioning
1	Physical Fitness Field Test, Short Physical Performance Battery, Nursing Home Disability Instrument, Physical Performance
0	Clinical Outcome Variables, Timed Functional Movements, Physical Performance and Mobility Examination, Modified Elderly Mobility Scale, General Motor Function Assessment

Table I.2: Tests most frequently rated as "very common"

Number of experts rating test as "very common"	Test name
2	Tinetti's Performance-oriented Mobility, Functional Fitness
1	Physical Fitness Field Test, Elderly Mobility Scale

Table I.3: Test Ratings

Test name	Number of general experts rating general opinion as "very good"	Number of general experts rating general opinion as "fairly good"
Functional Fitness	2	2
Tinetti's Performance-oriented Mobil Assess	2	1
Elderly Mobility Scale	1	2
Short Physical Performance Battery, Physical Performance Test	1	0
Physical Fitness Field Test, Nursing Home Disability Instrument, Groningen Fitness Test	0	1

Test name	Number of general experts rating general opinion as "very bad"	Number of general experts rating general opinion as "rather bad"
Tinetti's Performance-oriented Mobility Assessment, AAHPERD, Functional Fitness in Daily Functioning, Groningen Fitness Test	0	1

## Section J: Physical Functioning – Activities of Daily Living

Table J.1: Tests most frequently used

Number of experts rating test as "currently used"	Test name
8	Katz ADL
7	Barthel Index
6	Lawton IADL
4	Combination ADL-IADL
3	FIM, IAM
2	Functional Activities Questionnaire
1	ADL index, Brstol ADL, Cleveland ADL
0	ADL Staircase, Nottingham ADL, OARS-IADL

Table J.2: Tests most frequently rated as "very common"

Number of experts rating test as "very common"	Test name
7	Katz ADL
6	Barthel Index
5	Lawton IADL
3	Combination ADL-IADL, FIM
1	Functional Activities Questionnaire, IAM

Table J.3: Test Ratings

Test name	Number of general experts rating general opinion as "very good"	Number of general experts rating general opinion as "fairly good"
Katz ADL	5	3
Lawton IADL	4	2
Barthel Index	3	3
FIM	3	0
Functional Activities Questionnaire, IAM	1	0
Combination ADL-IADL	0	3
ADL index, Cleveland ADL	0	1

Test name	Number of general experts rating general opinion as "very bad"	Number of general experts rating general opinion as "rather bad"
Barthel Index	0	1

