EUNAAPA

European Network for Action on Ageing and Physical Activity

NATIONAL REPORT FINLAND

Work Package 5

Expert Survey on Physical Activity Programmes and Physical Activity Promotion Strategies for Older People

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▪ INTRODUCTION

The European Network for Action on Ageing and Physical Activity (EUNAAPA) is committed to improving the health, wellbeing and independence of older people throughout Europe by the promotion of evidence-based physical activity.

The first aim of EUNAAPA work package No. 5 (Identify Existing Programmes for Physical Activity and Physical Activity Promotion for Older People) was to identify and describe, with the help of national experts, Finland examples of physical activity (PA) programmes and PA promotion strategies for older people which were deemed to be 'successful'. The second aim was critically to compare these programmes and strategies with evidence based guidelines identified by a systematic search of the scientific literature.

In May 2007, the EUNAAPA Partners in each participating country were asked to enlist the help of eleven physical activity Experts in their country, all recognised authorities on PA for older people. Each Expert was asked to:

- complete a short questionnaire concerned principally with the availability in their country of national qualifications in the supervision or guidance of physical activity for adults in general and for older adults in particular.
- identify a successful PA programme for older people in their country and assist its director to complete a second (longer) questionnaire, concerned primarily with the characteristics of the chosen PA programme.
- identify a successful PA promotion strategy for older people in their country and assist its director to complete a third questionnaire, concerned primarily with the characteristics of the PA promotion strategy.

The resulting data have been submitted to the leader of work package 5 (University of Edinburgh) for incorporation into a cross-national report. The present document is a national report on the data collected by and from the Finland Experts.

▪ THE EXPERTS

o Methods

▪ Selection of Experts

As requested by the leader of Work Package 5, Experts were selected with the help of the matrix below (Table 1). We were instructed that we should use the matrix to guide the selection of Experts – ideally one from each of the 11 boxes but not more than two from any one box. The matrix should be used flexibly, bearing in mind that, for example, that several organisations could be located in more than one box. Ideally, all of the selected Experts should be knowledgeable both in the field of PA Programmes and in the field of PA Promotion Strategies. If this was not possible, it was particularly important that we could ensure that both fields were adequately represented in the group of Experts as a whole.

Table 1. Matrix used to guide the selection of national Experts for WP5.

<table>
<tr><th></th><th colspan="2">sport sector</th><th colspan="2">health sector and/or social services sector</th><th colspan="2">education sector (including training and professional development)</th></tr>
<tr><th></th><th>government</th><th>other</th><th>government</th><th>other</th><th>government</th><th>other</th></tr>
<tr><th rowspan="2">National or Regional</th><td rowspan="2">Ministry of Sport (or equivalent)

1</td><td rowspan="2">NGO specialising in the delivery of recreational or competitive physical activity for older people

2</td><td rowspan="2">Ministry of Health

or

Ministry (or department) with particular responsibility for older people

3</td><td rowspan="2">NGO specialising in the delivery of health-related exercise for older people
or
sickness funds or health insurance
or
NGO addressing age-related issues

4</td><td rowspan="2">Department specialising in the training of those who deliver recreational, competitive or health-related physical activity for older people

5</td><td>NGO specialising in the training of those who deliver recreational, competitive or health-related physical activity for older people
6</td></tr>
<tr><td>Professional association for those specialising in old age healthcare or social care
7</td></tr>
<tr><th></th><th>government</th><th>other</th><th>government</th><th>other</th><th colspan="2"></th></tr>
</table>

City or local neighbourhood	Municipal department for sport, recreation and leisure services 8	Sport or dance organisation with special interest in older people or Other organisation providing physical activity opportunities for older people 9	Municipal department responsible for healthcare services for older people or Municipal department responsible for social care services for older people 10	Local branch of a sickness fund or health insurance or Commercial provider of health-related exercise or Local branch of an NGO addressing age-related issues/providing social care for older people 11	

All of Finland Experts selected were known personally to Finland Collaborating Partner. Selected Experts were contacted by the Collaborating Partner by telephone. Where necessary, e-mail or an answering service was used to arrange a mutually convenient appointment for the telephone conversation. The purpose of the project was explained to the potential Expert by the Collaborating Partner and their support was requested. In Finland to ensure that we get the recommended eleven experts, thirteen potential Experts were selected. Most of Finland Experts could justifiably be identified with more than one field in the selection matrix.

In Finland was arranged a National Meeting on the 5th of June. Eight experts participated to the meeting. Experts and collaborating partners discussed about the EUNAAPA and the PA promotion strategies and PA programmes were selected.

- **Distribution and return of Experts' questionnaires**

On 6 June 2007, each of the 13 Finland Experts who had agreed to participate was sent an electronic and a bound, paper copy of the PA Expert Questionnaire, accompanied by an explanatory letter. Also included were a template of a further explanatory letter and electronic and paper copies of the other two questionnaires for distribution, in due course, to the directors of their chosen PA programme and PA promotion strategy. PA experts were encouraged to complete and return the PA Expert questionnaires as soon as possible before 10 August. Defaulters were reminded in mid-July (e-mail).

By 19 July 2007, nine of thirteen PA Experts questionnaires had been returned. By 13 August, all have returned their Experts' questionnaires.

- **Experts' educational background**

Experts determined themselves one or two Expert's area. One Expert was in the area of medicine, seven in the area of other health profession, five in the area of exercise/sport science, and five in the area of other. In addition, in comments three experts mentioned that they had expertise in physiotherapy (Table 2 and 3).

Table 2. Primary matrix fields of the national Experts, as perceived by the national partners when selecting the Experts.

	PA Expert										
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	***K***
Primary matrix field	*1*	*1*	*1*	*1*	*1*	***4***	*2*	*3*	*1*	***4***	**-**

Table 3. Educational backgrounds of national Experts for WP5.

	PA Expert													
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	***Total***
Medicine							x							*1*
Other Health Profession		x		x	x			x			x	x	x	*7*
Exercise/ Sport Science	x		x					x	x		x			*5*
Other		x		x		x				x			x	*5*
Missing data														-
Total	*1*	*2*	*1*	*2*	*1*	*1*	*1*	*2*	*1*	*1*	*2*	*1*	*2*	*18*

- **Experts' areas of practice**

Eight experts answered as PA programme experts and nine experts as PA strategy experts. Eight experts worked at national level, one at regional level and five at city, town or local neighbourhood level. All experts answered that their client group was community-dwelling older adults. In addition, two of them mentioned also the institution-dwelling older adults. The sector of experts was governmental (6 experts) and non-governmental (7 experts). The professional expertise was heath care of health promotion (11 experts), sports/recreation/physical activity (8 experts), health related exercise (14 experts), education (1 expert), research (6 experts), and social-cultural organisation (1 expert) (Table 4).

Table 4. The national Experts' areas of practice.

Expert	A	B	C	D	E	F	G	H	I	J	K	L	M
FIELD													
Physical activity programmes			x	x	x		x		x	x	x	x	
Physical activity (promotion) strategies	x	x		x		x		x		x	x	x	x
ORGANISATIONAL LEVEL													
National	x	x			x	x			x	x	x		x
Regional								x					
City, town or local neighbourhood			x	x			x	x				x	
CLIENT GROUP													
Community-dwelling older adults	x	x	x	x	x	x	x	x	x	x	x	x	x
Institution-dwelling older adults				x							x		
SECTOR													
Government			x	x			x		x			x	x
Non government organisation	x	x			x	x		x		x	x		
PROFESSIONAL EXPERTISE													
Health care				x			x	x					
Health promotion	x	x		x				x	x		x	x	x
Sport/ recreation/ physical activity facility management	x		x									x	
Sport/recreation/ physical activity instruction/ supervision/guidance	x	x	x									x	x
Health–related exercise facility management	x		x	x		x					x	x	
Health–related exercise instruction/ supervision/guidance	x		x	x		x			x		x	x	x
Education	x	x	x			x		x					x
Research	x				x	x		x			x		x
Social services, social care or social welfare													
Socio–cultural organisation										x			

- **NATIONAL QUALIFICATIONS IN THE SUPERVISION/GUIDANCE OF PHYSICAL ACTIVITY**

  - **Methods**

The questionnaire completed by the 13 national Experts also asked about the availability in their countries of national qualifications in the supervision or guidance of physical activity for adults in general and for older adults in particular. It asked whether such qualifications were optional or compulsory, and requested detailed information about assessment, validation and revalidation of the higher level, older-person-specific qualification. Finally, it asked about the existence in their country of a professional register of qualified instructors (*i.e.* a regulatory body that holds a current record of those qualified to guide or supervise physical activity and of their level of specialist qualification).

  - **Results**
    - **Basic level qualification**

Seven experts answered that in Finland a basic level qualification were required for supervise physical activity of older people. These two basic qualifications were: Government Resolution on the Health 2015 Public Health Programme (2001) and Government Resolution on Policies to Develop Health-Enhancing Physical Activity in Finland (2002). However, five experts answered that the required professional qualification in the basic level is, for example, in community groups physiotherapist, physiotherapy assistant, physical activity therapist, physical activity advisor. Nine Experts could not evaluate how many instructors have a qualification of basic level. Only two experts answered that almost all (75-100%) have the qualification of the basic level (Tables 5 and 7).

Table 5. PA Experts' responses concerning the availability in Finland of a basic level qualification in supervising or guiding physical activity or exercise by adults in general.

	Basic level qualification	
	Available	**Required**
Yes	7	3
No	5	-
Sometimes		3
Don't know	1	4
Not applicable		2
Missing Data	-	1
Total	*13*	*13*

Table 6. PA Experts' responses concerning the availability in Finland of a higher level qualification in supervising or guiding physical activity or exercise by older adults.

	Higher level qualification			
	Available	**Required**	**Important**	**External verification**
Yes		3	6	1
No		9	2	1
Don't know		1	1	4
Not applicable			3	5
Missing Data		-	1	2
Total		*13*	*13*	*13*

Table 7. PA Experts' estimates of the prevalence of the basic, entry level qualification and the higher level (older-person-specific) qualification among instructors guiding or supervising physical activity by older participants.

	Entry level	**Higher level**
0%	1	
25%		
50%		1
75%	1	1
100%	1	
Don't know	9	9
Not applicable	1	1
Missing data	-	1
Total	*13*	*13*

- **Higher level qualification**

Three experts answered that in Finland a higher level qualification are required for supervise physical activity of older people. Nine experts said that in Finland there is no higher level qualification and one expert did not know. Two experts mentioned Quality Recommendations for Guided-Enhancing Physical Activity for Older People as the higher level qualification. Most of the experts (6) considered that qualifications are important. Only one expert answered that higher level qualification are externally validated. Nine experts could not evaluate how many instructors have a qualification of higher level. Only two experts answered that 50-100% have the qualification of the higher level (Tables 6, 7 and 10).

- **Assessment, validation and revalidation**

Because in Finland is not required compulsory qualification for supervise physical activity of older people, the experts could not evaluate the content. Only one expert answered that "qualifications" involve verification of current cardiopulmonary resuscitation (CPR) certification, summative assessment of knowledge, and practical teaching competence assessed with older participants. Only one expert answered that

higher level "qualifications" involve evidence of current CPR certification or practical test of teaching competence and three experts that it involves evidence of continuing professional development (CPD, Tables 6, 8 and 9).

Table 8. PA Experts' responses concerning the components of the assessment for the higher level (older person specific) qualification.

	A	B	C	D	Not applicable	Don't know
Yes	1	1	-	1	-	5
No	-	-	-	-		
Total	*1*	*1*	-	*1*		

A = Verification of current cardiopulmonary resuscitation (CPR) certification
B = Summative assessment of knowledge
C = Practical teaching competence assessed with participants of any age
D = Practical teaching competence assessed with older participants

Table 9. PA Experts' responses concerning the requirements for retention of the higher level (older person specific) qualification.

	A	B	C	D	E	F	Not applicable
Yes	-	1	3	1	1	-	5
No	9	8	6	8	8	9	
Total	*9*	*9*	*9*	*9*	*9*	*9*	

A = Payment of fee
B = Evidence of current CPR certification
C = Evidence of continuing professional development (CPD)
D = A practical test of teaching competence
E = Other
F = Nothing

Table 10. PA Experts' responses concerning the existence in Finland of a professional register of PA instructors and their qualifications and concerning its membership requirements for registration to supervise PA by adults in general (a basic, entry level qualification*) and by older adults in particular (a higher level qualification**).

	Professional register		
		Membership requires	
	Exists	Entry level*	Higher level**
Yes	3	5	-
No	5		4
Don't know	5	3	5
Not applicable		3	3
Missing data	-	2	1
Total	*13*	*13*	*13*

Ten PA Experts answered that there is no register to supervise older adults in Finland or they did not know. Only three Experts answered that it exists.

- **'SUCCESSFUL' PA PROGRAMMES**

  - **Methods**

    - **Selection of programmes**

Each national Expert was asked to identify a successful PA programme for older people in their country and assist its director to complete a questionnaire concerned primarily with the characteristics of the chosen PA programme. The national Experts were instructed that their choice should be guided by the following definitions.

Physical activity (or PA) – Any bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure *e.g.* running, walking, swimming, lifting or carrying a heavy weight.

PA programme – A schedule of selected physical activities in which individuals can choose to engage. *e.g.* An overall programme of activities and PA opportunities for older people OR the components of such a programme, such as a programme of old time dancing classes, supervised resistance training, supervised, seated exercise classes, hill walking groups or aqua classes etc.

A successful PA programme – A PA programme is 'successful' if a PA expert in that country considers it to be successful. This judgment may be based on some or all of a wide range of possible effects of the programme. These might include, for example, demonstrable improvements in physical fitness or quality of life, growing membership, client loyalty, etc.

To be eligible for consideration a successful PA programme must have been running for at least 6 months and if it has ceased, this must have occurred no more than 2 years previously.

    - **Distribution and return of programme questionnaires**

On the 5th of June was arranged the National Meeting in Finland. In meeting was selected and decided PA programmes for EUNAAPA from Finland. By 13 August, all PA programme questionnaires had been returned.

  - **Results**

    - **Selection of programmes**

Thirteen selected PA programmes from National Meeting are presented in Appendix Two.

    - **Return of programme questionnaires**

Some of the experts expressed that it was difficult to put the information of the PA programmes to the questionnaire. However all thirteen experts returned the questionnaires in time.

- **Programme directors' educational backgrounds**

Two PA Directors had the education of medicine, and five had the education of other heath professionals, three had the education of exercise or sport science. Eight PA directors had other education such as architecture, political and social sciences (Table 11).

Table 11. Educational backgrounds of PA Programme Directors selected by Finland national Experts.

	PA Programme Directors													
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	***Total***
Medicine		x			x									2
Other Health Profession	x			x		x								3
Exercise/ Sport Science			x						x	x				3
Other	x	x	x				x	x			x	x	x	8
Missing data														-
Total	2	2	2	1	1	1	1	1	1	1	1	1	1	16

- **Catchment areas of programmes**

The areas of the programmes were mainly national (5 programmes) or the limited to a city/town (5 programmes). One PA director gave two answers so the total number is fourteen in this question (Table 12).

Table 12. PA Programme Directors' responses concerning the geographical classification of their programme.

	Number
National	5
Regional	1
Limited to a city/town	5
Limited to a local neighbourhood	3
Missing data	-
Total	*14*

- **Ages of programmes**

Seven PA Programme Directors responded that the length of time their programme was one to five years. The length of four programmes was more than 10 years and two was less than one year (Table 13).

Table 13. PA Programme Directors' responses concerning the length of time their programme has existed.

	Number
Less than 1 year	2
1 to 5 years	7
6 to 10 years	-
More than 10 years	4
Missing data	-
Total	*13*

- **Components of overall programmes**

PA Programme Directors responded that following components are included in the programmes: community based senior fitness or chair-based programmes (12), home based exercise programmes (8), and falls prevention programmes (8). The programmes were mainly land based, indoor group activity. The programmes used versatile facilities mainly sport / physical recreation facility (8), community centre (6), and day resources centre (8). (Tables 14, 15 and 16*).*

Table 14. PA Programme Directors' responses concerning which component programmes are included in their overall programmes.

	Number
Masters (elite competitor) programme	0
Community based senior fitness programmes (groups)	9
Community based senior chair-based programmes	3
Home based exercise programmes (individual)	8
Exercise referral / General Practitioner referral programmes	4
Falls Prevention Programmes	8
Medical condition-specific programmes	3
Cardiac rehabilitation	2
Pulmonary rehabilitation	2
Arthritis programmes	1
Other medical condition-specific programmes	1
Other programmes	6

Table 15. PA Programme Directors' responses concerning the description of their overall programmes.

	Number
Group activity	13
Individual activity	7
Indoors	12
Outdoors	6
Water-based	4
Land-based	13

Table 16. Programme Directors' responses concerning the types of facilities used by their overall programmes.

	Number
Sport / physical recreation facility	8
Community centre	6
Day resources centre	8
Participant's private dwelling	4
Sheltered housing, assisted living facility, care home or nursing home	4
Other	4

- **Characteristics of programmes' clients**

The PA programmes intended mainly community- dwelling older adults (8 programmes). The participants' walk outdoors with a walking aid but no assistance or supervision by another person in eleven cases. In nine programmes the participants walked outdoors with no walking aids. The 75% of participants were women in twelve PA programmes. (Tables 17-19).

Table 17. PA Programme Directors' responses concerning the 'category' of participant (by type of dwelling) for whom their overall programme is intended.

	Number
Community- dwelling older adults	8
Institution – dwelling older adults	0
Both, together (in the same group)	1
Both separately (in different groups)	4
Total	*13*

Table 18. PA Programme Directors' responses concerning the 'category' of participant (by level of functional mobility) for whom their overall programme is intended.

	Number
Frequently walks vigorously or runs	3
Walking outdoors with no walking aids and no assistance or supervision by another person	9
Walks outdoors with a walking aid but no assistance or supervision by another person	11
Walks outdoors only with assistance or supervision by another person	8
Never walks outdoors	4

Table 19. PA Programme Directors' estimates of the proportion of participants in their overall programme that are women.

	Number
0%	-
25%	-
50%	-
75%	12
100%	1
Don't know	-
Total	*13*

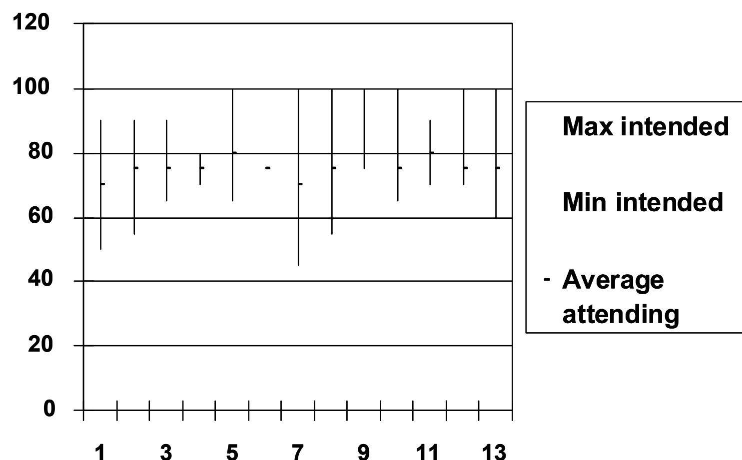

Figure 1. PA Programme Directors' responses concerning the age groups for whom their overall programme is intended and the average age of participant actually attending a typical session of the programme.

- **Characteristics of programmes' classes**

The group size was 6-10 in 10 PA programmes, 11-15 in eight programmes, and 16-20 in four programmes. Ten PA directors estimated the ratio of instructors to participants in a typical session of the programme to be 1:2-10 and six directors estimated the ratio to be 1:11-25. Couple of PA directors gave several answers which raise the number of programmes to the 20. The maximum possible frequency which individuals participated in the programmes was 5-7 times in four cases and 2 times also in four cases. Usually the frequency was one or two times. Mainly, 75% of the participants attended the programme for the last one year (Tables 20-23).

Table 20. PA Programme Directors' estimates of 'group' sizes used in their overall programmes.

	Number
1	5
2 – 5	3
6 – 10	10
11 – 15	8
16 – 20	5
21 – 25	4
26 – 50	3
51+	2
Don't know	0

Table 21. PA Programme Directors' estimates of the ratio of instructors to participants in a typical session of their programme.

	Number
1 : 1	1
1 : 2 - 10	10
1 : 11 - 25	6
1 : 26 - 50	1
1 : 51+	2
Don't know	0
Total	*20*

Table 22. PA Programme Directors' estimates of the maximum possible frequency and the usual frequency with which individuals participate in their overall programme.

	Maximum	Usual
<1	0	1
1	1	4
2	4	4
3 – 4	2	3
5 – 7	4	1
8+	1	0
Don't know	0	0
Total	*12*	*13*

Table 23. PA Programme Directors' estimates of the proportion of current participants that have attended their overall programme for at least a year.

	Number
0%	1
25%	1
50%	2
75%	4
100%	1
Don't know	2
Total	*11*

- **Objectives, outcomes, monitoring and feedback**

Two most important overall aims of the PA programme were improved physical function and opportunity to socialise. Also health promotion was important aim. The satisfaction of the participants was mainly estimated 1-2 times per year. Nine PA directors responded that the participants were formally surveyed for the aims of their involvement in the programme. Mainly the programmes were adjusted according to the participants' aims. Ten PA directors answered that objective outcome measures were recorded for participants at regular intervals. Six PA directors responded that balance and other objectives were recorded at regular intervals. Three directors mentioned strength or explosive power and two answered that mood/depression and social support were recorded at regular intervals (Tables 24-27).

Table 24. PA Programme Directors' responses concerning the two most important overall aims of their programme, from the point of view of its sponsoring organisation.

	Number
Health promotion	4
Improved competitive performance	-
Disease prevention	1
Improved physical function	9
Improved mood	2
Opportunities to socialise	6
Improved self esteem / confidence	1
Other	-
Don't know	-
Total	*23*

Table 25. PA Programme Directors' estimates of the frequency (times per year) with which the satisfaction of participants in their programme is formally measured.

	Number
Not at all	2
1 – 2	9
3 – 6	-
More than 6	-
Don't know	1
Total	*12*

Table 26. PA Programme Directors' responses concerning whether (A) participants are formally surveyed for the aims of their involvement in the programme, (B) programmes are adjusted according to participants' aims, and (C) objective outcome measures are recorded for participants at regular intervals.

	survey of aims	prog. adjusted for aims	outcomes measured
Yes	9	7	10
No	4	2	3
Don't know	-	-	-
Total	*13*	*9*	*13*

Table 27 PA Programme Directors' responses concerning which objective measures are recorded at regular intervals.

	Number
Strength or explosive power	3
Maximal oxygen uptake (directly measured)	-
Sub maximal test of aerobic fitness	-
Balance	6
Joint range of motion	1
Body composition	1
Bone density	1
Mood / depression	2
Social support	2
Other	6
Not applicable	1

- **Pre-participation assessment**

Seven PA directors responded that eligibility for entry to the programme requires the potential participant the health check. The health check was assessment by some other healthcare professional in three cases and two directors answered that the health check was completion of a health screening tool. Eight PA directors responded that for entry to the programme does not require the completion of a health screening tool by the potential participant. Mainly the health screening tools were not internationally recognised neither adapted for their programme.

Four directors answered that health screening tool included questions regarding dizziness. In three cases questions about eyesight and in two cases questions about hearing were included to the health screening tool. When asked what must be done before the applicant is permitted to enter the programme if the health screening tool identified the presence of a potential problem, five directors answered that this was not applicant and three answered other (Tables 28-33).

Table 28. PA Programme Directors' responses concerning whether eligibility for entry to their programme requires the potential participant to have a health check

	Number
Yes	7
No	6
Don't know	-
Total	13

Table 29. PA Programme Directors' responses concerning the form of health check required for a potential participant to be eligible for entry to their programme.

	Number
Completion of a health screening tool	2
Assessment by a doctor	1
Assessment by a doctor who is a sports medicine specialist or by the programme doctor	1
Assessment by some other healthcare professional	3
Assessment by an exercise instructor	1
Other	1
Total	*9*

Table 30. PA Programme Directors' responses concerning whether eligibility for entry to their programme requires completion of a health screening tool by the potential participant.

	Number
Yes	5
No	8
Don't know	-
Total	*13*

Table 31. PA Programme Directors' responses concerning whether their health screening tool is internationally recognised and whether it had been adapted for their programme.

	Internationally recognised	Adapted for the prog.
Yes	1	4
No	6	2
Not applicable	5	5
Total	*12*	*11*

Table 32. PA Programme Directors' responses concerning the questions included in the health screening tool used by their programme.

	Dizziness	Eyesight	Hearing	Don't know	Not applicable
Yes	4	3	2	-	7
No	2	3	4		
Total	*6*	*6*	*6*	-	*7*

Table 33. PA Programme Directors' responses concerning what is done so that an applicant can be permitted to enter a programme after a potential problem has been identified by the health screening tool.

	Number
The applicant need only sign a liability waiver	1
Applicant must obtain 'approval' from any healthcare professional	1
Applicant must obtain 'approval' from their doctor	1
Applicant must obtain 'approval' from a doctor who is a sports medicine specialist or from the programme doctor	1
It is not possible for the applicant to be permitted to enter the programme	-
Other	3
Don't know	-
Not applicable	5
Total	*12*

- **Programme content**

All programmes aimed to improve coordination and balance most of the programmes strength (11 programmes) and joint range of motion (9 programmes), some of them bone density (5 programmes) and body composition (4 programmes).

Other components or aspects that PA programmes aimed to improve were explosive power, endurance, activity of daily living, improvement if incontinence, coordination, flexibility, smoothness, confidence of movement, and motor skills or motor learning (Tables 34-39).

Table 34. PA Programme Directors' responses concerning the component(s) or aspect(s) of physical fitness which their PA Programme aims to improve.

	As in response to	Number
Strength	ProgQ40	11
Explosive power	ProgQ40	1
Endurance	ProgQ38	2
Coordination – Balance	ProgQ38	13
Joint range of motion	ProgQ40	9
Body composition	ProgQ40	4
Bone density	ProgQ40	5
Other	ProgQ40	6

Table 35. PA Programme Directors' responses concerning the modalities of physical activity offered in their programme.

	Number
Aquatics	
Swimming	2
Aqua exercises	6
Cycling	
On Road/ Paths	-
Off Road/ Track/ Hills	-
Group Sports/ Ball Games	
Badminton	1
Billiard Sports	1
Boules	2
Bowling	1
Golf	1
Minigolf	1
Short tennis	-
Tennis	-
Recreational Movement	
Dance	7
Movement to exercise	7
Exercise to music	7
Derived from Pilates	1
Derived from Tai Chi	2
Derived from Qigong	-
Derived from Yoga	-
Running	
Indoor running (not on treadmill)	-
Outdoor running/ Track	1
Orienteering	-
Skiing	
Cross Country Skiing	2
Downhill (Alpine Skiing)	-
Ski Touring	1
Walking	
Indoor Walking (not on treadmill)	7
Outdoor Walking on path/ track	7
Outdoor Walking groups	6
Rambling or Hill Walking	-
Trekking	-
Nordic Walking	6
Machine based equipment	
Circuits	5
Treadmill	2
Cycle	7
Rowing	4
Stepper	6

Cross – trainer	3
Cable machines/ fixed resistance	5
Dumbells / Free weights	6
Physioballs (Swiss balls/ exercise balls) for balance	6
Resistance balls/ bands/ tubes	4
Balance disks/ wobbleboards	6
Other	4
Competitive sport	-
Adapted exercise	
Back pain prevention	2
Osteoporosis prevention	5
Falls prevention	7
Pelvis Floor exercise	2
Chair-based exercise	6
Pulmonary rehab	5
Other	2

The modalities of physical activity offered in the programmes were very versatile. Most often mentioned were aqua exercises or swimming (8), recreational movements with music like dancing (21), walking indoors (7) or outdoors (7) in groups or with sticks. Machine based equipment like cycler (7) or stepper (6) or physioballs (6) or disks (6) for balance training were also often mentioned. Other (not in table) machine based equipment were climbing stairs up and down, gym equipment for lower legs, gymnastics sticks, and stepboard. Fall prevention (7) and chair-based exercise (6) were general adapted exercises. Relaxation was mentioned as other adapted exercise.

Table 36. PA Programme Directors' responses concerning the extent to which 'progression' of participants is part of their overall programme.

	Number
Never	1
For the first few weeks only	1
For the first few months only	5
Always	5
Don't know	1
Total	*13*

In most of the Programmes (10 programmes) participants progression is followed at least during the first few months and 5 responded that it is followed always. Progression was defined as a systematic increase in the intensity or resistance, the frequency and/or duration of exercise.

Table 37. PA Programme Directors' estimates of the length of a usual warm up at the beginning of a session in this programme and of the length of a usual cool down (or 'wind down' or 'warm down') at the end of a session.

	Warm up	Cool down
0 minutes	2	2
1 – 5 minutes	-	
6 – 10 minutes	4	2
11 – 15 minutes	3	4
16 – 20 minutes	1	
Don't know	1	3
Total	*11*	*11*

Table 38. PA Programme Directors' estimates of the length of a usual workout component of a session in this programme.

	Number
0 minutes	-
10 minutes	1
20 minutes	-
30 minutes	4
40 minutes	2
50 minutes	1
60 minutes	2
More than 60 minutes	-
Don't know	1
Total	*11*

PA Programme Directors estimated that usual warm up (7 programmes) and usual cool down (6) lasted 6-15 minutes. A usual workout component lasted 30-60 minutes (9). The needs of older people with chronic conditions are catered included these people in the mainstream groups with adapted exercise (5) or in frailty–related, disability–related groups (3), or disease-related groups (1) (Tables 40-44).

Table 39. PA Programme Directors' responses concerning how, within this programme, they cater for the exercise needs of older people with chronic medical conditions**.**

	Number
This is not possible	1
Adapted exercise, with participants in disease–related groups	1
Adapted exercise, with participants in frailty–related or disability–related groups	3
Adapted exercise, with participants included in the mainstream older person's group(s)	5
Don't know	1
Total	*11*

- **Instructors' qualifications and training**

Most PA Programme Directors responded that they required basic level qualification (7) or higher level qualification (4). Programme Directors responded also that they have additional training to the specific programs, they gave education for the non-professional instructors, and that physiotherapists were leading the Programs but home exercises were supervised also by homecare workers Tables 40- 44).

Table 40. PA Programme Directors' responses concerning minimum level of qualification required for instructors delivering this programme to older participants.

	Number
A basic (entry level) qualification	7
A higher level (old age specific) qualification	4
Other	4
Don't know	-

Table 41. PA Programme Directors' estimates of the proportion of instructors guiding/ supervising older participants, in this programme, that have the entry level qualification or the higher level qualification.

	Entry level qualification	Higher level qualification
0%	1	1
25%	1	2
50%	1	2
75%	1	-
100%	5	3
Don't know	1	2
Total	*10*	*10*

Table 42. PA Programme Directors' responses concerning whether instructors for this programme have to be a member of a professional register.

	Number
Yes	7
No	6
Don't know	-
Total	

Table 43. PA Programme Directors' estimates of the number of hours in–service training provided each year for the instructors in this programme.

	Number
0	-
1	1
3	1
5	-
10	-
15	-
20	2
30	1
More than 30	3
Don't know	1
Not applicable	4
Total	13

Programme directors gave three examples of topics covered in-service training for the programme instructors. As the first example they gave fall prevention, measuring of health related fitness, modalities of physical activity, motor learning, how to support outdoor mobility for those who had decreased functional capacity, special problems of supervision, strength training for older people, the programmes own content. As the second example they gave applications of various modes of exercise, Asahi health, does the sauna belong to aqua exercise (when, how, etc) exercise physiology, extend instructors understanding of programmes effect to older peoples functional capacities, motor learning, senior gym exercise, and social support. As the third example they gave balance exercise and training, exercise effects, gerontology lessons, how to upkeep motivation, and senior dance.

Table 44. PA Programme Directors' responses concerning ways that unpaid volunteers contribute to this programme.

	Number
Not at all	3
Instruction	3
Instructor's assistant	6
'Buddying' a participant	5
Peer mentoring participants	2
Administration	1
Transport	3
Refreshments	2
Other	1
Don't know	-
Not applicable	2

Mostly unpaid volunteers were instructor's assistants (6), they were 'buddying' a participant (5), or they were helping in transport, administration and refreshing. Other ways to contribute were that volunteers were instructions of Senior Dancing that was an additional program or they were instructors for the non-professional groups.

- **Client safety**

Eight PA Programme Directors' responded that the Programme has specific protocols to be followed in emergency situations and six that they had protocols in respect of the use, storage and maintenance of equipment. Five Programme directions responded that staff was trained annually for emergency situations and for equipment protocols (Tables 45-47).

Table 45. PA Programme Directors' responses concerning whether this programme has specific protocols to be followed in emergency situations or in respect of the use, storage and maintenance of equipment.

	Emergency protocols	**Equipment protocols**
Yes	8	6
No	4	2
Don't know	-	1
Total	*12*	*9*

Table 46. PA Programme Directors' responses concerning the frequency of staff training in the protocols to be followed in emergency situations or in respect of the use, storage and maintenance of equipment.

	Emergency protocols	**Equipment protocols**
3 monthly	-	-
6 monthly	-	-
Annually	5	4
Never	2	-
Don't know	1	2
Not applicable	1	1
Total	*9*	*7*

- **Finance, transport and refreshments**

Programme directors evaluated that the total cost per participant per session was more than 10 euros (4). However, most of the respondents did not know the costs (Table 47). They mainly evaluated that there is no cost for participants (6), one of the programme directors evaluated that the costs are 50 % (Table 48).

Table 47. PA Programme Directors' estimates of the total cost (per participant per session) of providing their programme (excluding transport and refreshments but including the cost of the room, lighting, heating, maintenance, instructor's fee, administration).

	Number
Up to € 2	1
More than € 2, up to € 5	-
More than € 5, up to € 10	1
More than € 10	4
Don't know	5
Total	*12*

Table 48. PA Programme Directors' estimates of the proportion of cost paid by each participant in their programme

	Number
0%	6
5%	2
10%	1
25%	-
50%	1
75%	-
100%	-
Don't know	2
Total	*12*

Table 49. PA Programme Directors' responses concerning whether transport and refreshments are provided for participants in their programme.

	Transport	**Refreshments**
Yes, to everyone	3	4
Yes, selectively	6*	-**
No	4	7
Don't know	-	1
Total	*13*	*12*

*some participants, some sessions
**some sessions

Table 50. PA Programme Directors' estimates of the proportion of the cost of transport and of refreshments that is paid by each participant in their programme.

	Transport	**Refreshments**
0%	7	3
5%		
10%		
25%		
50%		
75%		
100%		
Don't know	3	2
Total	*10*	*5*

- **Publicity, marketing and promotion**

PA Programme Directors' responded that they publicise, market or promote their programmes in many ways, most often by advertising in local newspapers. They also use features in local newspapers, and in elder-oriented magazines. Over half of programmes use leafleting in community centres for older people and word of mouth. Other methods not mentioned in table 51 were calendar of adapted physical activity

that is send to doctors, physiotherapists, nurses and the workers in the social sector or book how to plan places, services were older people could be active (Lehmuskallio V Akerblom S 2007). Other methods were events in local big supermarket, regular promotion days, advertising through regional home care services, with video presentations of Winter Walk Training (report of project in a form of best practices).

Table 51. PA Programme Directors' responses concerning the methods which have been used to publicise, market or promote their programme.

	Number	%
Advertising in local newspapers	8	62
Advertising in national/ regional newspapers	5	39
Advertising in elder-oriented magazines	4	31
Advertising through elder-oriented organisations	6	46
Features in local newspapers	7	54
Features in national/ regional newspapers	5	39
Features in elder-oriented magazines	6	46
Advertising on local radio	4	31
Advertising on national/ regional radio	3	23
Advertising on local TV	4	31
Advertising on national/ regional TV	3	23
Features on local radio	3	23
Features on national/ regional TV	3	23
Features on local TV	4	31
Features on national/ regional TV	4	31
Neighbourhood leafleting	4	31
Sports hall leafleting	2	15
Health premises leafleting	4	31
Leafleting in community centres for older people	7	54
Talks to local groups	6	46
Word of mouth	9	69
Websites	6	46
Open days	4	31
Bring a friend	5	39
Discounts	2	15
Multiple session bookings	3	23
Other	8	62

Table 52. PA Programme Directors' responses concerning whether their programme had found it useful (1) to capitalise on national or regional campaigns related to aspects of ageing and health in order to improve recruitment of new participants and/or motivation of existing participants, and/or (2) to build partnerships with local healthcare professionals or organisations.

	(1)	**(2)**
Yes	4	11
No	3	1
Have not tried	5	1
Don't know	1	-
Total	*13*	*13*

Four PA Programme Directors' responded that they had found it useful to capitalise on national or regional campaigns related to aspects of ageing and health (Table 52). The examples they gave were Senior week, European Year of Older People, Falls prevention Campaign's lectures, and Development Campaign of the environment for the elderly that brought up on October 11th National outdoor day of the elderly (11.10.2007). Almost all responded that building partnerships with local healthcare professionals or organisations was useful. The first examples were:

1) Physical activity in home nursing system
2) Cooperative network with the university, organizations and city of Jyväskylä - it has been created a successful chain of services from rehabilitation to physical education for example Senior gym concept.
3) To find enough those older adults who are in danger to lose social contacts and quality of life due to lack outdoor walking physiotherapist guide their clients to the Liiku ja Liidä -physical activity groups in walking in many municipalities
4) Colleague meetings
5) Co-operation with local and regional health care and social services – to find possibilities to meet and motivate inactive older people

Second examples were

1) Gym equipment firm
2) Active rehabilitation/physical activities is used in health care regularly as a method
3) To promote health, functional capacity and social support of older adults with decreased functional capacity health centres give facilities and equipments for the Liiku ja Liidä- physical activity groups in some municipalities
4) Property Oy Helsingin palvelutalot

Third examples were

1) Media
2) Services for different groups with different physical capability
3) Adapted physical instructors teach the companion instructors in some municipalities
4) Service Center of Paltianpuisto, in Paimio municipality
5) Administration of municipalities

- **‘SUCCESSFUL’ PA PROMOTION STRATEGIES**
  - **Methods**
    - **Selection of programmes**

Each Expert was asked to identify a successful PA promotion strategy for older people in Finland and assist its director to complete a questionnaire concerned primarily with the characteristics of the chosen PA promotion strategy. The Experts were instructed that their choice should be guided by the following definitions.

Physical activity (or PA) – Any bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure *e.g.* running, walking, swimming, lifting or carrying a heavy weight.

PA promotion strategy – An intervention, device or plan which it is intended will increase the PA of a community *e.g.* Improved street lighting or an educational TV advertising campaign.

A successful PA promotion strategy – A PA promotion strategy is ‘successful’ if a PA expert in that country considers it to be successful. This judgment may be based on some or all of a wide range of possible effects of the strategy. These might include, for example, demonstrable improvements in swimming pool use, in self-reported physical activity, increasing bicycle sales etc.

To be eligible for consideration a successful PA promotion strategy must have been running for at least 6 months and if it had ceased, this must have occurred no more than 2 years previously.

- **Distribution and return of promotion strategy questionnaires**

On the 5th of June Finland National Meeting was arranged. Partners were discussed about the EUNAAPA and the PA promotion strategies were selected. On 6/6 June 2007, each of the 13 Finland Experts who had agreed to participate was sent an electronic and a bound, paper copy of the PA Promotion Strategy Questionnaire, accompanied by an explanatory letter. The PA Promotion Questionnaire was introduced in the National Meeting.

- **Results**
  - **Selection of promotion strategies**

In Finland 18 PA Promotion Strategies were selected, which were described in appendix three.

- **Return of promotion strategy questionnaires**

By 19 July 2007, nine of the thirteen PA Promotion Strategy questionnaires had been returned. By 13 August, all PA Promotion Strategy questionnaires have been returned.

- **Promotion strategy directors’ educational backgrounds**

Two Directors of the PA Promotion Strategies had the education of medicine, and 13 had the education of other heath professionals, six had the education of exercise or sport science. Nine directors had other education such as social sciences or physiotherapy (Table 53).

Table 53. Educational backgrounds of the Directors of the PA Promotion strategies selected by Finland national Experts.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	*Total*
Medicine						X											X		*2*
Other Health Profession	X		X	X	X	X	X	X		X		X		X	X	X		X	*13*
Exercise/ Sport Science						X		X	X	X		X						X	*6*
Other	X	X	X			X	X				X	X	X				X		*9*
Missing data																			-
Total	*2*	*1*	*2*	*1*	*1*	*4*	*2*	*2*	*1*	*2*	*1*	*3*	*1*	*1*	*1*	*1*	*2*	*2*	*30*

- **Prevailing national context**

All PA Promotion Strategy Directors answered that in Finland is a law or other regulations for promotion of physical activity. Nine directors responded that in Finland there is a law or other regulation for promotion of physical activity especially for older people. All directors also answered that in Finland there is national level recommendations for promotion of physical activity especially for older people (Table 54).

Table 54. PA Promotion Strategy Directors' responses concerning whether (1) there is a law or other regulations, in Finland, for promotion of physical activity, (2) there is a law or other regulations, in Finland, for the promotion of physical activity especially for older people, and (3) there are any national level recommendations, in Finland, for promotion of physical activity especially for older people

	(1)	**(2)**	**(3)**
Yes	18	9	18
No	-	9	-
Don't know	-	-	-
Total	*18*	*18*	*18*

- **Description of promotion strategies**

PA Promotion Strategy Directors responded that Non Governmental sector mainly developed and delivers the promotion strategies in Finland (Table 55). Promotion Strategies aimed to deliver mainly at the national level (14 responses). Eighteen directors answered that their promotion strategy encouraged physical activity in groups exercise, seventeen answered independent exercise and fifteen outdoors. Fifteen PA Promotion Strategy directors answered that welfare organisations are taking part in their promotion strategies. In twelve responses primary health care was mentioned to taking part the strategies (Tablees 56-59).

The question about theoretical basis was quite difficult. Mainly directors answered that the basis of the promotion strategy was other theory or model than mentioned in the questionnaire.

Table 55. PA Promotion Strategy Directors' responses concerning which sectors to which belong the organisations that developed, and delivered, their promotion strategy.

	Developed	Delivered
Government	7	5
National	3	3
Regional	2	1
Local	5	4
Non Governmental	10	12
Commercial	1	1
Welfare/community organisation	3	4
Research organisation	5	7
Other	2	4

Table 56. PA Programme Directors' responses concerning the levels at which their promotion strategies aimed to deliver.

	Number
National	14
Regional	5
Limited to a city/ town	5
Limited to a local neighbourhood	4

Table 57. PA Promotion Strategy Directors' responses concerning the settings in which they considered their promotion strategy encouraged physical activity.

	Number
Centre based	13
Home based	12
Outdoors	15
Other	2
Group exercise	18
Independent exercise	17
Other	2

Table 58. PA Promotion Strategy Directors' responses concerning the settings/ organisations which they consider are taking part in their promotion strategy.

	Number
Social institutions	7
Primary health care	12
Community centres	6
Welfare organisations	15
Work place	3
Other	9
Don't know	-

Table 59. PA Promotion Strategy Directors' responses concerning the theoretical basis(es) which they consider was/were used to develop and/or deliver their promotion strategy.

	Number
None	3
Health Belief Model	1
Protection Motivation Theory	-
Theory of Reasoned Action	-
Theory of Planned Behaviour	1
ASE* – Model	-
Transtheoretical Model	3
Other	7
Don't know	2

* Attitude, Social influence and self-Efficacy

Eleven directors estimated that their promotion strategy has run 6 to 10 years (11 answers). Mainly the promotion strategy ran continually (11 answers). The reach the intended population physiotherapists (16), nurses (13), other allied health care professionals (13), exercise/ dance instructors (11), volunteers (11) and medical practitioners (11) were mainly used (Table 60-62).

Table 60. PA Promotion Strategy Directors' estimates of the time for which their promotion strategy has run.

	Number
Less than 1 year	1
1 to 5 years	2
6 to 10 years	11
More than 10 years	4
Don't know	-
Total	*18*

Table 61. PA Promotion Strategy Directors' responses concerning the time pattern of the running of their strategy.

	Number
Once only	1
Periodically	2
Continually	11
Other	4
Don't know	-
Total	*18*

Table 62. PA Promotion Strategy Directors' responses concerning the intermediaries used to reach the intended population.

	Number
Medical Practitioners	11
Nurses	13
Physiotherapists	16
Occupational therapists	7
Physiotherapy/ OT Assistants	6
Other Allied Health Care Professionals	13
Exercise/ dance instructors	11
Sports coaches	3
Community/Social Workers	8
Volunteers	11
Other	3
None	-
Don't know	2

- **Characteristics of strategies' target populations**

Our promotion strategy directors estimated that strategies intended mainly over 65 years of old people. Two promotion strategies had no age limits and age limit of four strategies was 45. Most of the strategies had no maximum age limit. According to the PA Promotion Strategy Directors age was not the only criteria. There were also criteria like decreased functional capacity (3 comments); senior-home residents, disseminated for all older people (Figure 2).

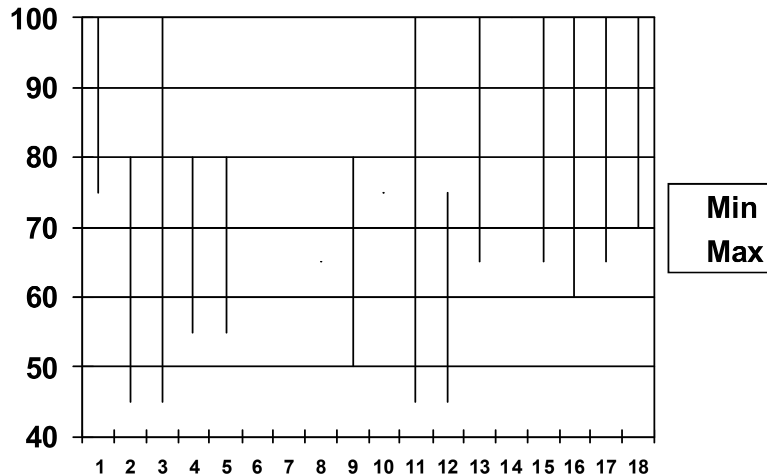

Figure 2 PA Promotion Strategy Directors' estimates of the upper and lower age limits of those for whom their strategy is intended.

PA Promotion Strategy Directors responded that strategies targeted community-dwelling older adults (10 answers). Often PA Promotion Strategy Directors responded that strategies targeted all older adults, general population, institution-dwelling older adults and older adults with chronic conditions. In addition, strategies targeted person with decreased functional capacity (2 comments), ethnic minority older adults, older adults with high fall risk, and with poor eyesight. Mainly Promotion Strategies did not cater specific cultural differences. Different language catered in three strategies (Table 63 and 64).

Table 63. PA Promotion Strategy Directors' responses concerning the 'category' of participants targeted by their promotion strategy.

	Number
General population (including older adults)	7
All older adults	7
Community – dwelling older adults	10
Institution – dwelling older adults	6
Older adults with chronic conditions	7
Ethnic minority older adults	1
Other	5

Table 64. PA Promotion Strategy Directors' responses when asked which specific cultural differences were catered for in their promotion strategy.

	Number
None	13
Different language	3
Different cultural perceptions	-
Different education levels	1
Different income levels	1
Other	1
Don't know	-

Levels of functional mobility that were included promotion strategies were "walks outdoor with no walking aids (17) and with walking aids (13) with no assistance or supervision by another person" (Table 65).

Table 65. PA Promotion Strategy Directors' responses concerning the 'category' of individual (by level of functional mobility) their promotion strategy aimed to include.

	Number
Frequently walks vigorously or runs	8
Walks outdoors with no walking aids and no assistance or supervision by another person	17
Walks outdoors with a walking aid but no assistance or supervision by another person	13
Walks outdoors only with assistance or supervision by another person	8
Never walks outdoors	2

- **Design of promotion strategies**

Strategies used to improve motivation (17), knowledge (15); safety (14), skills (12), access (11) encourage the behaviour change and tried to decrease fear and misconceptions about ageing (Table 66).

Nine PA Promotion Strategy directors answered that the readiness for behaviour change of target population was screened. All strategies surmounted barriers to physical activity. Generally answered barriers for PA were fear of injury, lack of energy / motivation, misconceptions about ageing and environmental barriers (Tables 67-69).

Table 66. Promotion Strategy Directors' responses concerning approaches used in their strategy to encourage behaviour change in relation to physical activity.

	Number
Improved knowledge	15
Improved access	11
improved safety	14
improved time management skills	3
Improved motivation	17
Fear reduction	11
Improved skill	12
Reduction in misconceptions about ageing	13
Don't know	-

Table 67. PA Promotion Strategy Directors' responses concerning whether the target population was screened for their readiness for behaviour change prior to implementing the promotion strategy.

	Number
Yes	9
No	8
Don't know	1
Total	*18*

Table 68. PA Promotion Strategy Directors' responses concerning whether their promotion strategy was designed to surmount barriers to physical activity.

	Number
Yes	18
No	-
Don't know	-
Total	*18*

Table 69. PA Promotion Strategy Directors' responses concerning which particular barriers to physical activity was their promotion strategy designed to surmount.

	Number
Perceived poor health	10
Symptoms associated with chronic conditions	6
Fear of injury	13
Acute exacerbation of chronic conditions	2
Lack of skill	10
Lack of time	2
Lack of energy / motivation	12
Environmental barriers	11
Misconceptions about ageing	12
Other	2
Don't know	-
Not applicable	-
Total	*80*

PA Promotion Strategies used information approaches like group-based health education focused on information provision (11) and mass media campaigns (9). Other approaches not mentioned in the table 32 were education for health and fitness professionals, articles and journals for health care and exercise specialists, opinion leader, peer training system for physician, cards concerning of bone specific exercise were made to separate to all groups and personal info-letters, telephone calls and discussion (Table 70).

PA Promotion Strategies used behavioural and social approaches like health professionals social support (14), individually-adapted behaviour change (12) and non–family social support (11). PA Promotion Strategies used environmental and policy approaches like enhanced access to physical activity (15) (Table 70)..

Table 70. PA Promotion Strategy Directors' responses concerning which approaches were used by their physical activity promotion strategy.

	Number
INFORMATION APPROACHES	
Community wide campaigns	7
Group-based health education focused on information provision	11
Mass media campaigns	9
Point of decision prompts	3
Other	6
BEHAVIOURAL AND SOCIAL APPROACHES	
Individually-adapted behaviour change	12
Education with TV/video/DVD	3
Family-based social support	3
Health professionals social support	14
Non–family social support	11
Other	2
ENVIRONMENTAL AND POLICY APPROACHES	
Enhanced access to physical activity	15
Outreach activities	9
Transportation policy	7
Infrastructure changes to promote non–motorised transit	5
Urban planning approaches	4
Other	1
Don't know	-

The nature of the message used in the promotion strategies was specific advice (14), general message (10) or advice (8). Other message types were individual advice and a written action plan, personal advice and planning how to include physical activity in normal daily life which environments are supportive and safe and what is beneficial for each individual (Table 71).

Promotion Directions responded that messages were conveyed by intermediates like health care professionals (14) and media (11). Other were post, internet and events and models, educating health and fitness professionals, education material (dvd and tester's guide, journals), personal info-letters, phone calls and personal discussion and competition during the opening week for example who is the most active person to use the route (Table 72).

Table 71. PA Promotion Strategy Directors' responses concerning the nature of the message(s) used in their promotion strategy.

	Number
General message	10
General advice	8
General warning	-
Specific advice	14
Specific warning	-
Other	5
Don't know	1
Total	

Table 72. PA Promotion Directors' responses concerning how the message(s) used in their promotion strategy was / were conveyed to the target population.

	Number
Media	11
Post	7
Internet / e-mail	6
Intermediates, healthcare professionals	14
Models / opinion	6
Events (e.g. Falls Awareness Day)	9
Other	7
Don't know	-

- **Evaluation and sustainability of effect of promotion strategies**

Mainly promotion strategy directors did not know the proportion of the target population which has been reached by their promotion strategy since it has been running (Table 73).

Table 73. PA Promotion Strategy Directors' estimate of the proportion of the target population has been reached by their promotion strategy since it has been running**.**

	Number
0%	-
25%	4
50%	1
75%	1
100%	-
Don't know	12
Total	18

To achieve the aims of the physical activity promotion strategy directors found that most effective information approach was group-based health education focused on information provision. Other information approaches not mentioned in the table 74 were education, peer-training, local support, personal info-letters, phone calls and discussions (Table 74).

To achieve the aims of the physical activity promotion strategy directors found that effective behavioural and social approaches were health professionals' social support, individually-adapted behaviour change and non–family social support. Other behavioural and social approaches not mentioned in the table were targeted on physicians and other health care practitioners in everyday counselling practices and volunteers (Table 74).

To achieve the aims of the physical activity promotion strategy directors found that most effective environmental and policy approach was enhanced access to physical activity. Other environmental and policy approaches not mentioned in the table were targeted on physicians' and other health care practitioners' everyday counselling practices and use of sports facilities (football field with heating) for older people (Table 74).

Nine directors responded that their promotion strategy have been evaluated since it was implemented. Seven strategies have not been evaluated (Table 75).

When asking which aspects of promotion strategy have been evaluated since it was implemented behaviour change was mentioned in five questionnaires, population reached and other aspects in four questionnaires (Table 76)..

Table 74. PA Promotion Strategy Directors' responses concerning which approaches they had found effective in achieving the aims of their physical activity promotion strategy.

	Number
INFORMATION APPROACHES	
Community wide campaigns	5
Group-based health education focused on information provision	7
Mass media campaigns	4
Point of decision prompts	2
Other	3
BEHAVIOURAL AND SOCIAL APPROACHES	
Individually-adapted behaviour change	9
Education with TV/video/DVD	3
Family-based social support	2
Health professionals social support	10
Non–family social support	9
Other	3
ENVIRONMENTAL AND POLICY APPROACHES	
Enhanced access to physical activity	11
Outreach activities	6
Transportation policy	6
Infrastructure changes to promote non–motorised transit	6
Urban planning approaches	-
Other	4
Don't know	1

Table 75. PA Promotion Strategy Directors' responses concerning whether their promotion strategy had been evaluated since it was implemented.

	Number
Yes	9
No	7
Don't know	2
Total	*18*

Table 76. PA Promotion Strategy Directors' responses concerning which aspects of their promotion strategy had been evaluated since it was implemented.

	Number
Behaviour change	5
Population reached	4
Cost effectiveness (e.g. total costs)	1
Other	4
Don't know	-
Not applicable	-

In most of the promotion strategies (11) a specific plan or device to maintain the behaviour change achieved was included. One director could not answer and one is missing (Table 77).

Table 77. PA Promotion Strategy Directors' responses concerning whether their promotion strategy included a specific plan or device to maintain the behaviour change achieved.

	Number
Yes	11
No	5
Don't know	1
Total	17

When asking the tools to maintain behaviour change in the PA Promotion Strategy the answers spread quite a lot. Social support was the main tool (7) and promotion days (6), other tools and buddy groups (5) and printed material were also general used. Other tools not mentioned in the table were writing in the papers, e-mail lists and www-pages (Table 78).

Table 78. PA Promotion Strategy Directors' responses concerning the tools used in their promotion strategy to maintain behaviour change.

	Number
Printed material posted	5
Telephone	3
Positive reinforcement / feedback rewards	3
Financial incentives	2
Social support	7
Buddy groups	5
Opportunities to socialise	4
Promotion days	6
Other	6
Don't know	-
Not applicable	1

- **Finance**

The total cost of the PA Promotion Strategies varied 10 000- 1 600 000 EUR and the median was 307 955 EUR (Table 79).

Mainly the PA Promotion Strategies in Finland were funded by national/ regional government, health budget or leisure/ sport budget. Also money from city/local government (health, social care or leisure/sport budget) was used to found the strategies (Table 80).

Table 79. The median and range of the PA Promotion Strategy Directors' estimates of the total cost (per year) of developing and running their promotion strategy.

Median	307 955
Least	10 000
Most	1 600 000
N	11

Table 80. PA Promotion Strategy Directors' responses concerning the source of the funding to run their promotion strategy

	Number
NATIONAL / REGIONAL GOVERNMENT	
Health budget	6
Social care budget	3
Leisure / sport budget	6
Other	1
CITY / LOCAL GOVERNMENT	
Health budget	4
Social care budget	4
Leisure / sport budget	4
Other	3
OTHER SOURCES	
Lottery	1
Charity	-
Other	7

- **SYSTEMATIC SEARCH FOR EVIDENCE BASED GUIDELINES**

WP5 cross-national and national report is included a systematic search for evidence based guidelines. It was done in United Kingdom by Susie Dinan-Young, Sheila Fisken, Maureen Harding, Susan Lewis, Fiona Scott, and Archie Young.

OBJECTIVE

The objective was to conduct a logical, repeatable and thorough search for evidence-based, professional guidelines for the promotion and/or provision of safe and effective physical activity (PA) by older people.

The guidelines identified by the search are to be used to create a readily accessible inventory of existing evidence based guidelines. This resource is to be included in the cross-national and national reports on WP5. It will permit a critical comparison of the successful PA programmes and PA promotion strategies (identified by the WP5 Experts) with current evidence-based guidelines.

METHODS

Definitions

Physical activity (PA) – Any bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure *e.g.* running, walking, swimming, lifting or carrying a heavy weight.

PA promotion strategy – An intervention, device or plan which it is intended will increase the PA of a community.
e.g. Improved street lighting or an educational TV advertising campaign.

Older person - In this systematic search the older person was defined as being 60 years and over, in good health or suffering from a medical condition.

Criteria for inclusion in inventory of guidelines

The publications to be included in the inventory were those which we considered to be guidelines, position stands, consensus statements, standards or recommendations from a credible source, that addressed exercise and/ or physical activity for older people and which satisfied <u>all five</u> of the following criteria.

- composed by a process involving a consensus of experts, and
- published under the auspices of government departments, international health organisations, age-related NGOs, or learned societies, and
- with sufficient information about the evidence on which they are based to allow the individual recommendations to be graded according to the strength of that evidence (see ‘Key to evidence statements and grades of recommendation’, as published in the most recent SIGN guideline, viz. SIGN Guideline No. 98, July 2007), and
- published from 1990 onwards, and
- addresses the delivery and/or promotion of physical activity for the older person (including old age specific sub-sections of guidelines for the role of physical activity for adults of all ages in health and/or disease).

Search to identify candidate publications for inclusion in the inventory of guidelines

The search protocol took account of the fact that the guidelines which we sought might have been published in scientific journals, websites, or as free-standing publications.

We searched the following electronic databases:

Ovid Medline (1950 to June Wk 4 2007)
CINHL (1982 to June Wk 5 2007)
EMBASE (1996 to 2007 Wk 26)
SPORTDiscus (1830 to May 2007)
AARP Ageline (1978 to June 2007)
Cochrane Review Library
NHS Scotland elibrary

Searches included no language restrictions and were limited to older adults.

The following two search strategies were used for Ovid Medline and adapted for the other databases.

Search 1 – Provision of physical activity for older people

1 exp exercise$/
2 (exercise$ or physical activity or exercise prescription).mp
3 1 or 2
4 exp aged/ or exp "aged, 80 and over"/
5 (aged or elderly or senior$ or older adult or older person$ or older people).mp
6 4 or 5
7 guideline.pt
8 practice guideline.pt
9 exp guidelines/
10 exp health planning guidelines/
11 7 or 8 or 9 or 10
12 exp consensus/
13 (guideline$ or consensus or position stand or standard$ or recommendations$).ti
14 11 or 12 or 13
15 3 and 6 and 14

Search 2 – Promotion of physical activity for older people

1 exp exercise$/
2 (exercise$ or physical activity).mp
3 1 or 2
4 exp health promotion$/
5 (health promotion$ or promotion strategy or promotion strategies or health behaviour$ or campaign$).mp
6 4 or 5
7 exp aged/ or exp “aged, 80 and over"/

8 (aged or elderly or senior$ or older person$ or older people or older adult$).mp
9 7 or 8
10 guideline.pt.
11 practice guideline.pt
12 exp guidelines/ (61574)
13 exp health planning guidelines/
14 exp consensus/
15 (guideline$ or consensus or position stand or recommendation$ or standard$).ti
16 10 or 11 or 12 or 13 or 14 or 15
17 3 and 6 and 9 and 16

The following websites were chosen on our judgement and searched for relevant guidelines, position stands, consensus statements, standards or recommendations. Search terms were adapted from the two Ovid Medline searches outlined above.

WHO (World Health Organisation)
NIH (National Institute of Health)
NIA (National Institute of Ageing)
CDC (Centre for Disease Control)
ACSM (American College of Sports Medicine)
AHA (American Heart Association)
NICE (National Institute for Health and Clinical Excellence)

Scrutiny to select publications for inclusion in the inventory of guidelines
Two reviewers (FS, AY) independently scanned the titles of candidate publications identified by the searches to identify potentially relevant publications for more detailed review. Searches of bibliographies and texts were also conducted to identify additional relevant publications. Non-concordance of reviewers was resolved by discussion. The abstract was obtained for each title selected.

The abstracts were then independently studied by the two reviewers, to identify publications for full review. Non-concordance was resolved by discussion. From the full text, the reviewers independently identified the publications which met all five criteria for inclusion in the inventory. Once again, non-concordance was resolved by discussion.

RESULTS

Approximately 5120 titles were considered. Of these, over 650 abstracts were reviewed and, from them, 325 full publications were reviewed. Fifty-five publications met all 5 criteria for inclusion in the inventory, where they have been listed under the following subheadings: habitual physical activity and PA promotion, resistance training, exercise referral, cardiovascular conditions, exercise testing and screening, hypertension, stroke, hypercholesterolemia, diabetes, obesity, osteoporosis, falls, osteoarthritis and chronic pain (1). Current evidence based guidelines are presented in Appendix 4.

CONCORDANCE OF PROGRAMMES WITH GUIDELINES DISCUSSION

Qualifications

Thirteen Finnish Experts were asked about the availability of national qualifications in the supervision or guidance of physical activity for older adults. Seven experts answered that a basic level qualification was required. The two basic qualifications mentioned were: Government Resolution on the Health 2015 Public Health Programme (2001) and Government Resolution on Policies to Develop Health-Enhancing Physical Activity in Finland (2002). Three experts answered that a higher level qualification was required. Experts mentioned Quality Recommendations for Guided-Enhancing Physical Activity for Older People. Thus from their answers we could notice that in Finland, there is not a required compulsory qualification for the supervision of physical activity with older people. Ten PA Experts answered that there is no register for the supervision of older adults in Finland or they did not know of any. Only three Experts answered that it exists. Probably, these Experts meant a "Register of health care professionals" that is the main register in the area of social and health care in Finland. All instructors that supervise disabled or ill persons within health and social care institutions should belong to that register. In addition, the ministry of education has a register for the adapted physical instructors who are working in the municipalities.

In Finland, additional training programs are available. Programme directors gave examples of topics covered during these in-service trainings. The training includes fall prevention, measuring of health related fitness, modalities of physical activity, motor learning, how to support outdoor mobility for those who had decreased functional capacity, special problems of supervision, etc.

Finnish qualification requirements are not very strict in the area of PA and aging. Only in the social and health care institutions require the registered qualification. However, additional training in programmes is versatile.

Pre-participation assessment

Only seven PA directors responded that eligibility for entry to the programme requires the potential participant take a health check. The health screening tools were not internationally recognised or adapted for their programme. When asked what must be done before the applicant is permitted to enter the programme if the health screening tool identified the presence of a potential problem, five directors answered that this was not applicant and three answered other. Clearly, in Finland should be used systematically validated health screening tools that the instructors could follow the current recommendations that presume for individualized activity plans (Nelson et al 2007). Individualized activity plans guide older persons to exercise classes specifically designed for their needs for example older adults with some chronic conditions such as arthritis or heart disease. If the program starts with low-intensity activities, there are rarely medical concerns. In ASCM Best practice statement (Cress et al 2004) points out that having a screening requirement, may impose a barrier that reduces the activity.

Aims

The two most important aims of the PA programme were improved physical function and opportunity to socialise. Health promotion was also an important aim. It is important to follow how the program aims are reached. The satisfaction of the

participants was mainly estimated 1-2 times per year. Ten PA directors answered that objective outcome measures were recorded for participants at regular intervals for example balance and other objectives were recorded. Three directors mentioned strength or explosive power and two answered that mood/depression and social support were recorded at regular intervals. The situation is quite good in Finland.

Programme content

All programmes (13) aimed to improve coordination and balance, most of the programmes focused on strength (11) and joint range of motion (9), some looked at bone density (5) and body composition (4). The aims of these programs are in accordance with current recommendations. For example, balance training is very important according to many multiple randomized clinical trials (Nelson et al 2007) to reduce risk of injury from falls. Muscle strengthening activities are recommended twice a week using major muscles of the body for maintaining or increasing of muscular strength and endurance. (Nelson et al 2007) In most of the Finnish Programmes participants progression is followed during the first few months and 5 directors responded that it is followed always. Progression was defined as a systematic increase in the intensity or resistance, the frequency and/or duration of exercise. It is highly appropriate and important for older adults to gradually increase the activity this advise minimize the risk of injury and allows for positive reinforcement that small steps lead to the higher goal. (Nelson et al 2007).

The modalities of physical activity offered in the programmes were very versatile. The strength of the Programmes was many opportunities for different needs. Most often mentioned were aqua exercises or swimming, recreational movements with music like dancing, walking indoors or outdoors in groups or with sticks. A usual workout component lasted 30-60 minutes. PA Programme Directors estimated that usual warm up and usual cool down lasted 6-15 minutes. Current Older adults recommendations (Nelson et al 2007) includes moderate- intensity aerobic exercise at least 30 minutes in five days a week or vigorous intensity exercise 20 minutes at least 3 times a week. The Programmes rarely offered training more than once or twice a week exercise sessions, thus the older participants needed advice on how to exercise on their own.

Client safety

Eight PA Programme Directors' responded that the Programme has specific protocols to be followed in emergency situations, and five Programme directions responded that staff was trained annually for emergency situations and for equipment protocols. However, this is not enough. Every setting that offers opportunities for physical activity of older adults should use strategies for emergency situations. (Cress et al 2004)

CONCORDANCE OF PROMOTION STRATEGIES WITH GUIDELINES DISCUSSION

All PA Promotion Strategy Directors answered that Finland has laws and other regulations for promotion of physical activity for older people. The law is called the law of physical activity and sport**.** All directors answered that in Finland there are national level recommendations for promotion of physical activity especially for older people. PA Promotion Strategy Directors responded that Non Governmental sectors

mainly develop and deliver the promotion strategies in Finland and mainly at the national level. Promotion strategy encouraged physical activity within 'groups' exercise, but in the same time also independent exercise. PA Promotion Strategies are carried together with welfare organisations or primary health care.

Characteristics of strategies' target populations
PA promotion strategy directors estimated that strategies were intended mainly for people over 65 years of age. Two promotion strategies had no age limits, while four other strategies had a minimum age limit of 45. Most of the strategies had no maximum age limit. According to the PA Promotion Strategy Directors age was not the only criteria. There were criteria like decreased functional capacity, or senior-home residents.
PA Promotion Strategy Directors responded that strategies targeted older adults within the following groups, community-dwelling, general population, institution-dwelling, chronic conditions, ethnic minority, high fall risk, and poor eyesight.

Design of promotion strategies
The question about theoretical basis was difficult. Although Directors could not mention the theoretical basis of their Promotion Strategy they did use several well established principles. PA Promotion Strategy Directors evaluated that these Strategies used to improve motivation, knowledge, safety, skills, encourage the behaviour change and tried to decrease fear and misconceptions about ageing. In addition, nine PA Promotion Strategy directors answered that the readiness for behaviour change of target population was screened. All strategies aimed to surmount barriers to physical activity (like fear of injury, lack of energy / motivation, misconceptions about ageing and environmental barriers) and solve these problems actively. The theoretical basis of strategies had features of social cognitive theory (Bandura 1997) and Transtheoretical model (Prohaska and Velicer 1994).

PA Promotion Strategies used information approaches like group-based health education focused on information provision and mass media campaigns and behavioural and social approaches like health professionals' social support, individually-adapted behaviour change and non–family social support. PA Promotion Strategies used environmental and policy approaches like enhanced access to physical activity. The nature of the message used in the promotion strategies was specific advice, general message or advice. Other message types were individual advice and a written action plan, personal advice and planning how to include physical activity in normal daily life which environments are supportive and safe and what is beneficial for each individual. Actually Finnish PA promotion strategies' theoretical basis is well in accordance with current recommendations. In these current recommendations social support, individual activity planning, environmental and policy approaches are all important roles. (Cress et al 2004; Nelson et al 2007; Green & Kreuter 1999).

Evaluation and sustainability of effect of promotion strategies
Promotion strategy directors did not know the proportion of the target population which had been reached by their promotion strategy. Nine directors responded that their promotion strategy had been evaluated since it was implemented; seven strategies had not been evaluated. Aspects that had been evaluated were behaviour

change in five questionnaires, population reached and other aspects in four questionnaires.

To achieve the aims of the physical activity promotion strategy, directors found that the most effective information approach was group-based health education focused on information provision. Effective behavioural and social approaches were health professionals' social support, individually-adapted behaviour change and non–family social support. The most effective environmental and policy approach was enhanced access to physical activity.

For the most part PA Promotion Strategies in Finland were funded by national/ regional government, health budget or leisure/ sport budget. Also money from city/local government (health, social care or leisure/sport budget) was used to fund these strategies.

▪ CONCLUSIONS & RECOMMENDATIONS

Programmes

After concordance with current evidence based guidelines presented in Appendix 4 it could be noticed that physical activity programmes for older adults in Finland are quite well in accordance with current recommendations. The programmes aimed to improve coordination, balance, strength, and joint range of motion, and some of the programmes focused on bone density and body composition. Most programmes offer activities in which large muscle groups are active and sessions lasted always longer than 30 minutes and included warming-up and cooling-down. Thus endurance training was also present in the activities.

Most programmes included progression as is in line with guidelines. Objective outcome measures, for example balance and strength measures were recorded for participants at regular intervals. Activities are mostly done in groups which are beneficial for social relations and exercise adherence. But for programme leaders it could be important also no more about mood/depression and social support situation in their groups, only in two programmes were recorded them at regular intervals. Also, in the future programmes should take more care about screening tools and health checks, safety protocols, and systematic feedback and objective measurements. For older people with medical conditions it could be important to get written referral that specifies the implications of health and medical factors for exercise and everyday activity. Most of older people need tailored exercise programme. (Craig et al 2001; Nelson et al 2007).

Because in Finland it is not required compulsory qualification for supervise physical activity of older people, continuing education is important. Mostly programmes for older people are instructed by physiotherapists and other health professionals. Thus, in basic education of health professionals there is needed more knowledge about aging and physical activity. All instructors need "qualifications" that involve verification of current cardiopulmonary resuscitation (CPR) certification, summative assessment of knowledge, and practical teaching competence assessed with older participants. Instructors require continuing professional development. This may

involve completion of accredited courses, reading, self-assessment and evaluation by peers (Craig et al 2001).

Promotion strategies
Although Directors could not mention exactly the theoretical basis of their Promotion Strategy, they mentioned principles, for example, social support, individual activity planning, environmental and policy approaches. Thus theoretical basis could be establish more consciously. Finnish PA promotion strategies' are quite well in accordance with current recommendations but telephone contacts and written support material, computer-generated feedback and messages, informal group meetings and events, exercise log books could be used more. Strategies that focus on the environment to create safe surroundings for walking are also important. (Edwards et al 2006; NHS Health Development Agency 2005).

Most of the directors responded that their promotion strategy have been evaluated since it was implemented. Seven strategies have not been evaluated. When asking which aspects of promotion strategy have been evaluated, behaviour change was mentioned in five questionnaires, population reached and other aspects in four questionnaires. There is a need for more systematic evaluation of effectiveness of the promotion strategies.

Recommendations for programmes

1) ***screening tools***
   In the future in programmes should be used systematically validated health screening tools that the instructors could follow the current recommendations that presume for individualized activity plans.

2) ***safety regulations***
   Every setting that offers opportunities for physical activity of older adults should use strategies for emergency situations.

3) ***systematic feedback and objective measurements***
   It is highly appropriate and important for older adults to gradually increase the activity.

4) ***referrals***
   The programmes should be used referrals that specifies the implications of health and medical factors for exercise

5) ***continuing education***
   Instructors require continuing professional development: completion of accredited courses, reading, self-assessment and evaluation by peers

Recommendations for promotion strategies

6) ***well established theoretical basis***

7) ***systematic evaluation tools for PA behaviour change and population reached***

General comment

8) *In basic education of health and exercise professionals there is needed more knowledge about aging and physical activity and PA promotion strategies*

- **REFERENCES**

Bandura A. The Exercise of Control. New York: WH Freeman & Co; 1997.

Brawley LR, Rejeski W J King AC (2003) Promoting activity for older adults. The challenges for changing behavior 25; 2: S172-S183.

Craig A, Dinan S, Smith A, Taylor A, Webborn N. NHS: Exercise Referral Systems: A National Quality Assurance Framework. Department of Health. HMSO; 2001.

Cress ME, Buchner DM, Prohaska T, Rimmer J, Brown M, Macera C, DePietro L, Chodzko-Zajko W. American College of Sports Medicine. Physical activity programs and behaviour counselling in older adult populations. Med Sci Sports Exerc. 2004; 36:1997-2003.

Green LW, Kreuter MW, Health promotion planning. An educational and ecological approach. Mountain View, CA: Mayfield Publishing Company 1999.

Edwards P and Tsouros A. Promoting physical activity and active living in urban environments. Europe: World Health Organization (WHO); 2006. www.euro.who.int/InformationSources/Publications/Catalogue/20061115_1

NHS Health Development Agency (HDA). The effectiveness of public health interventions for increasing physical activity among adults: a review of reviews (2nd ed). 2005. www.nice.org.uk

Nelson ME, Rejeski WJ, Blair SN, Duncan PW, Judge JO, King AC et al. Physical activity and public health in older adults: Recommendation from the American College of Sports Medicine and the American Heart Association. Med Sci Sports Exerc. 2007;39:1435–1445.

Prochaska JO, Velicer WF.The transtheoretical model of health behavior change. Am J Health Promot. 1997 Sep-Oct;12(1):38-48. Review.

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The EUNAAPA leaders of Work Package 5 has instructed and helped us very much. Thank you.

- **APPENDIX 1 - IDENTIFICATION DETAILS OF NATIONAL PA EXPERTS**

Expert	Job title	Postal address	e-mail address
Elina Karvinen	Sector Manager	Age Institute, Kalevankatu 12 A, 00100 Helsinki, Finland	elina.karvinen@ikainst.fi
Päivi Niemi	Programme Coordinator	Age Institute, Kalevankatu 12 A, 00100 Helsinki, Finland	paivi.niemi@ikainst.fi
Pirjo Huovinen	Physical activity educator	The City of Jyväskylä, Kuntoportti 4, 40700 Jyväskylä, Finland	pirjo.huovinen@jkl.fi
Sirkka Kannas	Physical activity coordinator	The City of Jyväskylä, Kyllön terveysasema, P.O.Box 52, 40701 Jyväskylä, Finland	sirkka.kannas@jkl.fi
Saija Karinkanta	Researcher	UKK-Institute, P.O.Box 30, 33501 Tampere, Finland	saija.karinkanta@uta.fi
Pauliina Husu	Researcher	UKK-Institute, P.O.Box 30, 33501 Tampere, Finland	pauliina.husu@uta.fi
Leena Timonen	Chief Physician	Siilaisen terveysasema, Noljakantie 17, 80130 Joensuu, Finland	leena.timonen@jns.fi
Raija Leinonen	Senior researcher	GeroCenter, Kinkomaan sairaala, 40930 Kinkomaa, Finland	raija.leinonen@gerocenter.fi
Mari Miettinen	Senior officer	Ministry of Social Affairs and Health, P.O.Box 33, 00023 Government, Finland	mari.miettinen@stm.fi

Maaret Alaranta	Project secretary	Eläkeliitto ry, Kalevankatu 61, 00180 Helsinki, Finland	maaret.alaranta@elakeliitto.fi
Jyrki Komulainen	Program director	LIKES Research center Rautpohjankatu 8a, 40700 Jyväskylä, Finland	jyrki.komulainen@likes.fi
Minna Lainio	Head of the physical activity unit	The City of Turku, Blomberginaukio 4, 20720 Turku, Finland	minna.lainio@turku.fi
Sanna Sihvonen	Senior researcher	Injury Prevention Unit, National Public Health Institute, Mannerheimintie 166, 00300 Helsinki, Finland	sanna.sihvonen@ktl.fi

APPENDIX 2 - IDENTIFICATION DETAILS OF 'SUCCESSFUL' PA PROGRAMMES

Name of programme	Name of organization	Home page of organization	Programme director	Addresses of programme director
A Mobile gym for older adults in rural areas	Age Institute	www.ikainst.fi	Pirjo Kalmari	Pirjo.kalmari@ikainst.fi Age Institute Kalevankatu 12 A 00100 Helsinki, Finland
Senior gym	The City of Jyväskylä	www.jyvaskyla.fi/liikunta	Marjukka Leino	Marjukka.leino@jkl.fi City of Jyväskylä, AaltoAlvari, Pitkäkatu 2, 40700 Jyväskylä, Finland
Physical activity services for older people in the city of Jyväskylä	The City of Jyväskylä	www.jyvaskyla.fi/liikunta	Pirjo Huovinen	Pirjo.huovinen@jkl.fi City of Jyväskylä Kuntoportti 3, 40700 Jyväskylä, Finland
			Sirkka Kannas	Sirkka.kannas@jkl.fi City of Jyväskylä Kyllön terveysasema P.O.Box 52, 40701 Jyväskylä, Finland
KAAMU: 12-month randomized, controlled exercise intervention trial and one-year follow-up of 2 different training programs and their combination on physical functioning and bone in home-dwelling older women	UKK-Institute	www.ukkinstituutti.fi	Saija Karinkanta	Saija.karinkanta@uta.fi UKK-Institute, P.O.Box 30, 33501 Tampere, Finland

Rehabilitation day centre	The Joensuu Health Centre	www.jns.fi	Leena Timonen	leena.timonen@jns.fi Siilaisen terveysasema, Noljakantie 17, 80130 Joensuu, Finland
Winter walk	Age-Institute	www.ikainst.fi	Marja-Leena Virtanen	marjis.virtanen@paimio.fi Age Institute Kalevankatu 12 A 00100 Helsinki, Finland
Health enhancing physical activity for older people	Eläkeliitto ry	www.elakeliitto.fi	Maaret Alaranta	Maaret.alaranta@elakeliitto.fi Eläkeliitto ry, Kalevankatu 61, 00180 Helsinki, Finland
Everyday environments and spaces for physical exercise for the elderly	TKK/Sotera	www.sotera.fi	Ira Verma	Ira.verma@tkk.fi TKK/Sotera P.O.Box 5500, 02015 TKK, Finland
Development of safe, supportative, and motivational environment (both outdoor and indoor) for physical activity for the elderly	LIKES Research Center	www.kki.likes.fi	Liisamaria Kinnunen	Liisamaria.kinnunen@likes.fi LIKES Research Center, Fit for life Program/KKI-ohjelma Heikkiläntie 7, 00210 Helsinki, Finland
Exercise at home	The City of Turku	www.turku.fi	Päivi Vastamäki	Paivi.vastamaki@turku.fi Sports and physical activities services centre Blomberginaukio 4, 20720

				Turku, Finland
Promotion of functional capacity among older home clients	National Public Health Institute	www.ktl.fi	Heikki Heinonen	Heikki.heinonen@ktl.fi Health Promotion Unit National Public Health Institute Mannerheimintie 166, 00300 Helsinki, Finland
The Basic of elder exercise in social and health care, instructor training (VALSSI)	Age Institute	www.ikainst.fi	Ulla Salminen	Ulla.salminen@ikainst.fi Age Institute Kalevankatu 12 A 00100 Helsinki, Finland
Work in a suburbarea for enjoyable ageing	GeroCenter	www.viitakodit.fi	Maarit Salonen	Salonen.maarit@suomi24.fi Viitakoti, Viitaniementie 24, 40720 Jyväskylä, Finland

▪ APPENDIX 3 - IDENTIFICATION DETAILS OF 'SUCCESSFUL' PA PROMOTION STRATEGIES

Name of promotion strategy	Name of organization	Home page of organization	Promotion strategy director	Addresses of promotion strategy director
Strength in old age- A health exercise programme for older adults 2005-2009	Age Institute	www.ikainst.fi www.voimaavanhuuteen.fi	Päivi Niemi	Paivi.niemi@ikains.fi Age Institute, Kalevankatu 12 A, 00100 Helsinki, Finland
TERLI-project, Health-enhancing and adapted physical activity in the region of Jyväskylä region 2006-2008	The City of Jyväskylä	www.jyvaskyla.fi/liikunta	Elina Hasanen	Elina.hasanen@jkl.fi TERLI/sivistystoimi/ liikunta Jyväskylän kaupunki, PL341, 40101 Jyväskylä, Finland
Bone exercise recommendations, especially recommendations for 1) older adults and 2) those suffering osteoporosis	UKK-Institute	www.ukkinstituutti.fi www.osteoporoosiliitto.fi	Saija Karinkanta	Saija.karinkanta@uta.fi The UKK Institute PO Box 30, 33501 Tampere, Finland
UKK-health related fitness tests for high-functioning older adults	UKK-Institute	www.ukkinstituutti.fi	Pauliina Husu	Pauliina.husu@uta.fi The UKK Institute PO Box 30, 33501 Tampere, Finland
UKK Institute 55+TRAINER®	UKK-Institute	www.ukkinstituutti.fi	Pauliina Husu	Pauliina.husu@uta.fi The UKK Institute PO Box 30, 33501 Tampere, Finland

Physical activity prescription by physician	UKK-Institute	www.ukkinstituutti.fi	Minna Aittasalo	minna.aittasalo@uta.fi The UKK Institute PO Box 30, 33501 Tampere, Finland
Walking strategy 2005–2009	UKK-Institute	www.ukkinstituutti.fi	Minna Aittasalo	minna.aittasalo@uta.fi The UKK Institute PO Box 30, 33501 Tampere, Finland
Screening and counseling for physical activity in older people	GeroCenter Foundation	www.gerocenter.fi	Raija Leinonen	Raija.leinonen@gerocenter.fi GeroCenter, Kinkomaan sairaala, 40930 Kinkomaa, Finland
Quality recommendations for guided health-enhancing physical activity for older people	Ministry of Social Affairs and Health	www.stm.fi	Mari Miettinen	Mari.miettinen@stm.fi Ministry of Social Affairs and Health, P.O.Box 33, 00023 Government, Finland
Keep walking project 2002-2005. Outdoor exercise and activities of daily living as part of the everyday living of older adults	Age Institute	www.ikainst.fi	Elina Karvinen	elina.karvinen@ikainst.fi Age Institute, Kalevankatu 12 A, 00100 Helsinki, Finland
Physical activity strategy of Finnish Pensioners' Federation	Finnish Pensioners' Federation	www.elakeliitto.fi	Maaret Alaranta	Maaret.alaranta@elakeliitto.fi Eläkeliitto ry, Kalevankatu 61, 00180 Helsinki, Finland

Fit for life program	LIKES Research Center for Sport and Health Sciences	www.kki.likes.fi	Jyrki Komulainen	Jyrki.komulainen@likes.fi LIKES Research Center, Rautpohjankatu 8a, 40700 Jyväskylä, Finland
Suursuopuisto exercise route for the elderly, Maunula, Helsinki, Finland	The City of Helsinki	www.hel.fi	Anne Tanhuanpää	Anne.tanhuanpaa@hkr.hel.fi Public Work Department, P.O.Box 1500, 00099 The city of Helsinki., Finland
Routes for the elderly with zimmer frame in Kuopio, Finland	The City of Kuopio	www.kuopio.fi	Aila Mäkelä	Aila.makela@kuopio.fi The City of Kuopio, sosiaali- ja terveyskeskus, Tullinportinkatu 31, 70100 Kuopio, Finland
Active courtyard of Vaskikodit Senior Home in Finland	Tampereen Vaskikodit	www.tampereenvaskikodit.fi	Tuija Kanto-Hannula	Tuija.kanto-hannula@tampereenvaskikodit.fi Tampereen Vaskikodit, Hatanpään puistokuja 22G, 33900 Tampere, Finland
The city of Turku sports and recreation departments activity model for elderly people	The City of Turku	www.turku.fi/liikunta	Minna Lainio	Minna.lainio@turku.fi The City of Turku, Blomberginaukio 4, 20720 Turku, Finland
"NEVER"- Falls prevention in older adults	National Public Health Institute	www.ktl.fi	Sanna Sihvonen	Sanna.sihvonen@ktl.fi Injury Prevention Unit, National Public Health Institute, Mannerheimintie 166, 00300 Helsinki, Finland

Instructor training	Age Institute	www.ikainst.fi	Elina Karvinen	elina.karvinen@ikainst.fi Age Institute, Kalevankatu 12 A, 00100 Helsinki, Finland

- **APPENDIX 4**

CURRENT EVIDENCE BASED GUIDELINES

Physical activity & the older person 31/10/07

Habitual Physical Activity and PA Promotion

American College of Sports Medicine (ACSM) and the American Heart Association (AHA). Physical activity and public health: Updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. Med Sci Sports Exerc. 2007;39:1423-1434.

American College of Sports Medicine (ACSM) and the American Heart Association (AHA). Physical Activity and Public Health in Older Adults: Recommendation from the American College of Sports Medicine and the American Heart Association. Med Sci Sports Exerc. 2007;39:1435-1445.

American College of Sports Medicine (ACSM). Physical activity programs and behaviour counselling in older adult populations. Med Sci Sports Exerc. 2004;36:1997-2003.

American College of Sports Medicine (ACSM). Position stand: The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness, and flexibility in healthy adults. Med Sci Sports Exerc. 1998;30:975–991.

American College of Sports Medicine (ACSM). Position stand: Exercise and physical activity for older adults. Med Sci Sports Med.1998;30:992–1008.

Department of Health, Physical Activity, Health Improvement and Prevention. At least five times a week. Evidence on the impact of physical activity and its relationship to health. A report from the Chief Medical Officer. UK: Department of Health;2004.

Edwards P and Tsouros A. Promoting physical activity and active living in urban environments. Europe: World Health Organization (WHO); 2006. www.euro.who.int/InformationSources/Publications/Catalogue/20061115_1 (accessed 12 Sept 2007).

NHS Health Development Agency (HDA). The effectiveness of public health interventions for increasing physical activity among adults: a review of reviews (2nd ed). 2005. www.nice.org.uk (accessed 22 October 2007).

The Center for Disease Control and Prevention (CDC) and the American College of Sports Medicine (ACSM). Physical activity and public health: A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. JAMA.1995;273:402–407.

United States Department of Health and Human Services. Physical Activity and Health: A Report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 1996

Resistance Training

American College of Sports Medicine (ACSM). Position stand: Progression models in resistance training for healthy adults. Med *Sci Sports Exerc*. 2002;34:364–380.

Exercise Referral

Craig A, Dinan S, Smith A, Taylor A, Webborn N. NHS: Exercise Referral Systems: A National Quality Assurance Framework. Department of Health. HMSO; 2001.

Cardiovascular conditions

American Heart Association (AHA). Scientific statement: Resistance exercise in individuals with and without cardiovascular disease: 2007 update. Circulation. 2007;116:572-584.

American Heart Association (AHA). Scientific statement: Exercise and physical activity in the prevention and treatment of atherosclerotic cardiovascular disease. Circulation. 2003;107:3109-3129.

American Heart Association (AHA). Scientific statement: Secondary prevention of coronary heart disease in the elderly (with emphasis on patients ≥ 75 years of age). Circulation. 2002;105:1735-1743.

American Heart Association and American College of Sports Medicine. AHA/ACSM Joint Statement: Recommendations for cardiovascular screening, staffing, and emergency policies at health/fitness facilities. Med Sci Sports Exerc.1998;30:1–18.

Bjarnason–Wehrens B, Mayer–Berger W, Meister ER, Baum K, Hambrecht R, Gielen S. Recommendations for resistance exercise in cardiac rehabilitation. Recommendations of the German Federation for Cardiovascular Prevention and Rehabilitation. Eur J Cardiovasc Prev Rehabil. 2004;11:352–361.

Borjesson M, Assanelli D, Carre F, Dugmore D, Panhuyzen-Goedkoop NM et al. European Society of Cardiology Study Group of Sports Cardiology: Recommendations for participation in leisure – time physical activity and competitive sports for patients with ischemic heart disease. Euro J Cardiovasc Prev Rehabil. 2006;13:133–6.

Hirsch AT, Haskal Ziv J, Hertzer, NR, Bakal CW, Creager MA, Halperin JL et al. American College of Cardiology/American Heart Association Guidelines for the management of patients with peripheral arterial disease (lower extremity, renal,

mesenteric, and abdominal aortic): A Collaborative Report from the American Associations for Vascular Surgery/Society for Vascular Surgery, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine and Biology, Society of Interventional Radiology, and the ACC/AHA Task Force on Practice Guidelines – Summary of recommendations. Journal of Vascular and Interventional Radiology. 2006;17:1383-1398.

McVeigh G, Bleakney G, Cupples M, Downey B, Doyle S, Hanna D et al. Guidelines for Cardiac Rehabilitation in Northern Ireland. Belfast: Clinical Resource Efficiency Support Team, 2006.

National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand. Guidelines for the prevention, detection and management of chronic heart failure in Australia. Australia: National Heart Foundation, 2006.

National Heart Foundation of Australia. Position statement: Physical activity for people with cardiovascular disease: recommendations of the National Heart Foundation of Australia. Medical Journal of Australia. 2006;184:71–75.

Norgren L, Hiatt WR, Dormandy JA, Nehler MR, Harris KA, Fowkes FGR. Inter-society consensus for the management of peripheral arterial disease (TASC II). Journal of Vascular Surgery. 2007;45:S5A-S67A.

Pollock ML, Franklin BA, Balady GJ, Chaitman BL, Fleg JL, Fletcher B et al. Resistance exercises in individuals with and without cardiovascular disease: benefits, rationale, safety, and prescription. An advisory from the Committee on Exercise, Rehabilitation, and Prevention, Council on Clinical Cardiology, American Heart Association. Circulation. 2000;101:828-833.

Scottish Intercollegiate Guidelines Network. Cardiac rehabilitation. A national clinical guideline. Edinburgh: SIGN publication no. 57, 2000.

The Agency for Health Care Policy and Research (AHCPR). Clinical Guideline Number 17. Cardiac Rehabilitation. Publication No. 96-0672. www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat2.chapter.6677 (accessed 19 October 2007).

Vigorito C, Incalzi RA, Acanfora D, Marchionni N, Fattirollo F. Recommendations for cardiovascular rehabilitation in the very elderly. Monaldi Archives for Chest Disease. 2003;60:25-39.

Exercise testing and screening

American College of Cardiology and the American Heart Association. ACC/AHA 2002 Guideline update for exercise testing. www.americanheart.org/downloadable/heart/1032279013658exercise.pdf (accessed 24 Sept 2007).

American Heart Association (AHA). Recommendations for preparticipation screening and the assessment of cardiovascualr disease in masters athletes: An advisory for healthcare professionals from the working groups of the World Heart Federation, the International Federation of Sports Medicine, and the American Heart Association Committee on exercise, cardiac rehabilitation, and prevention. Circulation. 2001;103:327-334.

American Heart Association (AHA). Exercise Standards for Testing and Training: A Statement for Healthcare Professionals from the American Heart Association. Circulation. 2001;104: 1649 – 1740.

Task Force of the Italian Working Group on Cardiac Rehabilitation and Prevention, endorsed by Working Group on Cardiac Rehabilitation and Exercise Physiology of the European Society of Cardiology. Statement on cardiopulmonary exercise testing in chronic heart failure due to left ventricular dysfunction: recommendations for performance and interpretation Part III: Interpretation of cardiopulmonary exercise testing in chronic heart failure and future applications. Euro J Cardiovasc Prev Rehabil. 2006;13:485 – 494.

Hypertension

American College of Sports Medicine (ACSM). Position Stand: Exercise and Hypertension. Med Sci Sports Exerc. 2004;36:533–553.

Cleroux J, Feldman RD, Petrella RJ. Recommendations on physical exercise training. Canadian Medical Association Journal. 1999;160(9 SUPPL.):S21–S28.

Stroke

American Heart Association (AHA). Scientific statement: Physical activity and exercise recommendations for stroke survivors. Circulation. 2004;109:2031-2041.

Hypercholesterolemia

Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) Final Report.US Department of Health and Human Services; Public Health Service; National Institutes of Health; National Heart, Lung, and Blood Institutes. NIH Publication No. 02 – 5215, 2002.

Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) Executive Summary. US Department of Health and Human Services; Public Health Service; National Institutes of Health; National Heart, Lung, and Blood Institutes. NIH Publication No. 01 – 3670, 2001.

Diabetes

American Diabetes Association. Standards of Medical Care in Diabetes. Diabetes care. 2007;30:S4-S41.

California Healthcare Foundation/ American Geriatrics Society Panel on improving care for elders with diabetes. Guidelines for improving the care of the older person with diabetes mellitus. JAGS. 2003;51:S265-S280.

Canadian Diabetes Association. Physical Activity and Diabetes. 2003:S24-S26. www.diabetes.ca/cpg2003/downloads/physicalactivity.pdf (accessed 4 Sept 2007).

Scottish Intercollegiate Guidelines Network. Management of diabetes. A national clinical guideline. Edinburgh: SIGN publication no. 55, 2002.

Sigal RJ, Kenny GP, Wasserman DH, Castaneda-Sceppa C, White RD. Physical Activity/Exercise and Type 2 Diabetes. Diabetes Care. 2006;29:1433-1438.

Obesity

National Institute for Health and Clinical Excellence (NICE). Obesity. London: NICE clinical guideline 43, 2006. www.nice.org.uk (accessed 22 October 2007).

Villareal DT, Apovian CM, Kushner RF, Klein S. Obesity in older adults: technical review and position statement of the American Society for Nutrition and NAASO,The Obesity Society. Obesity Research. 2005;13:1849–1863.

Osteoporosis

American College of Sports Medicine (ACSM). Position stand: Physical activity and bone health. Med Sci Sports Exerc. 2004;36:1985–1996.

American College of Sports Medicine (ACSM). Position stand: Osteoporosis and exercise. Med Sci Sports Exerc. 1995; 27:i-vii.

Bonaiuti D, Arioli G, Diana G, Franchignoni F, Giustini A, Monticone M et al. Clinical guidelines in rehabilitation. Societa Italiana di Mediciana Fisica e Riabilitativa (SIMFER) rehabilitation treatment guidelines in postmenopausal and senile osteoporosis. Europa Medicophysica. 2005;41:315-337.

Brown JP, Josse RG. 2002 Clinical practice guidelines for the diagnosis and management of osteoporosis in Canada. Canadian Medical Association Journal. 2002;167(10 Suppl):S1 – 34.

Forwood MR & Larsen JA. Exercise recommendations for osteoporosis. A position statement of the Australian and New Zealand Bone and Mineral Society. Australian Family Physician, 2000;29:761–764.

Hough S & Mahlai MP. Diagnosis and management of osteoporosis. South African Medical Journal. 2000;90:907-944.

The North American Menopause Society. Management of osteoporosis in postmenopausal women: 2006 position statement of The North American Menopause Society. Menopause. 2006; 13:340–367.

United States Department of Health and Human Services. Bone Health and Osteoporosis: A Report of the Surgeon General. Rockville, MD: US Department of Health and Human Services, office of the Surgeon General, 2004.

United States Department of Health and Human Services. Bone Health and Osteoporosis: A Report of the Surgeon General. Executive Summary. Rockville, MD: US Department of Health and Human Services, office of the Surgeon General, 2004.

Falls

American Geriatrics Society, British Geriatrics Society, and American Orthopaedic Surgeons Panel on Falls Prevention. Guideline for the prevention of falls in older persons. JAGS;49:664-672.

National Institute for Health and Clinical Excellence (NICE). Falls. London: NICE clinical guideline 21, 2004. www.nice.org.uk (accessed 22 October 2007).

Osteoarthritis

American Geriatrics Society. Exercise Prescription for older adults with osteoarthritis pain: consensus practice recommendations. Journal of the American Geriatrics Society.2001;49:808-823.

Zhang W, Doherty M, Arden N, Bannwarth B, Bijlsma J, Gunther K-P et al. European League against rheumatism (EULAR) evidence based recommendations for the management of hip osteoarthritis: report of a task force of the EULAR Standing Committee for International Clinical Studies Including Therapeutics (ESCISIT). *Ann Rheum Dis*. 2004; 64:669–681.

Chronic pain

American Geriatrics Society (AGS). The management of persistent pain in older persons. JAGS. 2002;50:S205-S224.