

EUNAAPA – Work Package 5

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

National Report Sweden

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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, Swedish examples of physical activity (PA) programmes and PA promotion strategies for older people which were deemed to be 'successful'. The second aim was to critically 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 Swedish Experts.

- **THE EXPERTS**

- **Methods**

- **Selection of Experts**

As requested by the leader of Work Package 5, eleven Experts were to be selected with the help of the matrix below (Table 1). Partners were instructed that they should use the matrix to guide the selection of eleven Experts – ideally one from each of the 11 boxes but not more than two from any one box. They were advised that the matrix should be used flexibly, bearing in mind that, for example, several organisations could be located in more than one box. EUNAAPA Partners were also advised that, ideally, all of their 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 the Partners should ensure that both fields were adequately represented in the group of 11 Experts as a whole.

Experts from different areas, background and geographical sites in Sweden were contacted through e-mail and telephone calls. For example, experts were approached within the academic sector, the health care sector, NGO such as Retirement organisations, Physical Exercise organisations and the Governmental sector.

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

The questionnaires were sent by email together with the invitation letter and they were returned by mail or e-mail. Any questions that arose were dealt with through email or telephone calls.

- **Results**

- **Selection of Experts**

A total number of 29 experts were consecutively approached. Only six Experts finally answered the expert questionnaire. Only three of those fulfilled and took responsibility for the whole process. One expert took responsibility for the expert and the programme questionnaire, one the expert and the promotion strategy questionnaire and one answered only the expert questionnaire (Appendix 1).

When selecting the Experts, the WP5 Leader and the Collaborating Partner judged that the eleven represented all of the primary matrix fields, with the exception of box 5 (Table 1) and with two Experts representing box 3 (Table 1). The Swedish experts covered four of the suggested fields (Table 2). It was difficult to find Experts that were willing to participate in the Sport sector on the national level as well as in different NGOs.

However we did find people willing to answer the PA programme questionnaire on the city/local level, for example field 11 in the matrix.

As stated above, a total of 29 Experts were approached but only six turned out to be willing to participate. The reason for declining was mainly that the procedure was felt to be too time consuming and too complicated. The fact that the questionnaires had to be distributed during the summer holidays also contributed strongly.

- **Return of Experts' questionnaires**

Questionnaires were returned from the end of June to the end of September 2007. Several experts had to be reminded several times before they finally returned the questionnaires.

- **Experts' educational background**

Most Experts had a background within the sectors health or education and/or within the exercise and sport sector. Two experts stated other educational backgrounds, one with a PhD in physiology and a psychologist with a PhD in Geriatric Medicine (Table 3).

	sport sector		health sector and/or social services sector		education sector (including training and professional development)	
	government	other	government	other	government	other
National or Regional	Ministry of Sport (or equivalent)	NGO specialising in the delivery of recreational or competitive physical activity for older people	Ministry of Health or Ministry (or department) with particular responsibility for older people	NGO specialising in the delivery of health-related exercise for older people or sickness funds or health insurance or NGO addressing age-related issues	Department specialising in the training of those who deliver recreational, competitive or health-related physical activity for older people	NGO specialising in the training of those who deliver recreational, competitive or health-related physical activity for older people 6
	1	2	3	4	5	Professional association for those specialising in old age healthcare or social care 7
	government	other	government	other		
City or local neighbourhood	Municipal department for sport, recreation and leisure services	Sport or dance organisation with special interest in older people or Other organisation providing physical activity opportunities for older people	Municipal department responsible for healthcare services for older people or Municipal department responsible for social care services for older people	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		
	8	9	10	11		

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

	PA Experts					
	A	B	C	D	E	F
Primary matrix field	5	10	8	3	3	8

Table 2. Results of the Primary matrix fields of the national Experts of those experts that finally agreed to participate.

	PA Experts						
	A	B	C	D	E	F	Total
Medicine	X	X		X		X	4
Other Health Profession			X				1
Exercise/ Sport Science	X				X		2
Other	X					X	2
Missing data							
Total	3	1	1	1	1	2	9

Table 3. Educational backgrounds of national Experts for WP5.

- **Experts' areas of practice**

There was a wide variety of the experts' area of practice (Table 4). The area of Health-related exercise facility management was not covered by an expert, but we had one person answering the PA programme questionnaire that covered this field. No experts had any experience from the socio-cultural area.

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

Table 4. The national Experts' areas of practice.

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

- **Methods**

The questionnaire completed by the six national Experts also asked about the availability in Sweden 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**

Two of six experts stated that a basic level is required for supervising/guiding physical activity/exercise for example assistance nurse and basic exerciser (Table 5).

	Basic level qualification	
	Available	Required
Yes	2	2, sometimes
No	4	
Don't know		
Missing Data		4, not applicable
Total	6	6

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

- **Higher level qualification**

One of six experts stated that a higher level is required sometimes, for example occupational therapists or health promotion pedagogue (Table 6). The prevalence was just answered by one expert (Table 7).

	Higher level qualification			
	Available	Required	Important	External verification
Yes	1	1, sometimes	1	1
No	5			
Don't know				
Missing Data		5	5	5
Total	6	6	6	6

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

	Entry level	Higher level
0%		
25%		1
50%	1	
75%		
100%		
Don't know	3	3
Not applicable	2	2
Missing data		
Total	6	6

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.

▪ **Assessment, validation and revalidation**

The higher level suggested, refers to university degree for different professions and involves therefore both assessment and external verification (Table 8, 9).

▪ **Professional register**

Two experts stated that no professional register exists and four did not know (Table 10).

	A	B	C	D	Not applicable	Don't know
Yes	1	1	1	1	1	
No						
Total	1	1	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 8. PA Experts' responses concerning the components of the assessment for the higher level (older person specific) qualification.

	A	B	C	D	E	F	Not applicable
Yes	1	1	1		1		4
No	5	5	5	6	5	6	
Total	6	6	6	6	6	6	

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

	Professional register		
	Exists	Membership requires	
		Entry level*	Higher level**
Yes			
No	2		
Don't know	4	1	1
Not applicable		5	5
Missing data			
Total	6	6	6

Table 10. PA Experts' responses concerning the existence in Sweden 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**).

- **‘SUCCESSFUL’ PA PROGRAMMES**

- **Methods**

- **Selection of programmes (including definitions)**

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**

Questionnaires were delivered through email and returned by mail or email. Two experts answered the PA questionnaire by themselves regarding programmes run in their own organisations.

- **Results**

- **Selection of programmes**

As described above only four Experts succeeding in returning a PA programme questionnaire. Since so many experts declined to participate, the Swedish EUNAAPA group approached PA programme directors directly and this resulted in five more included PA programmes. Experts that declined participation sometimes suggested PA programmes that we later approached or we contacted organisations or PA directors that were known to us. A total of nine PA programmes are included in this report.

- **Return of programme questionnaires**

The five PA programme directors that were approached by the Swedish EUNAAPA group directly returned their questionnaires before the end of July. The last questionnaire sent in by one of the experts, was returned at the end of September after several reminders.

- **Programme directors' educational backgrounds**

Most of the programme directors had their educational background within health care and exercise/sport science (Table 11).

	PA Programme Directors									
	A	B	C	D	E	F	G	H	I	Total
Medicine	X	X	X	X			X			5
Other Health Profession					X			X		2
Exercise/ Sport Science	X	X	X	X			X			5
Other				X		X			X	3
Missing data										
Total	2	2	2	3	1	1	2	1	1	15

Table 11. Educational backgrounds of PA Programme Directors selected by the Swedish National Experts and the EUNAAPA group.

- **Catchment areas of programmes**

No programmes have been run on the national level, the other levels have been covered symmetrically (Table 12).

	Number
National	0
Regional	3
Limited to a city/town	3
Limited to a local neighbourhood	3
Missing data	
Total	9

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

- **Ages of programmes**

Six of nine programmes have run for 1 to 5 years (Table 13).

	Number
Less than 1 year	0
1 to 5 years	6
6 to 10 years	1
More than 10 years	2
Missing data	0
Total	9

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

- **Components of overall programmes**

Most programmes were community based senior fitness programmes and they were performed in groups, were land-based and conducted indoors (Table 14-16). Two programmes were specifically designed for falls prevention, while two had components within the programme aiming at falls prevention. This was also the case for cardiac, pulmonary and arthritis rehabilitation (Table 14). Only one programme was designed for

institutionalised elderly people and one for participants' private dwellings (Table 16).

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

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

	Number
Group activity	8
Individual activity	3
Indoors	9
Outdoors	3
Water-based	2
Land-based	9

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

	Number
Sport / physical recreation facility	5
Community centre	7
Day resources centre	0
Participant's private dwelling	1
Sheltered housing, assisted living facility, care home or nursing home	1
Other	1

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

▪ **Characteristics of programmes' clients**

Most programmes had a minimum age of 60 or 65 and a maximum of 100 years (Figure 1). The average age of all programmes was 72. A majority of clients were community-dwelling elderly people and most of the clients walked outdoors with or without walking aid (Table 17, 18). Only two programmes included clients that never walked outdoors (Table 18). Seventy-five percent of the clients in all programmes were women (Table 19).

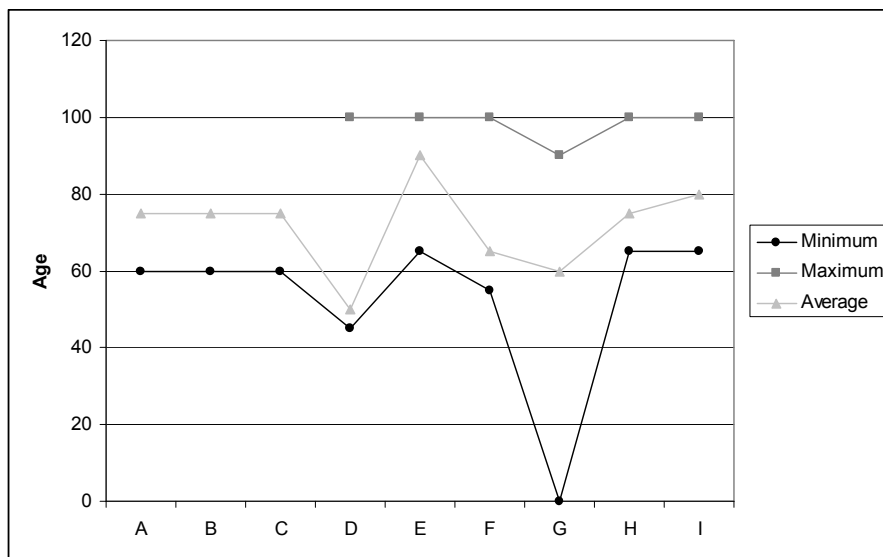


Figure 1. PA Programme Directors' responses concerning the age groups for whom their overall programme is intended and the average age of participants actually attending a typical session of the programme.

	Number
Community- dwelling older adults	7
Institution – dwelling older adults	1
Both, together (in the same group)	1
Both separately (in different groups)	
Total	9

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

	Number
Frequently walks vigorously or runs	6
Walking outdoors with no walking aids and no assistance or supervision by another person	8
Walks outdoors with a walking aid but no assistance or supervision by another person	7
Walks outdoors only with assistance or supervision by another person	2
Never walks outdoors	2

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

	Number
0%	
25%	
50%	
75%	9
100%	
Don’t know	
Total	9

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

▪ **Characteristics of programmes' classes**

Most programmes were conducted in groups of 6-10 or 11-25 clients but with a wide range of 1-51+ (Table 20). The most common instructor rate was 1:11-25 (Table 21). Most programmes offered a maximum frequency of 3-4 times/week and clients participated on average twice a week (Table 22). In four programmes 75% of the current clients had attended the programme for more than one year (Table 23). Two programmes had run for more than six months but less than one year.

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

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

	Number
1 : 1	1
1 : 2 - 10	2
1 : 11 - 25	5
1 : 26 - 50	1
1 : 51+	
Don't know	
Total	9

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

	Maximum	Usual
<1		
1		
2	3	7
3 – 4	4	2
5 – 7	2	
8+		
Don't know		
Total	9	9

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

	Number
0%	1
25%	
50%	
75%	4
100%	1
Don't know	1
Total	7

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

▪ **Objectives, outcomes, monitoring and feedback**

The two most commonly overall aims of the programmes were health promotion and improved physical function. Two “other” aims were fall prevention and reduced dependency in activities of daily living (ADL) (Table 24). Clients satisfaction was usually formally measured 1-2 times/year (Table 25). Almost all programmes surveyed individual aims for each client and these aims were adjusted for in the programmes. Five programmes used objective outcome measures (Table 26). Muscle strength, balance, body composition and mood/depression were the most common outcome measures (Table 27). Other outcome measures were

falls, life style habits, ADL and health-related quality of life. All programmes that measured outcome, measured several variables.

	Number
Health promotion	6
Improved competitive performance	0
Disease prevention	2
Improved physical function	7
Improved mood	0
Opportunities to socialise	1
Improved self esteem / confidence	0
Other	2
Don't know	
Total	18

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
Not at all	0
1 – 2	6
3 – 6	2
More than 6	1
Don't know	
Total	9

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

	A	B	C
Yes	8	8	5
No	1		4
Don't know			
Total	9	8	9

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.

	Number
Strength or explosive power	3
Maximal oxygen uptake (directly measured)	0
Sub maximal test of aerobic fitness	2
Balance	3
Joint range of motion	1
Body composition	3
Bone density	0
Mood / depression	3
Social support	2
Other	4
Not applicable	1

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

- **Pre-participation assessment**

Only two programmes required a health check before participation and assessments were in one programme also conducted by other health professionals (Table 28, 29). Only one programme required completion of a health screening tool that was adapted for the programme and included measurements such as questionnaire of life style, physical capacity, blood pressure and heart rate (Table 30-32). If the health

screening tool identified a problem the client was referred to a physician, if severe this could be organised the same day (Table 33).

	Number
Yes	2
No	7
Don't know	
Total	9

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

	Number
Completion of a health screening tool	0
Assessment by a doctor	2
Assessment by a doctor who is a sports medicine specialist or by the programme doctor	0
Assessment by some other healthcare professional	0
Other	0
Total	2

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
Yes	1
No	8
Don't know	
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.

	Internationally recognised	Adapted for the prog.
Yes	0	1
No	1	0
Not applicable	5	5
Total	6	6

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

	Dizziness	Eyesight	Hearing	Don't know	Not applicable
Yes					9
No					
Total					9

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

	Number
The applicant need only sign a liability waiver	
Applicant must obtain 'approval' from any healthcare professional	
Applicant must obtain 'approval' from their doctor	
Applicant must obtain 'approval' from a doctor who is a sports medicine specialist or from the programme doctor	
It is not possible for the applicant to be permitted to enter the programme	
Other	1
Don't know	
Not applicable	8
Total	9

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.

▪ **Programme content**

The most common components of the programmes were muscle strength, coordination/balance and joint range of motion followed by endurance and attempts to influence body composition (Table 34). Other components added were muscle endurance, mobility and opportunity to socialize. All programmes included several components.

A variety of modalities were offered in the different programmes (Table 35). Exercises to music were common as well as the use of a variety of machine equipment. Other equipment used was weight vests. Exercises were commonly adapted to falls prevention, to back pain and osteoporosis prevention as well as to chair-based exercises. Most programmes offered the clients the possibility of progression during the programme (Table 36). Warm-up was usually 6-10 minutes and cool-down 1-5 minutes (Table 37). One programme was only individually based and therefore warm-up and cool-down could vary. Most programmes lasted for 40 minutes and some for 30 minutes (Table 38). Most programmes adapted exercises to the mainstream older person's groups (Table 39).

	Number
Strength	9
Explosive power	0
Endurance	6
Coordination – Balance	9
Joint range of motion	7
Body composition	5
Bone density	3
Other	1

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

TABLE 35

	Number
Aquatics	
Swimming	0
Aqua exercises	2
Cycling	
On Road/ Paths	0
Off Road/ Track/ Hills	0
Group Sports/ Ball Games	
Badminton	2
Billiard Sports	0
Boules	2
Bowling	1
Golf	0
Minigolf	0
Short tennis	1
Tennis	0
Recreational Movement	
Dance	2
Movement to exercise	3
Exercise to music	6
Derived from Pilates	2
Derived from Tai Chi	1
Derived from Qigong	3
Derived from Yoga	1
Running	
Indoor running (not on treadmill)	1
Outdoor running/ Track	1
Orienteering	0
Skiing	
Cross Country Skiing	0
Downhill (Alpine Skiing)	0
Ski Touring	0
Walking	
Indoor Walking (not on treadmill)	3
Outdoor Walking on path/ track	2
Outdoor Walking groups	3
Rambling or Hill Walking	1
Trekking	0
Nordic Walking	1

TABLE 35 (continued)

Machine based equipment	
Circuits	2
Treadmill	2
Cycle	3
Rowing	2
Stepper	1
Cross – trainer	2
Cable machines/ fixed resistance	3
Dumbbells / Free weights	4
Physioballs (Swiss balls/ exercise balls) for balance	3
Resistance balls/ bands/ tubes	2
Balance disks/ wobbleboards	2
Other	1
Competitive sport	
Adapted exercise	
Back pain prevention	4
Osteoporosis prevention	4
Falls prevention	6
Pelvis Floor exercise	3
Chair-based exercise	4
Cardiac/pulmonary rehab	0
Other	2

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

	Number
Never	1
For the first few weeks only	
For the first few months only	1
Always	6
Don’t know	
Missing data	1
Total	9

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

	Warm up	Cool down
0 minutes	1	
1 – 5 minutes		3
6 – 10 minutes	1	4
11 – 15 minutes	6	1
16 – 20 minutes		
Don't know		
Total	8	8

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.

	Number
0 minutes	
10 minutes	
20 minutes	1
30 minutes	3
40 minutes	5
50 minutes	
60 minutes	
More than 60 minutes	
Don't know	
Total	9

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

	Number
This is not possible	
Adapted exercise, with participants in disease-related groups	
Adapted exercise, with participants in frailty-related or disability-related groups	1
Adapted exercise, with participants included in the mainstream older person's group(s)	6
Don't know	
Missing data	2
Total	9

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

▪ **Instructors' qualifications and training**

A higher level of qualification was required in four programmes, followed by a basic level in three programmes. The other two programmes required other qualifications such as physiotherapy education or students educated in public health (Table 40). In eight of nine programmes 100% of the instructors had the required level (Table 41). In four of nine programmes the instructor had to be registered in a professional register (Table 42). In a majority of the programmes in-service training for instructors took place more than 30 hours per year (Table 43). Unpaid volunteers contributed only in a few programmes (Table 44).

	Number
A basic (entry level) qualification	3
A higher level (old age specific) qualification	4
Other	2
Don't know	

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

	Entry level qualification	Higher level qualification
0%		
25%		
50%		
75%	1	1
100%	8	8
Don't know		
Total	9	9

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.

	Number
Yes	4
No	5
Don't know	
Total	9

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

	Number
0	
1	
3	
5	
10	
15	1
20	
30	
More than 30	5
Don't know	
Not applicable	2
Missing data	1
Total	9

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

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

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

- **Client safety**

Five of nine programmes had specific protocols to be followed in emergency situations but only three trained the staff annually (Table 45, 46). Six programmes had equipment protocols to be followed and four of those had annual training for staff (Table 45, 46).

	Emergency protocols	Equipment protocols
Yes	5	6
No	4	3
Don't know		
Total	9	9

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
3 monthly		
6 monthly		
Annually	3	4
Never		
Don't know	1	1
Not applicable	5	4
Total	9	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.

▪ **Finance, transport and refreshments**

Most PA directors did not know the total cost of the programme or the cost for each client (Table 47, 48).

Most programmes did not provide transport for the clients, but refreshments were usually offered (Table 49, 50).

	Number
Up to € 2	
More than € 2, up to € 5	1
More than € 5, up to € 10	
More than € 10	1
Don't know	7
Total	9

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
0%	3
5%	
10%	1
25%	
50%	
75%	
100%	
Don't know	4
Missing data	1
Total	9

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

	Transport	Refreshments
Yes, to everyone		4
Yes, selectively	2*	2**
No	7	3
Don't know		
Total	9	9

*some participants, some sessions

**some sessions

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

	Transport	Refreshments
0%	2	1
5%	1	
10%		
25%		
50%		1
75%		
100%		4
Don't know		
Not applicable	6	3
Total	9	9

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.

▪ **Publicity, marketing and promotion**

A wide variety of publicity and marketing methods were used. The most common methods were websites, bring a friend followed by word of mouth and advertising in elder-oriented magazines (Table 51). Most programmes used multiple methods.

Only three programmes have found it useful to promote them in national or regional campaigns. A majority had however found it useful to build partnerships mainly with primary care units, research units and universities (Table 52).

	Number
Advertising in local newspapers	5
Advertising in national/ regional newspapers	1
Advertising in elder-oriented magazines	2
Advertising through elder-oriented organisations	4
Features in local newspapers	2
Features in national/ regional newspapers	1
Features in elder-oriented magazines	2
Advertising on local radio	0
Advertising on national/ regional radio	1
Advertising on local TV	1
Advertising on national/ regional TV	0
Features on local radio	0
Features on national/ regional TV	1
Features on local TV	1
Features on national/ regional TV	0
Neighbourhood leafleting	1
Sports hall leafleting	2
Health premises leafleting	1
Leafleting in community centres for older people	0
Talks to local groups	3
Word of mouth	6
Websites	7
Open days	3
Bring a friend	7
Discounts	0
Multiple session bookings	1
Other	4

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

	(1)	(2)
Yes	3	7
No	4	
Have not tried	1	1
Don't know		
Missing data	1	1
Total	9	9

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.

- **‘SUCCESSFUL’ PA PROMOTION STRATEGIES**

- **Methods**

- **Selection of programmes (including definitions)**

Each national Expert was asked to identify a successful PA promotion strategy for older people in their country and assist its director to complete a questionnaire concerned primarily with the characteristics of the chosen PA promotion strategy. 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 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**

Questionnaires were delivered through email and returned by mail or email. Two experts answered the promotion strategy questionnaire by themselves regarding programmes run in their own organisations.

- **Results**

- **Selection of promotion strategies**

As described above only four Experts succeeding in returning a promotion strategy questionnaire. Two of those were strategies run in their own organisations.

- **Return of promotion strategy questionnaires**

The first promotion strategy questionnaire was returned in the middle of August and the last at the end of September after several reminders.

- **Promotion strategy directors' educational backgrounds**

Two directors had a background in medicine, a nurse and a dentist. One was a social pedagogue and one had a master in public health (Table 53).

	PA Promotion Strategy Directors				
	A	B	C	D	Total
Medicine	X				1
Other Health Profession		X	X		2
Exercise/ Sport Science					
Other				X	1
Missing data					
Total	1	1	1	1	4

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

- **Prevailing national context**

Answers regarding laws and regulations varied between directors (Table 54). One of the directors answering yes to the question about law and referred to the law of school where a minimum amount of athletic/gymnastics shall be included per week in school for children up to the age of 15. Regarding recommendations two directors referred to The Swedish National Institute of Public Health.

	(1)	(2)	(3)
Yes	1	0	3
No	1	4	0
Don't know	2	0	1
Total	4	4	4

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

▪ **Description of promotion strategies**

Most promotion strategies were developed on the regional and local level and delivered through research organisations, the health care sector and municipalities (Table 55). One promotion strategy was run in cooperation between a local municipality, the Swedish Road Administration and a university.

The aim was to deliver the promotion strategies mainly to a city/town (Table 56). The settings were both centre and home based, only outdoor but offered both group and individual exercise (Table 57). A variety of settings/organisations as well as multiple organisations was taking part in the promotion strategies (Table 58).

The most common theoretical bases were the Health Belief Model and the Theory of Reasoned Action (Table 59). Two promotion strategies have used multiple models. Another model used was empowerment.

The promotion strategies have been run from one to five years up to more than 10 years (Table 60). Two strategies run continually, one is now in routine care while one has built supportive environments for health to give the elderly conditions and possibilities to take their daily walk in a safe accessible way (Table 61). A variety of intermediaries have been used to reach the intended population (Table 62).

	Developed	Delivered
Government		
National	1	1
Regional	1	2
Local	2	2
Non Governmental		
Commercial		
Welfare/community organisation	1	
Research organisation	2	2
Other	1	1

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

	Number
National	2
Regional	1
Limited to a city/ town	3
Limited to a local neighbourhood	1

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

	Number
Centre based	2
Home based	2
Outdoors	4
Other	0
Group exercise	4
Independent exercise	4
Other	0

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

	Number
Social institutions	3
Primary health care	3
Community centres	3
Welfare organisations	3
Work place	3
Other	2
Don't know	0

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

	Number
None	0
Health Belief Model	2
Protection Motivation Theory	0
Theory of Reasoned Action	2
Theory of Planned Behaviour	0
ASE* – Model	1
Transtheoretical Model	0
Other	1
Don't know	0

* Attitude, Social influence and Self-Efficacy

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
Less than 1 year	0
1 to 5 years	1
6 to 10 years	1
More than 10 years	2
Don't know	0
Total	4

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

	Number
Once only	1
Periodically	0
Continually	2
Other	1
Don't know	0
Total	4

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

	Number
Medical Practitioners	3
Nurses	2
Physiotherapists	3
Occupational therapists	0
Physiotherapy/ OT Assistants	1
Other Allied Health Care Professionals	1
Exercise/ dance instructors	2
Sports coaches	2
Community/Social Workers	2
Volunteers	3
Other	1
None	0
Don't know	0

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

▪ **Characteristics of strategies' target populations**

Two strategies included all ages and two were directed toward elderly people above the age of 65 (Figure 2). Three of four strategies were directed toward the general population but with consideration to older adults as well as older and younger people with disabilities (Table 63).

Only one promotion strategy was also directed toward institutionalised elderly people and this strategy also used staff as intermediaries. Only one promotion strategy considered cultural differences and catered for different language, cultural perceptions, education levels and income levels (Table 64). All promotion strategies were directed towards people that walked outdoors with or without aid. Only one was also directed toward people that never walked outdoors (Table 65).

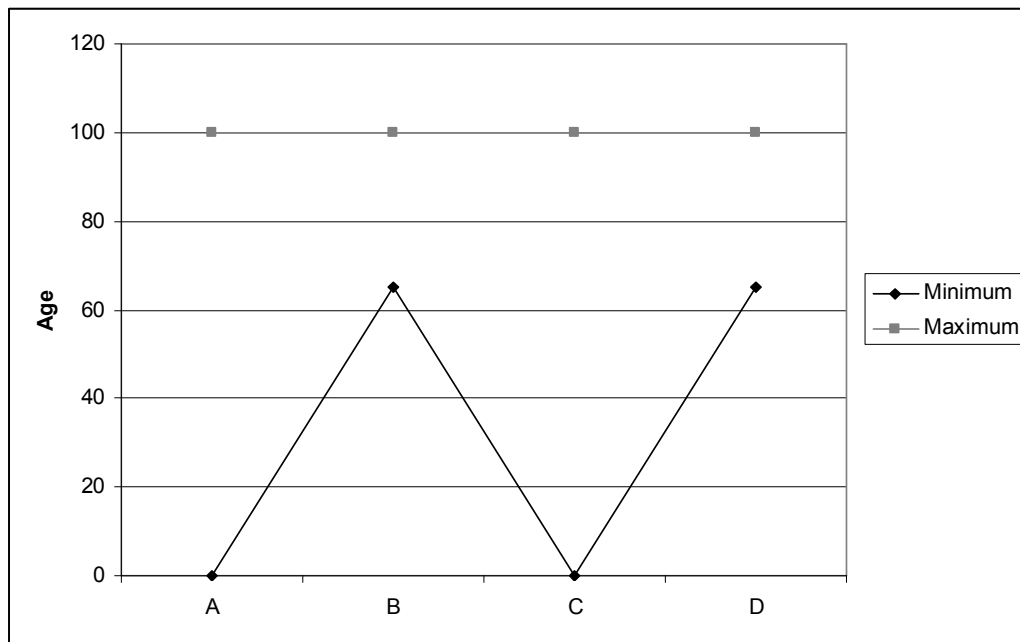


Figure 2. PA Promotion Strategy Directors' estimates of the upper and lower age limits of those for whom their strategy is intended.

	Number
General population (including older adults)	3
All older adults	1
Community – dwelling older adults	2
Institution – dwelling older adults	1
Older adults with chronic conditions	2
Ethnic minority older adults	2
Other	3

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

	Number
None	3
Different language	1
Different cultural perceptions	1
Different education levels	1
Different income levels	1
Other	0
Don't know	0

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

	Number
Frequently walks vigorously or runs	4
Walks outdoors with no walking aids and no assistance or supervision by another person	4
Walks outdoors with a walking aid but no assistance or supervision by another person	4
Walks outdoors only with assistance or supervision by another person	4
Never walks outdoors	1

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

▪ **Design of promotion strategies**

Improved knowledge and motivation were the most common strategies used to encourage behaviour change followed by improved access and safety as well as reduction in misconceptions about aging (Table 66). A majority of the promotion strategies screened the population for their readiness prior to implementation (Table 67). A majority was also designed to surmount barriers to physical activity (Table 68) and these were mainly lack of skill and misconceptions about aging (Table 69). All

promotion strategies used group-based health education focused on information provision and enhanced access to physical activity followed by individually-adapted change and health professional social support in a majority of the strategies (Table 70).

General advice followed by specific advice and general message were the most common messages used (Table 71) and the messages were conveyed through media, intermediates (health professionals) and events (Table 72).

	Number
Improved knowledge	4
Improved access	3
Improved safety	3
Improved time management skills	1
Improved motivation	4
Fear reduction	2
Improved skill	2
Reduction in misconceptions about ageing	3
Don't know	0

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

	Number
Yes	3
No	1
Don't know	0
Total	4

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	3
No	0
Don't know	1
Total	4

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

	Number
Perceived poor health	2
Symptoms associated with chronic conditions	2
Fear of injury	2
Acute exacerbation of chronic conditions	1
Lack of skill	3
Lack of time	1
Lack of energy / motivation	2
Environmental barriers	2
Misconceptions about ageing	3
Other	1
Don't know	0
Not applicable	0
Total	19

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

	Number
INFORMATION APPROACHES	
Community wide campaigns	2
Group-based health education focused on information provision	4
Mass media campaigns	2
Point of decision prompts	0
Other	0
BEHAVIOURAL AND SOCIAL APPROACHES	
Individually-adapted behaviour change	3
Education with TV/video/DVD	1
Family-based social support	2
Health professional social support	3
Non-family social support	2
Other	1
ENVIRONMENTAL AND POLICY APPROACHES	
Enhanced access to physical activity	4
Outreach activities	0
Transportation policy	2
Infrastructure changes to promote non-motorised transit	2
Urban planning approaches	1
Other	2
Don't know	0

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

	Number
General message	2
General advice	3
General warning	0
Specific advice	2
Specific warning	1
Other	1
Don't know	0
Total	9

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

	Number
Media	3
Post	2
Internet / e-mail	0
Intermediates, healthcare professionals	3
Models / opinion	1
Events (e.g. Falls Awareness Day)	3
Other	1
Don't know	0

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

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

Half of the promotion strategies have reached 75% of the target population, one strategy 25% and one 100% (Table 73). The most effective approach was group-based health education focused on information provision followed by individual-adapted behaviour change (Table 74). All directors mentioned multiple approaches that were effective. Other approaches used were individual information and giving possibilities for empowerment. A majority of the strategies have been evaluated since implementation (Table 75) and the evaluation consisted mainly of behaviour change and population reached (Table 76). Other types of evaluations mentioned were asking the elderly people how they experienced changes in their living area, fracture outcome and levels of

physical activity. Multiple evaluation methods were used. Half of the strategies had a specific plan or device to maintain the behaviour change (Table 77). Multiple methods were used for maintaining behaviour change (Table 78) but no methods were more common than others.

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

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

	Number
INFORMATION APPROACHES	
Community wide campaigns	2
Group-based health education focused on information provision	4
Mass media campaigns	1
Point of decision prompts	1
Other	1
BEHAVIOURAL AND SOCIAL APPROACHES	
Individually-adapted behaviour change	3
Education with TV/video/DVD	0
Family-based social support	2
Health professional social support	2
Non-family social support	2
Other	1
ENVIRONMENTAL AND POLICY APPROACHES	
Enhanced access to physical activity	2
Outreach activities	0
Transportation policy	1
Infrastructure changes to promote non-motorised transit	1
Urban planning approaches	0
Other	1
Don't know	0

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
Yes	3
No	1
Don't know	0
Total	4

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

	Number
Behaviour change	2
Population reached	2
Cost effectiveness (e.g. total costs)	1
Other	2
Don't know	0
Not applicable	0

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

	Number
Yes	2
No	0
Don't know	1
Missing data	1
Total	4

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
Printed material posted	1
Telephone	1
Positive reinforcement / feedback rewards	1
Financial incentives	0
Social support	1
Buddy groups	0
Opportunities to socialise	1
Promotion days	1
Other	1
Don't know	0
Not applicable	1

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

▪ **Finance**

Only two directors knew the approximate total cost for running the promotion strategies, therefore only the range (Euro 200.000-350.000) is shown in Table 79. One of the strategies aimed at improving and enhancing the environment and therefore a total cost was only calculated. Two promotion strategies were financed through local health budgets, one from a combination of university and county funding and one from a combination of the Swedish Road Administration (national level) and a municipality (local level) (Table 80).

Median	
Least	27.120
Most	200.000
Number	2

Table 79. The range of two PA Promotion Strategy Directors' estimates of the total cost of developing and running their promotion strategy.

	Number
NATIONAL / REGIONAL GOVERNMENT	
Health budget	0
Social care budget	0
Leisure / sport budget	0
Other	1
CITY / LOCAL GOVERNMENT	
Health budget	2
Social care budget	0
Leisure / sport budget	0
Other	1
OTHER SOURCES	
Lottery	0
Charity	0
Other	0

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

▪ **SYSTEMATIC SEARCH FOR EVIDENCE BASED GUIDELINES**

○ **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 constituted a readily accessible inventory of existing evidence based guidelines. It permits a critical comparison of the successful PA programmes and PA promotion strategies (identified by the WP5 Experts) with current evidence-based, best-practice 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 all five 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 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)

CINAHL (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

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 Institutes 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-seven 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.

- **CONCORDANCE OF PROGRAMMES WITH GUIDELINES**

- **Discussion**

Recommendations have stated that physical activity/training should include aerobic activity, muscle strengthening, flexibility and balance exercises for elderly people and younger people with chronic disabilities. [1, 2]. All of the programmes described in this report included at least one but mostly several of these components. The recommended frequency is 2-3 times/week [1] and this is also fulfilled by most programmes (Table 22).

Intensity of aerobic activity and muscle strengthening were not asked for in the questionnaire and can therefore not be evaluated and discussed. Most programmes included progression as is in line with guidelines [3]. Only half of the programmes conducted objective measurement, which may facilitate setting the level of progression as well as adherence [4]. However, most programmes surveyed the clients regarding aims of training, which has been stated to increase adherence to a physical training programme [4]. Perceived safety is another important aspect of

adherence [4]. Only 55% of the programmes had an emergency protocol to be followed in case of an adverse event, and 66% had an equipment protocol. This level should be increased both in order to improve the clients' safety, but also as a way to increase adherence through information about the protocols to the clients.

Adaptations of most programmes were set to the mainstream of older people. Only one programme was adapted for institutionalised elderly people and this programme follows the recommendation that muscle strength training and balance should be the focus of a training programme for very frail elderly people [5]. The description and the effects of this specific programme have been published [6, 7].

Tai chi has been shown to reduce falls, especially the first fall [8] however, only one programme included Tai chi components in the programme. Qigong movements were included in three programmes and two of them aimed at falls prevention. Both Tai chi and Qigong include movements in different standing positions (support areas), but Qigong has been regarded as less complex and challenging to perform [9]. However, few studies have examined the effect of Qigong. Only one study found has examined the effects on physical performance showing a positive effect [10]. Therefore, evidence is limited. Despite this, training of Qigong is widely spread in Sweden especially within programmes offered through different retirement and non-profitable exercise organisations. Unfortunately, they declined to participate in this survey.

Questions about falls prevention were asked both as a part of the overall programme as well as a specific modality within a programme. As mentioned above two programmes were designed to reduce falls. One consisted of a variety of components such as endurance, strength training, balance and flexibility/mobility trained in group sessions, while the other consisted of individual tailored programmes including balance, strength training and walking outdoors. Four more programmes had falls prevention as a modality within the programme and components included were mainly muscle strength, balance and endurance training as well as Qigong and Pilates. Multifactorial interventions have been shown to reduce falls, and exercise intervention is an important part of this. Here, balance training has been demonstrated to be the most important exercise component [11]. Tai chi needs further evaluation before it can be recommended as the preferred balance training. All nine programmes targeted balance, also those who did not aim at falls prevention. However, type of balance and the level of difficulty can not be stated through the questions asked.

Programmes that aimed at osteoporosis prevention mainly consisted of strength training, balance training and exercises to music in standing position i.e. weight bearing exercises. This is in line with recommendations suggested by the American College of Sports Medicine (ACSM) to include weight bearing endurance activities and strength training to preserve bone health [12].

For cardiac patients, recommended components include aerobic training and strength training [13, 14]. Two programmes had cardiac rehabilitation as a component in the overall aim of the programmes. The programmes consisted of aerobic training and strength training in interval sections and were adapted to include persons with cardiac problems as well as healthy elderly people.

Very few programmes required a health check before entering the programme. According to Haskell et al [2] there are poor predictive values of exercise testing for acute cardiac events in asymptomatic persons, especially when entering a programme of moderate intensity. However, symptomatic persons with diseases such as previous cardiac events, diabetes etc should consult a physician before entering a programme [2]. Questions regarding identification of potential problems were only asked in relation to health screening tools and were therefore not applicable to answer for most of our responders. Therefore, we do not know how the PA directors handled this issue and it can not be analysed in this report.

- **CONCORDANCE OF PROMOTION STRATEGIES WITH GUIDELINES**
 - **Discussion**

It was difficult to engage experts that know of different promotion strategies for elderly people that run or have run in Sweden. Only four strategies are being described and it's difficult to know whether this gives a true picture of promotion strategies run in Sweden. If this is the true picture, there is a lot that needs to be done. The National Institute of Public Health has recently been relocated to a smaller town in the north of Sweden and was therefore reluctant to take part in this survey. They did contribute with one strategy, but there may very well be more strategies that they have taken part in or have knowledge of that have we have no information of.

Promotion strategies included in this report have used similar but also different approaches to increase physical activity. One strategy focused on the environment and aimed at creating safe and accessible

surroundings to enhance activity, which is in line with recommendations from the WHO [15]. They also used empowerment as a method to facilitate the older individuals' own perception of the importance of physical activity. Another strategy used multiple interventions to reduce cardiovascular risk factors, directed toward the whole population, where increased physical activity was one component.

One strategy aimed at osteoporosis and falls and fracture prevention was also directed to the whole population. Lectures and seminars were given to increase the knowledge of the impact of physical activity on bone content as well as to reduce falls. Exercise groups were created to enhance activity. For the prevention of osteoporosis, both young and elderly need to be addressed which was the case in this strategy [12]. One promotion strategy runs in a local municipality where elderly people are invited to different "meeting points" that offer both cultural, social and physical activities. This is part of the health promotion programme run in the municipality.

All strategies offer both individual and group-based activities, which is of importance to be able to reach people with different needs and preferences. They also use different theoretical models to affect behaviour as well as social support both from the family but also from for example health professionals [4]. Self-efficacy has been shown to be a strong predictor for behavioural changes [16]. Only one strategy used this theory as a part of the ASE-model (Table 59). However, self-efficacy has also been suggested to be included in the Health Belief Model and from the questions asked, we can not exclude that self-efficacy has been used in other strategies.

Promotion strategies to increase physical activity are suggested to be run on both national, regional and local levels in order to be successful [15]. As only one of the strategies presented fulfilled this recommendation, it might be something that needs to be taken into consideration when planning future health promotion strategies.

▪ CONCLUSIONS & RECOMMENDATIONS

One of the major limits of this report is the small number of expert and promotion strategies included. Therefore, it is difficult to draw conclusions regarding the amount and the results of different Physical Activity programmes and strategies.

No official guidelines exist regarding physical activity for elderly people in Sweden. However, "Physical activity on prescription" is gradually being spread and for this purpose a book named FYSS has been developed that addresses all age groups (www.fyss.se). Further action must be taken before this becomes fully implemented.

No professional register of qualified instructors exists in Sweden. Different exercise organisations have their own basic qualifications to be able to be an instructor for different exercise groups. Exercise groups directed toward different medical diagnoses or syndromes are usually run by physiotherapists within the health care sector. Most programmes and strategies included in this survey fulfil the recommendations for example given by the ACSM, but we can not conclude that this is the case for all programmes and strategies run in Sweden.

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