



EUNAAPA – Work Package 5

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

National Report Austria

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1 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, Austrian 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 June 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 PA expert was asked to:

- a. identify a successful PA programme for older people in their country.
- b. identify a successful PA promotion strategy for older people in their country.
- c. 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.

Regarding to point a. and b. the original plan was that the PA experts should also assist their PA programme and PA promotion strategy directors to complete a second questionnaire. But this plan would have caused substantial work effort for the experts, so we had to modify the original plan. In the end all participating people, the PA experts as well as the directors of successful PA programmes or of successful PA promotion strategies were assisted by the Austrian EUNAAPA team.

So after the data from the PA experts had been completed the next step of the Austrian EUNAAPA team was to ask all named directors to complete a longer questionnaire, concerned primarily with the characteristics of the chosen PA programme and the promotion strategy respectively.

The resulting data of the three questionnaires 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 the Austrian EUNAAPA team.



2 THE EXPERTS

2.1 Methods

2.1.1 Selection of Experts

As requested by the leader of Work Package (WP) 5, all EUNAAPA Partners should select eleven physical activity (PA) experts with the help of a matrix (see Appendix One, Table 1). They were instructed to 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. The partners were advised that the matrix should be used flexibly, bearing in mind that, for example, that 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.

In addition to these guidelines and due to our experiences from WP 4 the Austrian collaborating partner selected more experts than necessary in order to reach eleven PA experts at last. Institutions and experts known to the authors as well as information drawn from an intensive internet research were listed and then put into the fields that suited their background most. Further on the selected institutions working in the relevant sectors were approached and asked to name experts willing and able to participate in the survey.

2.1.2 Distribution and return of Experts' questionnaires

At last the sample consisted on the one hand of experts who had already supported the implementation of a former EUNAAPA work package and on the other hand of experts who were requested for the first time. Most of the Austrian experts selected were not known personally to the Austrian EUNAAPA team.

The initial contact with the survey subject was made by phone in order to explain the objectives of the questionnaire and to ensure the experts' compliance. Simultaneously, every potential expert received an email containing all relevant information about the work package. Additionally the new experts were given information about the EUNAAPA project in general, whereas the well-known experts were informed about the actual project process.

Meanwhile we created an online-survey of all questionnaires for WP 5. This was done with support of Prof. Sabine Würth, the head of the Department of Sport Psychology from the Center for Sport Science and University Sport and by means of Unipark online survey software.

The online-survey consisted of the following components:

- First of all there was a welcome page with general information about the respective purpose of the questionnaires. At the beginning of the survey we unfortunately failed to list the entrance requirements for our experts, but immediately they were added.
- While the welcome page was done in the native language (German) the rest of the online-survey regarding the definitions and the questionnaire was - according to the original draft - designed in English.



From the 18th of June until the end of July 2007 each of the Austrian experts who had agreed to participate was sent an invitation to the Expert Questionnaire including an access code for the online-survey.

PA experts were encouraged to complete the PA Expert Questionnaires as soon as possible before the end of July. Defaulters were reminded in mid-July and at the end of July by phone.

After the end of the online survey the data was electronically carried across into excel files. Additionally the data was checked by a 'second set of eyes'.

2.2 Results

2.2.1 Selection of Experts

All in all, 15 experts were selected as potential respondents. 13 experts were covering 9 of the 11 fields of the original expert selection matrix. Two experts belonging to the educational sector at local level were added in a separate field (No. 12). However, approximately half of the Austrian experts could be identified with more than one field in the selection matrix.

Table 1. Sampling Matrix for the Austrian experts

	sport sector		health sector and/or social services sector		education sector (including training and professional development)	
National or Regional	government	NGO	government	NGO	government	NGO
	1	2	3	4	5	6 7
Experts approached	Expert I	Expert C Expert H x	Expert A Expert F x	Expert D Expert E Expert G Expert H	—	Expert E Expert H x
City or local neighbourhood	government	NGO	government	NGO		NGO
	8	9	10	11		12
Experts approached	—	Expert J	Expert A Expert B Expert F	Expert J		Expert K Expert J x

x denotes experts that were contacted but did not fill out the online-survey or expert who did the questionnaire incorrect

— no expert approached in this area because they were not reached within the survey period



2.2.2 Return of Experts' questionnaires

By 31st July 2007, twelve of the fifteen PA Expert Questionnaires had been filled out. Due to a lack of time three defaulters refused their participation in the end. Educational representatives at governmental level were not reached within the survey period. One questionnaire was eliminated because of deficient answers. According to the WP 5 guidelines the sample finally consisted of eleven Austrian PA experts, who are listed in Appendix Two in alphabetical order.

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	3	10	2	4	6	8	4	9	1	11	12

Whereas the number of potential experts in the area of non-governmental organisations turned out satisfactory, it was even harder to find governmental respondents especially at national level.

We conducted the Federal Ministry of Social Affairs which is responsible for senior citizen's concerns in general, the Federal Ministry for Health which deals with health concerns for the whole population and the Federal Chancellery which is in charge of sport affairs. Although the contacted persons willingly gave information about their responsible area of work and helpfully named us links at regional level to other health related institutions or experts, they did not feel competent enough to fill out the questionnaire or refused to take part in the online-survey at all. The reasons given were that institutions at national governmental level generally develop health related strategies and structures and try to establish networks in the area of aging, health care and physical activity. They also do statistic research and public relations. Concerning PA programmes for older people in particular institutions at national governmental level more often commission such programmes or raise funds but rarely are implementing programmes on their own.

As table 1 shows, senior people affairs in Austria are traditionally part of the health and social system. In the last decade the sport sector has become aware of the importance of physical activity and sport interventions to keep older people healthy but this process is still in progress. And finally at the educational sector the situation in Austria is diffuse at the moment although there is an increasing demand for good qualified instructors in this area. But this will be discussed later on (Chapter 3).

Furthermore we included two institutions in the online-survey which did not match with the primary matrix. One institution is a senior lobby. In Austria senior lobbies are highly connected to political parties. By law its aims are amongst others *to represent and to encourage social, economic, cultural and other miscellaneous interests of the seniors*. As physical activity plays an important role to sustain health for the elderly and as group activities have a high social impact, the promotion of physical activity programmes is also of senior lobby's interest. Even though the survey showed that they mainly offer approved activities but do not develop or implement physical activity programmes, they are an important address for further PA promotion.

The other institution is a 'municipal adult centre for continuing education' (VHS), which provides further learning, training and physical activity programmes for older people. It is a



very popular address for the elderly in town to meet people there and to join various lectures, like educational programmes or PA specific lectures, such as dance and recreational courses.

2.2.3 Experts' educational background

As seen in the following chart (Table 3) there were no medicines or other health professions among the experts. Most of the Austrian experts were exercise or sport scientists. A lot of the selected experts had another educational background. The majority of the 'Others' had a social background, like sociologist or social worker.

A quarter of the experts were multiple educated. Some had additional skills in health promotion, health management or mnemonic training. Others had studied dramatics and political science or just are autodidactic.

The responses of the experts clearly emphasise, that the support of older adults in Austria is traditionally achieved by social services or institutions. But it is also a highly visible hint, that there are hardly any appropriate qualification possibilities, for example there is no professorship for geriatrics or geragogy in Austria.

Table 3. Educational backgrounds of national experts for WP5

PA Expert Profession	A	B	C	D	E	F	G	H	I	J	K	Total
Medicine												0
Other Health Profession												0
Exercise/ Sport Science		x	x					x	x			4
Other	x	x	x	x	x	x	x	x		x	x	10

2.2.4 Experts' areas of practice

Concerning the responses to experts' area of practice table 4 shows that the majority (73%) of the PA experts are working in the field of PA programmes whereas only 45% operate in the field of PA promotion strategies.

All but one expert are located at one organisational level, either national, regional or local. As mentioned before most of them are working in the non-governmental sector, predominantly they are supporting community-dwelling older adults and mainly do health promotion. None of the PA experts marked health care or research as their professional expertise.



Table 4. The national experts' areas of practice

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



3 NATIONAL QUALIFICATIONS IN THE SUPERVISION/ GUIDANCE OF PHYSICAL ACTIVITY

3.1 Methods

The questionnaire completed by the 11 national experts also asked about the availability of national qualifications in the supervision or guidance of physical activity for adults in general and for older adults in particular in their countries. 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).

3.2 Results

3.2.1 Basic and higher level qualification

As analysis shows (see table 5), 55% of the PA experts agree that there is a basic level qualification available in Austria, whereas only 27% note that it is required for guiding older-person physical activity interventions. According the higher level qualification the percentage is even much lower.

About a third of the experts could not give a reply to the questions ('don't know') concerning the existence of older-person-specific qualifications at all. Even though the importance of implementing a higher level qualification was mainly classified as 'necessary', only 27% of the PA experts could answer the availability of a higher level qualification with yes.

Table 5. PA experts' responses concerning the availability in Austria of a basic level and a higher level qualification in supervising or guiding physical activity or exercise by older adults

	Basic level qualification		Higher level qualification			
	Available	Required	Available	Required	Important	External verification
Yes	6	3	3	2	8	2
No	1	0	4	1	0	2
Don't know	4	2	3	4	1	4
Sometimes		3		1		
Not applicable		1		2	1	2
Missing Data	0	2	1	1	1	1
Total	11	11	11	11	11	11



Table 6. 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%	0	1
25%	2	2
50%	0	0
75%	3	0
100%	0	0
Don't know	4	5
Not applicable	0	1
Missing data	2	2
Total	11	11

3.2.2 Austrian qualifications in the guidance of PA for older people

The responses of the experts reflect the diffuse situation of the national qualification requirements in Austria in the guidance of physical activity for older people. Therefore we started our own short enquiry to get a general idea about the range of qualification possibilities which is shown in table 7.

There are a few out-of-school educations at university level as well at college level, for example offered by the Sports Academy and the Pedagogic Academy of the Catholic Church. But also various associations, like sport clubs and psychomotoric clubs, offer an older-people-specific instructor training. There are a few commercial providers as well.

The training programmes substantially differ in entrance requirements - with or without final examination or graduate degree - but they also vary in the duration and the cost of training. There is a wide difference between the curricula too. Some training programmes are mainly based on socio-scientific aspects, others basically educate in physical activity contents.

In terms of the amount of lectures in physical activity for older people the curricula vary between rudimental information, which is taught in a few hours, and mainly PA based contents. And within the physical activity contents there are also differences: some focus on psychomotoric or motogeragogic aspects others put their emphasis on dance or sport in general.

All in all there is no common valid qualification for the guidance of physical activity for older people in Austria. Therefore there are also no official guidelines to decide between a basic or a higher level qualification. So according to this survey question the expert's rating depends on personal view and not on existing national guidelines. In many cases the training programmes are part of the project planning, to guarantee the competence of the prospective instructors and the quality of the project.



Table 7. Examples of Austrian qualifications in the supervision/guidance of physical activity for older people in alphabetic order of the supplier's abbreviation

Abbrev.	Supplier	Name of the qualification
AKMÖ	Aktionskreis Motopädagogik Österreich www.psychomotorik.at/	Motogeragogik
BSPA	Die Sportakademie (Sport Academy) http://www.bafl.at/	Lehrwarteausbildung Fit/Senioren (senior trainer)
KBW	Katholisches Bildungswerk http://www.bildungswerk.at/	<ul style="list-style-type: none"> ▪ LIMA-Trainer/in ▪ SelbA-Trainer/in
KPHVIE	Pädagogisches Institut der Erzdiözese Wien http://www.kphvie.at/	Masterlehrgang – Geragogik (Master course in geragogy)
PGA	Verein für Prophylaktische Gesundheitsarbeit http://www.pga.at/	Dipl. VitalCoach 50 plus
ULIG	University of Graz http://www-gewi.uni-graz.ac.at/ulig/	ULIG – Universitätslehrgang Interdisziplinäre Gerontologie (Postgraduate course on interdisciplinary gerontology)
—	Institutes for Sport Science at different Universities in Austria <ul style="list-style-type: none"> ▪ Vienna: http://zsu-schmelz.univie.ac.at/ ▪ Salzburg: http://www.sbg.ac.at/usi/home.htm ▪ Innsbruck: http://www.uibk.ac.at/usi/index.html ▪ Graz: http://www.kfunigraz.ac.at/usiwww/ 	Master of science: <ul style="list-style-type: none"> ▪ Basic information on ageing and PA for older adults ▪ Optional additional skills
—	Body & Health Academy http://www.bodytrainer.at/	Dipl. Senioren- und Gesundheitstrainer/in
—	SPORTUNION http://www.sportunion.at	<ul style="list-style-type: none"> ▪ FIT 65+ INSTRUCTOR Ausbildung ▪ Übungsleiter/in für den Senioren-sport

This list does not claim to be exhaustive.

There is no qualification by law basically necessary for the supervision of PA interventions of the elderly at the moment. The estimation of the experts concerning the basic level qualification differs between 25% and 75%, and only a minority of the instructors is high-qualified (see table 6). The demand for more high-qualified employees in the guidance of physical activity for older people is evident (see table 5). Due to statistical prognoses for increasing life expectation, there will be a great need for older-person-specific good-qualified instructors in future.

Therefore further discussion for national guidelines regarding basic and higher level qualifications in the guidance of physical activity for older people in Austria will be necessary.

3.2.3 Assessment, validation and revalidation

Table 8 and 9 make clear that neither the components of the assessment for the higher level qualification nor the requirements for retention of this level are non-standard in Austria.



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	4	4	3	4	1	2
No	7	7	8	7		
Total	11	11	11	11		

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	2	2	3	2	1	0	2
No	9	9	8	9	10	11	
Total	11	11	11	11	11	11	

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

3.2.4 Professional register

As table 10 shows experts mainly do not know if there is a professional register of PA instructors in Austria.

Table 10. PA experts' responses concerning the existence in Austria 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		
	Exists	Membership requires	
		Entry level*	Higher level**
Yes	2	0	0
No	1	2	0
Don't know	6	5	6
Not applicable		2	3
Missing data	2	2	2
Total	11	11	11

Actually there are some professional registers for persons who work with the elderly, like the register of Austrian Senior Dance Association, the register of the Physiotherapists, or the Personal Trainers' register. But there is definitely no professional register explicit of instructors for PA guidance of older adults in Austria.



4 'SUCCESSFUL' PA PROGRAMMES

4.1 Methods

4.1.1 Selection of programmes (including definitions)

The original plan was, first to ask each national expert to identify a successful PA programme for older people in his country and its director. Then the experts should assist their directors to complete a comprehensive questionnaire concerned primarily with the characteristics of the chosen PA programme. Due to the great expenditure of time and because the assistance was not remunerated at all this would have caused many problems. Therefore the Austrian EUNAAPA team decided – in accordance with the Work Package leaders – to support all directors on their own.

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.

As originally intended the physical activity experts were not permitted to select their own PA programme. But this rule caused various difficulties among the collaborating partners, worrying that they will not get the appointed number of programmes or promotion strategies by sticking rigidly to the initial rule. Finally it had been decided that the experts can nominate their own PA programme if there is absolutely no other option.

The experts were requested to fill out the online questionnaires as soon as possible but not later than the end of July 2007. Their nomination and information were the basis for the next working step.

4.1.2 Distribution and return of programme questionnaires

By the end of July 2007 we had received the names of ten Austrian PA programme directors. One expert was not able to nominate a successful PA programme or promotion strategy.

Then the named directors were initially contacted by phone in order to explain the aims of EUNAAPA and the objectives of the questionnaire and to ensure the directors' compliance.



Simultaneously, every potential director of a successful PA programme received an email containing all relevant information about the work package. Additionally persons who were joining the EUNAAPA project for the first time were given information about the EUNAAPA project in general, whereas the well-known directors who had already supported the implementation of a former EUNAAPA work package were informed about the actual project process.

The PA programme directors also were sent an invitation to the online-survey including an access code. We had already created an online version of the original draft in June 2007. It consisted of the same components as the Expert Questionnaire:

- A welcome page in the native language at the beginning with general information about the respective purpose of the questionnaire and the entrance requirements for our experts.
- The rest of the online-survey regarding the definitions and the questions was - according to the questionnaire supplied by the work package leader - designed in English. Technical terms, which we thought might not be known by the directors or might cause misconception, were additionally specified or translated.

All subjects were asked to complete the PA Programme Questionnaires as soon as possible. Additional questions on the questionnaire and survey procedures were answered by telephone. In two cases the questionnaires were filled out with the assistance of an Austrian EUNAAPA partner.

After the first deadline had passed on the 20th August 2007 all directors who had not done the questionnaire by that time were reminded by a telephone call. And we repeated the telephone call one week later.

On the 30th August 2007 the online survey was closed. The Unipark-Software enabled us to export the data of each questionnaire directly into excel files. Nevertheless the data was checked by a 'second set of eyes' before the evaluation started and before the resulting data of the three questionnaires was submitted to the leader of work package 5 (University of Edinburgh) for incorporation into a cross-national report.

4.2 Results

4.2.1 Selection of programmes

The first aim of EUNAAPA work package No. 5 was to identify, with the help of national experts, Austrian examples of physical activity programmes and PA promotion strategies for older people, which were deemed to be 'successful'.

The result of this first work step was the nomination of ten Austrian PA programmes and PA promotion strategy directors, one fewer than requested. Unfortunately one expert was not able to name a successful Austrian PA programme or promotion strategy.

As requested by the leader of Work Package (WP) 5 the collaborating partners had to pay attention that no director of a programme or promotion strategy was nominated more than once. To our surprise there were no double entries.



4.2.2 Return of programme questionnaires

To keep to the time schedule of the EUNAAPA project the online survey had to be started at the beginning of the summer and holiday season in Austria. In addition to the accessibility of the experts and their personal time resources the online questionnaires were filled out bit by bit. To avoid any delay the Austrian EUNAAPA team immediately contacted the directors of a successful PA programme, named by the Austrian experts.

Finally, at the 31st August 2007, we had received the description of seven successful PA programmes, which are listed in Appendix Three. Three questionnaires were not filled out due to different circumstances. One director was not reached because he was on summer holidays. Another director was not able to fill out the questionnaire due to a lack of time and the third person refused to fill out the online survey because the programme did not agree to participate.

At least the initial date of finishing the data collection was delayed by the Work Package leaders. Unfortunately we received this information too late to restart the search for another successful PA programme director again and send another invitation letter.

4.2.3 Programme directors' educational backgrounds

As seen in the following chart (Table 11) the educational background of the PA programme directors is similar to the experts' one. There were one medicine and one sport scientist, but no other health professions among the directors. The rest of the selected directors had another educational background. The majority of the 'Others' had a social background, like sociologist or social worker. But nobody of the Austrian directors of a PA programme was originally educated in geriatrics or geragogy.

Table 11. Educational backgrounds of PA Programme Directors selected by Austrian national experts

Profession	PA Programme Director							Total
	A	B	C	D	E	F	G	
Medicine						x		1
Other Health Profession								0
Exercise/ Sport Science			x					1
Other	x	x		x	x		x	5



4.2.4 Catchment areas of programmes

Table 12 shows that the PA programmes were classified in almost all geographical areas. Most of the PA programmes were located at regional level.

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

	Number
National	2
Regional	3
Limited to a city/town	2
Limited to a local neighbourhood	0
Total	7

4.2.5 Ages of programmes

The responses of the PA programme directors concerning the length of time their programme has existed, table 13 shows that the duration mainly was 6 to 10 years. This indicates that the programmes are completely implemented by institutions which requires responsible long-term consideration of the experts.

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

	Number
Less than 1 year	1
1 to 5 years	2
6 to 10 years	3
More than 10 years	1
Missing data	0
Total	7

4.2.6 Components of overall programmes

The majority of the PA overall programmes comprises multiple components (see table 14). Primarily they focus on community based senior fitness programmes. But also community based senior chair-based programmes, residential home programmes, falls prevention programmes, or fitness and cultural programmes in nursing homes are part of the overall programme. It is remarkable, that none of the Austrian PA programmes have any focus on specific medical conditions.



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

	Number
Masters (elite competitor) programme	1
Community based senior fitness programmes (groups)	5
Community based senior chair-based programmes	2
Home based exercise programmes (individual)	1
Exercise referral / General Practitioner referral programmes	0
Falls Prevention Programmes	2
Medical condition-specific programmes	0
<i>Cardiac rehabilitation</i>	0
<i>Pulmonary rehabilitation</i>	0
<i>Arthritis programmes</i>	0
<i>Other medical condition-specific programmes</i>	0
Other programmes	3

As table 15 shows the programmes are mainly done indoor and by group activities.

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

	Number
Group activity	7
Individual activity	2
Indoors	7
Outdoors	3
Water-based	1
Land-based	7

Generally all types of facilities listed in table 16 are in use, except the participant's private dwelling. Very often the programmes are located in community centres and sport or physical recreation facilities. Additionally the directors also named residential homes, senior clubs or facilities of partner organisations.

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

	Number
Sport / physical recreation facility	5
Community centre	6
Day resources centre	1



Participant's private dwelling	0
Sheltered housing, assisted living facility, care home or nursing home	2
Other	3

4.2.7 Characteristics of programmes' clients

The next questions were regarding the characteristics of programmes' clients: Figure 1 shows that there is really a wide spread concerning the age group for which the overall programmes are intended. Considering the minimum and the maximum age senior programmes span over half of the life expectancy. Only a few overall programmes are offered for a target group with a small range of calendaric age. Whereas the majority of the programmes addresses young seniors as well as persons of age 80 and above.

Due to this wide range of senior age and in terms of the effectiveness of health-oriented programmes further research is necessary to gain knowledge if there are selective age-specific programmes offered within the overall programmes and to collect detailed information about their particular programme contents.

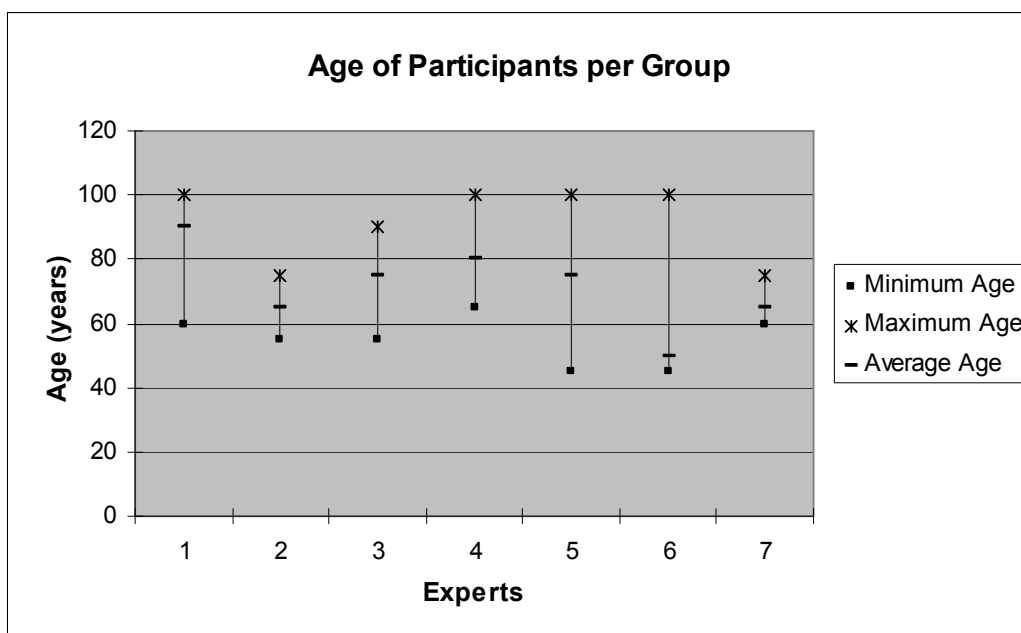


Figure 1. PA Programme Directors' responses concerning the age groups for whom their overall programme is intended and the average age of participant actually attending a typical session of the programme

Table 17 shows that the overall programmes mainly are intended either for community-dwelling older adults or for institution-dwelling older adults. Only a few programmes are offered for both categories, but if so, than only in separate groups.



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	3
Institution – dwelling older adults	2
Both, together (in the same group)	0
Both separately (in different groups)	2
Total	7

Regarding the level of functional mobility of the participants all functional mobility categories were covered by the overall programmes. Going into detail three overall programmes definitely had no inclusion criteria for the participants. Some programmes included two or three levels of functional mobility. At least one overall programme was limited to one mobility category.

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	4
Walking outdoors with no walking aids and no assistance or supervision by another person	6
Walks outdoors with a walking aid but no assistance or supervision by another person	5
Walks outdoors only with assistance or supervision by another person	3
Never walks outdoors	5

The last question concerning the characteristics of programme clients' was answered by the directors unanimously. All directors estimated that three out of four participants in their overall programme are women.

In fact the physical activity level of men in Austria is in comparison with the PA level of women distinct above almost the whole life span and approximates not until later life (see Appendix One, Table 2). These data absolutely correspond with international data. Nevertheless further investigation is necessary to identify the specific needs of men and finally to provide adequate PA programmes for older male participants.

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

	Number
0%	0
25%	0
50%	0
75%	7



100%	0
Don't know	0
Total	7

4.2.8 Characteristics of programmes' classes

To conclude, the directors estimated that:

- Normally group sizes within the programmes are of 11 to 15 participants but sometimes also including 16 to 20 older adults (see table 20).
- Mainly 11 to 25 participants are supervised by one instructor (see table 21).
- Once or twice a week are the most usual frequencies with which individuals participate in their overall programme, even if a higher frequency is possible (see table 22).
- Predominantly 50% to 75% of the current participants attended their overall programme for at least a year. Assuming that the attendance is optional, the high percentage of current participants indicates that there is a solid team structure (see table 23).

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

	Number
1	0
2 – 5	0
6 – 10	1
11 – 15	3
16 – 20	2
21 – 25	0
26 – 50	1
51+	0
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	0
1 : 2 - 10	1
1 : 11 - 25	4
1 : 26 - 50	1
1 : 51+	0
Don't know	0
Missing data	1
Total	7



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	3	3
2	1	2
3 – 4	1	0
5 – 7	1	0
8+	0	0
Don't know	0	0
Missing data	1	1
Total	7	7

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%	2
100%	0
Don't know	1
Total	7

4.2.9 Objectives, outcomes, monitoring and feedback

At first sight (see table 24) the most overall aims of the successful Austrian PA programmes are to *'improve physical, mental and social well-being'*. Going into details it is remarkable that there were no double entries regarding the two most important overall aims among the directors. Some programmes rather focus on psychosocial objectives, others aim for more physical and mental aspects, others again promote health and opportunities to socialise. Only improved competitive performance is not targeted at all.

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	2
Improved competitive performance	0
Disease prevention	2
Improved physical function	3



Improved mood	1
Opportunities to socialise	3
Improved self esteem / confidence	3
Other	0
Don't know	0
Total	14

Table 25 shows that all PA directors formally measure the satisfaction of participants in their programmes once or twice a year.

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	0
1 – 2	7
3 – 6	0
More than 6	0
Don't know	0
Total	7

Concerning the participants' monitoring most of the directors answered that they survey participants for the aims of their involvement in the programme and adjust the programme according to the participants' aims (see table 26). But only a few also record objective outcome measures at regular intervals. These measurements exclusively consist of mental and social components whereas physical aspects are not part of it (see table 27).

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	5	5	3
No	2	2	4
Don't know	0	0	0
Total	7	7	7



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

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

4.2.10 Pre-participation assessment

The PA programme directors' responses concerning the pre-participation assessment (see tables 28-33) reflect the results of the former EUNAAPA work package No. 4. As stated in the Austrian National Report on *Assessment Instruments for Physical Activity and Physical Functioning* the PA and PF assessment instruments are mainly used by geriatrics and other health professionals who work in geriatric centres, but that does not apply for the extramural field of PA programmes.

Concerning the participation in an Austrian PA programme, in most cases there was no completion of a health-screening tool required by the potential participants.

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	2
No	5
Don't know	0
Total	7



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	0
Assessment by a doctor	1
Assessment by a doctor who is a sports medicine specialist or by the programme doctor	0
Assessment by some other healthcare professional	1
Assessment by an exercise instructor	0
Don't know	0
Not applicable	1
Other	0

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	0
No	6
Don't know	1
Total	7

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 programme
Yes	0	0
No	5	4
Not applicable	2	3
Total	7	7

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	0	0	0	2	2
No	7	7	7		
Total	7	7	0		



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	0
Applicant must obtain 'approval' from any healthcare professional	0
Applicant must obtain 'approval' from their doctor	2
Applicant must obtain 'approval' from a doctor who is a sports medicine specialist or from the programme doctor	0
It is not possible for the applicant to be permitted to enter the programme	0
Other	0
Don't know	0
Not applicable	1
Missing data	4
Total	7

4.2.11 Programme content

In the next chapter we tried to get more information about the contents of successful PA programmes. Table 34 shows that on one hand coordination and balance and on the other hand flexibility and mobility are those aspects of physical activity which the PA programmes mainly aim to improve. Secondly to advance in endurance or strength is also a goal of the PA programmes, whereas explosive power and bone density are not targeted at all.

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

	Number
Strength	2
Explosive power	0
Endurance	3
Coordination – Balance	6
Flexibility – Mobility	5
Body composition	1
Bone density	0
Other	3

Going into details table 35 gives an overview over the modalities of physical activity offered in the PA programmes. Dance, movement to exercise and exercise to music are definitely the most common modalities. Walking, with its many different specifications, is also a very popular activity in the PA programmes. Swimming as another modality of physical activity was nominated too.



Minigolf was the only group sport, which was named in the PA chart. It is also done in a competitive way. There is even a homepage of the Minigolf Company (<http://minigolfcompany.com/>) where participants and guests for example are informed about the dates of competition. Afterwards the results of an event are published on the website. You also can see photos of wonderful competitive encounters there.

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

Modalities of Physical Activity	Number	Modalities of Physical Activity	Number
Aquatics		Walking	
Swimming	1	Indoor Walking (not on treadmill)	2
Aqua exercises	0	Outdoor Walking on path/ track	2
Cycling		Outdoor Walking groups	1
On Road/ Paths	0	Rambling or Hill Walking	1
Off Road/ Track/ Hills	0	Trekking	1
Group Sports/ Ball Games		Nordic Walking	1
Badminton	0	Machine based equipment	
Billiard Sports	0	Circuits	0
Boules	0	Treadmill	0
Bowling	0	Cycle	0
Golf	0	Rowing	0
Minigolf	1	Stepper	0
Short tennis	0	Cross – trainer	0
Tennis	0	Cable machines/ fixed resistance	0
Recreational Movement		Dumbbells / Free weights	0
Dance	5	Physioballs (Swiss balls/ exercise balls) for balance	1
Movement to exercise	6	Resistance balls/ bands/ tubes	0
Exercise to music	5	Balance disks/ wobbleboards	0
Derived from Pilates	0	Other	0
Derived from Tai Chi	0	Competitive sport	Minigolf
Derived from Qigong	0	Adapted exercise	
Derived from Yoga	1	Back pain prevention	1
Running		Osteoporosis prevention	1
Indoor running (not on treadmill)	0	Falls prevention	3
Outdoor running/ Track	0	Pelvis Floor exercise	0
Orienteering	0	Chair-based exercise	4
Skiing		Pulmonary rehab	0
Cross Country Skiing	0	Other	0
Downhill (Alpine Skiing)	0		
Ski Touring	2		



Beside this some PA programmes offer adapted exercise mainly falls prevention and chair-based exercise. It is remarkable that nearly no PA programme uses machine based equipment.

Finally, also ski touring was named in the questionnaire, which supposable is especially performed in Austria.

The questions concerning the contents of a (training) session the directors gave the following details:

- The length of a usual warm up mainly is between 6 and 10 minutes, sometimes even longer and sometimes only 1 to 5 minutes long (see table 37).
- The length of a cool down is usually as long as the warm up (6-10 min.) or it is no part of the session at all.
- The time of the usual workout component differs between 10 and 50 but mainly lasts 40 minutes (see table 38).
- The majority offers adapted exercise within the programme either in general age-related groups or in specific disability-related groups to cater for the exercise needs of older adults with chronic medical conditions (see table 39).
- Finally there is no systematic increase in load parameters (see table 36).

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

	Number
Never	5
For the first few weeks only	0
For the first few months only	0
Always	1
Don't know	1
Total	7

('Progression' 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	0	3
1 – 5 minutes	2	0
6 – 10 minutes	3	3
11 – 15 minutes	1	0
16 – 20 minutes	0	0
Don't know	0	0
Missing data	1	1
Total	7	7



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

	Number
0 minutes	0
10 minutes	2
20 minutes	0
30 minutes	0
40 minutes	3
50 minutes	1
60 minutes	0
More than 60 minutes	0
Don't know	0
Missing data	1
Total	7

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	2
Adapted exercise, with participants in disease-related groups	0
Adapted exercise, with participants in frailty-related or disability-related groups	2
Adapted exercise, with participants included in the mainstream older person's group(s)	2
Don't know	0
Missing data	1
Total	7

4.2.12 Instructors' qualifications and training

Table 40 shows that there is a basic level required for all PA programme instructors, but no high level qualification.

In comparison to table 6 of the Expert Questionnaire the estimation of the experts as well as the directors (see table 41) – concerning the prevalence of the entry and the higher level qualification among instructors guiding or supervising physical activity by older participants – is similar: There are predominantly basic level instructors and less high level qualified persons in the Austrian PA programmes.



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	6
A higher level (old age specific) qualification	0
Other	2
Don't know	0

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%	0	1
25%	2	2
50%	0	1
75%	2	1
100%	1	0
Don't know	0	0
Missing data	2	2
Total	7	7

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

	Number
Yes	1
No	6
Don't know	0
Total	7

The PA programme directors' responses (see table 43) regarding the number of hours in-service training provided each year for the instructors in their programmes were very different. On one hand more than the half does not offer an in-service training for the instructors. On the other hand in-service training is very well offered within the programme, but the amount of hours differs between five to more than 30 hours of in-service training.

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

hours	Number
0	4
1	0
3	0



5	1
10	0
15	1
20	0
30	0
More than 30	1
Don't know	0
Not applicable	0
Total	7

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

	Number
Not at all	0
Instruction	1
Instructor's assistant	1
'Buddying' a participant	0
Peer mentoring participants	0
Administration	3
Transport	0
Refreshments	1
Other	3
Don't know	0
Not applicable	0

4.2.13 Client safety

For the most part the PA programmes have no specific emergency or equipment protocols, which have to be followed or used in emergency situations (see table 45).

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	3	1
No	4	5
Don't know	0	1
Total	7	7



According to the directors' responses the staff is never trained in emergency protocols nor does the use, storage and maintenance of emergency equipment seem to be applicable to them (see table 46).

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	0	0
6 monthly	0	0
Annually	0	0
Never	6	0
Don't know	0	0
Not applicable	1	7
Total	7	7

4.2.14 Finance, transport and refreshments

Table 47 shows a maximum spread concerning the total cost per participant per session. Every given category was named only once by the directors. Unfortunately, the reasons for these price differences cannot be drawn from these data.

Whereas the information regarding the expenses for the programmes was quite different, the data concerning the proportion of cost paid by each participant were nearly unanimously: The participation of older adults in the PA programmes is almost free of charge (see 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	1
More than € 5, up to € 10	1
More than € 10	1
Don't know	1
Missing data	2
Total	7



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

	Number
0%	5
5%	0
10%	0
25%	0
50%	0
75%	1
100%	0
Don't know	0
Missing data	1
Total	7

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

	Transport	Refreshments
Yes, to everyone	0	2
Yes, selectively	3*	0**
No	4	5
Don't know	0	0
Total	7	7

*some participants, some sessions

**some sessions

As shown in table 49 transport and refreshments normally were not provided for the participants in the programmes. Only transport was selectively arranged for them. Due to the fact that these services were mainly not offered within the programmes the directors could not specify the proportion of costs for their participants (see table 50).

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%	1	2
5%	0	0
10%	0	0
25%	0	0
50%	0	0
75%	0	0



100%	0	0
Don't know	1	0
Missing data	5	5
Total	7	7

4.2.15 Publicity, marketing and promotion

Considering all promotion strategies that are emphasised in table 51 this leads to the following conclusions:

- The most common way to promote a PA programme is to establish a website.
- Advertising in local newspapers and talks to local groups are also very popular promotion strategies.
- All mentioned forms of advertisement in print media are often in use: at any geographical level and especially in elder-oriented magazines or through elder-oriented organisations.
- Generally publicising in newspapers or magazines is more common than advertising on radio or TV.
- If the promotion of a PA programme is done on radio or TV, advertising on radio is more popular than on TV, whereas features are equal in use.
- Another important way of promotion is the distribution of leafleting, especially through neighbourhood or in community centres for older people as well as in health premises.
- Finally, the presentation at congresses but also the organisation of raffles were used to promote the PA programmes.

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

PR Methods	Number	PR Methods	Number
Advertising in local newspapers	6	Advertising on local radio	3
Advertising in national/ regional newspapers	4	Advertising on national/ regional radio	3
Advertising in elder-oriented magazines	5	Advertising on local TV	1
Advertising through elder-oriented organisations	5	Advertising on national/ regional TV	1
Features in local newspapers	5	Features on local radio	3
Features in national/ regional newspapers	4	Features on national/ regional TV	2
Features in elder-oriented magazines	3	Features on local TV	3
		Features on national/ regional TV	3



Neighbourhood leafleting	5	Talks to local groups	6
Sports hall leafleting	0	Word of mouth	4
Health premises leafleting	4	Websites	7
Leafleting in community centres for older people	5	Open days	3
		Bring a friend	1
Other	2	Discounts	1
		Multiple session bookings	0

According to the last question in the Programme Questionnaire (see table 52) the majority of the directors found it useful to capitalise on national or regional campaigns related to aspects of ageing and health in order to improve recruitment of new participants and/or to motivate the existing participants. All PA programme directors answered unanimously that it is useful to build partnerships with local healthcare professionals or organisations.

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	7
No	2	0
Have not tried	1	0
Don't know	0	0
Total	7	7

4.3 Conclusion

The following chapter gives a brief summary about the main survey findings. During the implementation of WP5, the Austrian EUNAAPA team sought for detailed information on successful PA programmes in the whole country. The results of the data collection shall provide a basis for further negotiations with Austrian PA experts and policy-makers.

In general, the Austrian PA programmes mainly last from 6 to 10 years which indicates that they are completely implemented by institutions.

Very often the PA programmes are located in community centres and sport or physical recreation facilities, primarily they focus on community based senior fitness and they are mainly done indoor and by group activities.



The PA programmes mainly aim for various contents of health promotion: there is particular focus on psychosocial objectives, others aim for more physical and mental aspects, others again promote health and opportunities to socialise.

It is very striking that all directors at a certain point were of one opinion: concerning the characteristics of programme clients, all directors stated that three out of four participants in their overall programme are women.

But the comprehensive survey did not only deliver a lot of information, it also raised some new questions and further work fields: regarding the mentioned aspect above, the percentage of active male in Austria is higher at any age than of active women. Nevertheless only about 25% are taking part in physical activity programmes. But what do they others do? What type of physical activity are of main interest for men aged 50 and above? We also have to analyse if there even is a demand for PA programmes for this target group at all. Further investigation is necessary too, to identify the specific needs of men and finally to provide appropriate PA programmes for older male participants.

Another remarkable aspect is that non of the Austrian PA programmes has any focus on specific medical conditions, like cardiac, pulmonary or arthritis programmes, although one third of people aged 50 to 54 lack from health-related diseases [59]. This percentage rapidly is increasing during ageing: Two third of men aged 75 and above and nearly four out of five of women at the same age stated that their activities of daily living are restricted. Although the selection process was done by a predetermined operational procedure in order to involve a broad field of national PA programmes, medical condition related programmes were not reached.

Furthermore, the overall programmes are intended for an age group, which span over half of the life expectancy. In terms of the effectiveness of health-oriented programmes, further research is necessary to gain knowledge if there are selective age-specific programmes offers and to collect detailed information about their particular programme contents.

In this regard the discussion of the qualification and training of the PA instructors for older adults as well as requirements for a quality management system are inevitable.



5 'SUCCESSFUL' PA PROMOTION STRATEGIES

5.1 Methods

5.1.1 Selection of programmes (including definitions)

According to the original plan of the leader of work package No. 5 the collaborating partners had to ask each national experts to identify a director of a successful physical activity promotion strategy (PA PS) for older people in their country. Then each expert should have assisted its PA PS director to complete a comprehensive questionnaire concerned primarily with the characteristics of the chosen PA promotion strategy.

Due to the fact, that in all cases the director of a PA programme was also the director of the PA promotion strategy the Austrian EUNAAPA team proceeded the same way as it was done for the implementation of the Programme Questionnaire (see chapter 4.1.1). Therefore all directors were supported by the Austrian EUNAAPA team.

But before the national experts again 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.

As the Austrian EUNAAPA team needed the information of the national experts urgently for their further enquiry and to avoid any delay the experts were requested to fill out the online questionnaires as soon as possible but not later than the 31st of July 2007.

5.1.2 Distribution and return of promotion strategy questionnaires

After the time limit had expired at the end of July 2007 we had received the names of ten Austrian physical activity promotion strategy (PA PS) directors. One expert was not able to identify a successful PA promotion strategy.

The further approach was similar to the distribution of the PA Programme Questionnaire (see chapter 4.1.2).



5.2 Results

5.2.1 Selection of promotion strategies

With the help of the national experts ten Austrian examples of PA promotion strategies were identified, which were deemed to be 'successful'.

Already from the beginning of the implementation of this work package No. 5 the Austrian EUNAAPA team was at pains to contact a greater number of national experts than required in order to have access to some more experts if necessary. But to search for surrogates within or towards the end of the period of data collection was impossible. So the sample finally consisted of ten PA PS directors, one fewer than requested.

5.2.2 Return of promotion strategy questionnaires

The invitations for the PA promotion strategy directors were sent out immediately after we had received the results from the PA Expert Questionnaire.

By 31st August 2007, six of the ten PA Promotion Strategy Questionnaires had been filled out, which are listed in Appendix Four. Four directors did not take part in the survey due to different circumstances. Two named directors refused to fill out the online survey because their promotion strategy did not agree to participate. Another director was not able to fill out the questionnaire due to a lack of time and the fourth person took a summer break.

5.2.3 Promotion strategy directors' educational backgrounds

In this context we want to refer to chapter 4.2.3 because all programme and all promotion strategy directors were identical and thus their educational background too.

Table 53. Educational backgrounds of the Directors of the PA Promotion strategies selected by Austrian national experts

Profession	PA Promotion Strategy Director						Total
	A	B	C	D	E	F	
Medicine						x	1
Other Health Profession							0
Exercise/ Sport Science			x				1
Other	x	x		x	x		4



5.2.4 Prevailing national context

Regarding the question, if there is a law or respectively if there are recommendations in Austria for the promotion of physical activity in general and especially for older people, we received one reference (see table 54).

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

	(1)	(2)	(3)
Yes	1	0	1
No	5	6	4
Don't know	0	0	1
Total	6	6	6

Therefore the Austrian EUNAAPA team tried to figure out and outline the legal situation in Austria.

In fact the term 'physical activity' is not mentioned by law nor is there a law which explicit deals with the promotion of physical activity especially for older people (<http://www.ris.bka.gv.at/gesamtabfrage/>).

But there is a legal standard on national basis for health promotion, called:

- Gesundheitsförderungsgesetz – GfG: Bundesgesetz über Maßnahmen und Initiativen zur Gesundheitsförderung, -aufklärung und -information, BGBl. I Nr. 51/1998 i.d.g.F. Act on Health Promotion, BGBl. I Nr. 51/1998 as amended (convenient translation)

The subject of this law analogously is that there have to be actions and initiatives in order to maintain, to promote and to enhance the health of the whole population. These actions should take place in all stages of life.

Furthermore there is a national law for the promotion of sports:

- Bundes-Sportförderungsgesetz 2005 – BSFG: Bundesgesetz betreffend die Förderung des Sports aus Bundesmitteln, BGBl. I Nr. 143/2005 i.d.g.F. Act on Sports Promotion 2005, BGBl. I Nr. 143/2005 as amended (convenient translation)

This law especially deals with the promotion of sport activities at international and national level. But there are also legal acts for sport promotion at regional level which differ within the federal states.

5.2.5 Description of promotion strategies

The questions concerning the development and implementation of the PA promotion strategies the directors gave the following details:

- In general a promotion strategy was developed and delivered by one and the same organisation.
- One-third of them was developed by multiple organisations in different sectors
- In most cases the promotion strategies were designed and implemented by non governmental organisations. Within that sector this process mainly was done by welfare or research organisations (see table 55).



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	2	2
National	0	0
Regional	1	1
Local	2	1
Non Governmental	4	5
Commercial	0	0
Welfare/community organisation	2	4
Research organisation	3	2
Other	1	1

The next questions were regarding the description of the PA promotion strategies:

- Table 56 shows that the promotion strategies mainly aimed to deliver at regional level. One strategy targeted both levels – national and regional – whereas another one was limited to a city.
- Furthermore the directors responded that the strategies for promoting PA programmes generally focus on centre-based settings (see table 57). But they also were designed for community-based settings at local level, for residential homes and sometimes for outdoor activities.
- The directors consider that group exercise is the prior setting in which their promotion strategy could encourage physical activity.
- Social institutions are regarded as the main organisations, which participate in the PA promotion strategies (see table 58). Additionally the promotion of PA programmes in Austria is also done by a lot of other organisations and in various settings like: primary health care, community centres and welfare organisations but also by university and ecclesial facilities.

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

	Number
National	2
Regional	4
Limited to a city/ town	1
Limited to a local neighbourhood	0



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

	Number
Centre based	4
Home based	0
Outdoors	2
Other	4
Group exercise	6
Independent exercise	1
Other	0

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

	Number
Social institutions	6
Primary health care	3
Community centres	3
Welfare organisations	2
Work place	1
Other	5
Don't know	0

Concerning the theoretical background of the PA promotion strategies only one director responded that they used some of the models and theories, which are listed in table 59 to develop and deliver the PA promotion strategy. In two other cases motogeragogic theory and the theoretical background of the SIMA study, which was published by Oswald Wolf at the University of Erlangen/Nuremberg, were the basis for their strategies.

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	1
Health Belief Model	1
Protection Motivation Theory	0
Theory of Reasoned Action	0



Theory of Planned Behaviour	1
ASE* – Model	1
Transtheoretical Model	1
Other	3
Don't know	0
Missing data	1

* Attitude, Social influence and self-Efficacy

Table 60 shows that half of the strategies lasted from 6 to 10 years. The others were of short duration. Mainly the promotion strategy had been running continually (see table 61). In two cases the strategies were carried out only one-time.

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

	Number
Less than 1 year	2
1 to 5 years	1
6 to 10 years	3
More than 10 years	0
Don't know	0
Total	6

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

	Number
Once only	2
Periodically	0
Continually	4
Other	0
Don't know	0
Total	6

The last question of this chapter was about the intermediaries that were used for the purpose of reaching the intended population. Regarding the answers of the directors predominantly three groups of people were nominated: the medical practitioners, the sport coaches and the volunteers. Apart from this the directors also named chaplains, experts and cooperating partners as well as workers in residential homes as intermediaries in order to get in touch with the targeted population.



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

	Number
Medical Practitioners	3
Nurses	1
Physiotherapists	0
Occupational therapists	0
Physiotherapy/ OT Assistants	0
Other Allied Health Care Professionals	1
Exercise/ dance instructors	2
Sports coaches	3
Community/Social Workers	0
Volunteers	4
Other	3
None	1
Don't know	0

5.2.6 Characteristics of strategies' target populations

Figure 2 shows – similar to figure one in chapter 4.2.7, which regarded the age limits of the participants – that there is again a wide spread concerning the age limits of those for whom the strategy is intended. The majority of the promotion strategies addresses young seniors as well as people who are well advanced in age. Only one strategy is offered for a target group with a small range of calendric age.



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



In conclusion, the Austrian directors characterised the population targeted by the PA promotion strategies as follows:

- Older adults in general as well as institution-dwelling older adults are of main interest for the PA promotion strategy directors (see table 63).
- Two strategies focussed on specific cultural differences as listed in table 64 and one of them also catered for the different levels of handicaps.
- As shown in table 65 all levels of functional mobility of the individuals were covered by the promotion strategies. Going into detail only one strategy was limited to one mobility category. The others predominantly had no inclusion criteria for the targeted individuals.

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

	Number
General population (including older adults)	1
All older adults	4
Community – dwelling older adults	2
Institution – dwelling older adults	4
Older adults with chronic conditions	1
Ethnic minority older adults	2
Other	1

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

	Number
None	4
Different language	2
Different cultural perceptions	2
Different education levels	2
Different income levels	2
Other	1
Don't know	0

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	4
Walks outdoors with no walking aids and no assistance or supervision by another person	5
Walks outdoors with a walking aid but no assistance or supervision by another person	3



Walks outdoors only with assistance or supervision by another person	3
Never walks outdoors	3

5.2.7 Design of promotion strategies

In the next chapter we tried to get more information about the design of successful Austrian physical activity promotion strategies.

Table 66 shows that the directors used at least one approach in their strategies, which was 'improved motivation', in order to encourage behaviour change in relation to physical activity. In addition, improving knowledge or facilitating access to physical activity programmes were also popular approaches in their strategies.

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

	Number
Improved knowledge	3
Improved access	4
Improved safety	1
Improved time management skills	0
Improved motivation	6
Fear reduction	1
Improved skill	2
Reduction in misconceptions about ageing	1
Don't know	0

In one of two cases the intended population was not screened for their readiness for behaviour change prior to implementing the promotion strategy (see table 67).

But nearly every PA promotion strategy tried to surmount barriers to physical activity (see table 68). To say it in detail, 'lack of energy', 'lack of skill' or 'perceived poor health' were the most common barriers the directors tried to surmount through their strategies (see table 69).

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	2
No	3
Don't know	1
Total	6



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

	Number
Yes	5
No	1
Don't know	0
Total	6

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	2
Symptoms associated with chronic conditions	1
Fear of injury	1
Acute exacerbation of chronic conditions	0
Lack of skill	2
Lack of time	1
Lack of energy / motivation	4
Environmental barriers	1
Misconceptions about ageing	1
Other	0
Don't know	0
Not applicable	0

In the following question the directors were asked what kind of approaches were used by their physical activity promotion strategies:

- Most of the directors responded that mainly informal approaches, like community wide campaigns are very popular (see table 70a).
- This procedure also was deemed to be effective by the directors in order to achieve the aims of their physical activity promotion strategy (see table 70b).
- Moreover group-based health education and mass media campaigns were used to promote the PA programmes (see again table 70a).
- Furthermore health professional and non-family social support as well as actions for individually-adapted behaviour change were named as common behavioural and social approaches.
- The answers regarding the environmental and policy approaches were quite different. On one hand enhanced access to physical activity as well as transportation policy are approaches, which were occasionally used by the promotion strategies. Whereas urban planning approaches or infrastructure changes were not part of a PA promotion strategy.

The latest publication of the Health Enhancing Physical Activity Organisation (HEPA) emphasises that infrastructural aspects play an important role to enhance increased outdoor activities.



Table 70. PA Promotion Strategy Directors' responses concerning a) which approaches were used by their physical activity promotion strategy b) which approaches they had found effective in achieving the aims of their physical activity promotion strategy

	a) Number	b) Number
INFORMATION APPROACHES		
Community wide campaigns	5	4
Group-based health education focused on information provision	3	2
Mass media campaigns	2	2
Point of decision prompts	0	0
Other	0	0
BEHAVIOURAL AND SOCIAL APPROACHES		
Individually-adapted behaviour change	3	2
Education with TV/video/DVD	1	1
Family-based social support	1	0
Health professionals social support	3	1
Non-family social support	3	1
Other	1	1
ENVIRONMENTAL AND POLICY APPROACHES		
Enhanced access to physical activity	3	2
Outreach activities	1	0
Transportation policy	2	0
Infrastructure changes to promote non-motorised transit	0	0
Urban planning approaches	0	0
Other	2	1
Don't know	0	0

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

	Number
General message	4
General advice	2
General warning	0
Specific advice	2
Specific warning	0
Other	2
Don't know	0



The nature of the message used in their promotion strategy predominantly was of a general character, sometimes it was a general or specific warning, but never an advice (see table 71).

The messages mainly were conveyed to the target population by media or during events (see table 72). Sometimes it was done with the help of intermediaries. In a few cases the message was transmitted via internet or email, which will presumably become more important in future.

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	6
Post	0
Internet / e-mail	2
Intermediates, healthcare professionals	3
Models / opinion	1
Events (e.g. Falls Awareness Day)	5
Other	1
Don't know	0

5.2.8 Evaluation and sustainability of effect of promotion strategies

Table 73 shows that one-third of the promotion strategies seem to have reached a high percentage (75% - 100%) of the intended population whereas the rest of the strategies were not very effective or specific data was missing at all.

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

	Number
0%	1
25%	1
50%	0
75%	1
100%	1
Don't know	2
Total	6

Regarding the evaluation of the PA promotion strategies, the majority of the directors responded that the strategies have been evaluated since they were implemented (see table 74). 'Behaviour change' and the population that was reached were the major aspects that were assessed (see table 75).



In most cases the promotion strategies included a specific plan or device to maintain the behaviour change achieved (see table 76). Therefore various tools were used in order to maintain the changes which are listed in table 77.

Table 74. PA Promotion Strategy Directors' responses concerning whether their promotion strategy had been evaluated since it was implemented

	Number
Yes	4
No	2
Don't know	0
Total	6

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

	Number
Behaviour change	4
Population reached	4
Cost effectiveness (e.g. total costs)	1
Other	1
Don't know	0
Not applicable	0

Table 76. PA Promotion Strategy Directors' responses concerning whether their promotion strategy included a specific plan or device to maintain the behaviour change achieved

	Number
Yes	4
No	2
Don't know	0
Total	6

Table 77. PA Promotion Strategy Directors' responses concerning the tools used in their promotion strategy to maintain behaviour change

	Number
Printed material posted	2
Telephone	0
Positive reinforcement / feedback rewards	1
Financial incentives	1
Social support	1
Buddy groups	0
Opportunities to socialise	0



Promotion days	2
Other	0
Don't know	0
Not applicable	0

5.2.9 Finance

The PA promotion strategy directors' estimates regarding the total cost per year of developing and running their promotion strategy differed very much. As shown in table 78 the difference between the minimum and the maximum of the total costs is 98.000,- Euros.

Much to our surprise we found out that the total costs of 2.000,- Euros is computed for a promotion strategy that runs at national level whereas the amount of 100.000,- Euros is calculated for a PA promotion strategy that is aimed to deliver at regional level.

Regarding the proportion of the targeted population that has been reached by the strategy since it has been implemented, the director with the low budget answered that they had not been successful at all. In comparison to the high budget director we unfortunately did not receive any data.

Table 78. 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	€ 59.000,-
Least	€ 2.000,-
Most	€ 100.000,-

The last question (see table 79) asked about the source of the funding to run the promotion strategy. To conclude, the directors responded that:

- The Austrian PA promotion strategies generally are funded by the health budget of the national or regional government.
- In some cases they are financed by the social care budget.
- A few promotion strategies are funded by sport budget at different governmental levels.
- At least one Austrian strategy was provided money by charity.

Table 79. PA Promotion Strategy Directors' responses concerning the source of the funding to run their promotion strategy

	Number
NATIONAL / REGIONAL GOVERNMENT	
Health budget	4
Social care budget	2
Leisure / sport budget	1
Other	0
CITY / LOCAL GOVERNMENT	



Health budget	0
Social care budget	0
Leisure / sport budget	0
Other	1
OTHER SOURCES	
Lottery	0
Charity	1
Other	0

5.3 Conclusion

It has become obvious that healthy ageing not only depends on individual-specific activities but also requires the successful planning of comprehensive national, regional and local promotion strategies.

Concerning the Austrian situation, the present data do not allow us to give a consistent general view. Thus, only a few common conclusions can be drawn from the survey:

- Successful Austrian PA promotion strategies are mainly developed and delivered by NGOs and aimed to deliver at regional level (see tables 55 and 56).
- Generally, they are funded by the health budget of the national or regional government (see table 79).
- Half of the strategies lasted from 6 to 10 years and mainly had been running continually (see tables 60 and 61).
- The majority of the Austrian PA promotion strategies address older adults of all ages and at all levels of functional mobility (see figure 2 and table 65).
- In most cases group exercise is considered being the best setting in which the promotion strategy could encourage physical activity (see table 57).
- Social institutions are regarded as the main institutions, which participate in the PA promotion strategies (see table 58).
- In order to encourage behaviour change in relation to physical activity, improved motivation is the prior approach that is used in their strategies (see table 66).
- As the Austrian PA directors stated, community wide campaigns, including general messages, are very popular (see tables 70 and 71).
- The messages mainly were conveyed to the target population by media or during events (see table 72).
- Finally, the majority of the promotion strategies included a specific plan or device to maintain the behaviour change achieved (see table 76).



6 SYSTEMATIC SEARCH FOR EVIDENCE BASED GUIDELINES

6.1 Objective

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

The search for potentially relevant publications was done by the EUNAAPA experts at the University of Edinburgh, Susie Dinan-Young, Sheila Fiske, Maureen Harding, Susan Lewis, Fiona Scott and Archie Young (names in alphabetical order).

The guidelines identified by the search had to be included in the national and cross-national reports on WP5. It permitted a critical comparison of the successful PA programmes and PA promotion strategies, which had been identified by the national PA experts, with current evidence-based guidelines.

6.2 Methods

6.2.1 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.

6.2.2 Criteria for inclusion in inventory of guidelines

The publications to be included in the inventory were those, which the EUNAAPA experts 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 the most recent SIGN guideline, viz. SIGN Guideline No. 98, July 2007), and
- published from 1990 onwards, and finally
- it 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).



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

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

The expert team from the University of Edinburgh 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 detailed information on two search strategies, that were used for Ovid Medline and adapted for the other databases, is listed in Appendix Six.

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

- 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)

6.2.4 Scrutiny to select publications for inclusion in the inventory of guidelines

Two reviewers - Fiona Scott and Archie Young - 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.

7 CONCORDANCE OF PROGRAMMES WITH GUIDELINES

7.1 Discussion

7.1.1 Multi-dimensional Physical Activity

Ageing is a complex process involving many variables that interact with another, greatly influencing the manner in which we age. Recommendations have stated that participation in regular physical activity is essential for healthy ageing. Thus, it is imperative to determine the extent and mechanism by which physical activity and exercise can improve health, functional capacity, quality of life and independence for older adults. Physical activities for the elderly and younger adults with chronic disabilities should be multi-dimensional and combine aerobic activity, muscle-strengthening and balance as well as flexibility training, which are optimal for health and functional benefits [2, 3, 5]. All of the programmes described in this report included at least one but mainly several of these components (see table 34).

Coordination and balance

Coordination and balance were the most mentioned types of physical activity in the Austrian PA programmes (see table 34). For older adults the training of these PA components is very important to reduce the risk of injury from falls. In this context some Austrian PA directors named fall prevention as their main goal of the programme (see table 35). Falls are a major cause of disability. Approximately 30 per cent of people over 65 years and living in the community have one or more falls each year. This often results in serious injury and starts a cascade of decreased mobility [6].

Therefore community-dwelling older adults with substantial risk of falls should perform exercises that maintain or improve balance. Research has pointed out that programmes combining balance, strength and endurance training reduced the risk of falls by 10%. Programmes with balance training alone reduced the risk by 25%. Especially Taijiquan seems to be a promising type of balance exercise. Some interventions showed reduced risk of falls by 47%. But this requires further evaluation before it can be recommended as preferred balance training [6, 51, 53, 54].

Nevertheless, the appropriate frequency and duration as well as the preferred types of balance training are still unclear and not specified [2, 53]. So long only a few prevention studies have shown that three times per week of balance training have been effective. Detailed exercise prescriptions have not been asked in the Austrian PA programme questionnaire and therefore cannot be discussed.



Flexibility

Austrian PA programmes also focus on the improvement of flexibility (see table 34). Flexibility is the ability to move a joint through a complete range of motion. An adequate range of motion in all body joints is important to maintain an acceptable level of physical functioning and mobility. Thus, it is recommended that older adults should perform activities on at least two days per week for at least 10 minutes each day. A general stretching routine should involve major muscles and be undertaken with 10-30 sec for a static stretch and 3-4 repetitions for each stretch. Preferably flexibility activities are performed on all days that aerobic or muscle-strengthening activity is performed [2]. Due to missing specifications of the flexibility training in Austrian PA programmes a comparison according to the present guidelines could not be made.

Endurance

Half of the Austrian directors responded that the advance in endurance is also a goal of the PA programme. Concerning endurance-type activities the American College of Sports Medicine (ACSM) and the American Heart Association (AHA) gave the following recommendations for older adults, which are listed in table 80 [2].

The recommended amount of aerobic activity should be done in addition to routine activities of daily living that tend to be of light intensity or last less than 10 minutes in duration [1, 2]. In general, duration and intensity depend on the participant's daily health and energy needs. In order to gain health benefits, exercise need not be strenuous. Vigorous activity and/or high levels of activity are more appropriate for selected older adults with sufficient fitness, experience and motivation [2, 4, 5]. Regarding the type of activity, it should be continuous, rhythmic and involving large muscle groups. Furthermore, aerobic exercise should increase heart rate for an extended period and raise core body temperature.

The most common modalities of aerobic activity in the Austrian programmes are dance and walking, with its many different specifications (see table 35). Concerning the exercise prescriptions of the Austrian PA programmes, in most cases type and time (see table 38) of aerobic activity correspond with the recommendations given by ACSM and AHA. Intensity has not been asked in the questionnaire and therefore cannot be evaluated and discussed. The frequency with which individuals participate in their overall programme per week is less than suggested (see table 22). But the present data does not give any information if the indicated frequency is equal to the participant's whole amount of aerobic-type activity per week.

Strength

Sarcopenia and muscle weakness are major components of normal ageing. In order to preserve or increase muscle mass adequate strategies should be implemented. In this regard muscle-strengthening has become a very important part in the prevention of osteoporosis and for reducing the risk of falls in older age. In addition, it also has positive effects on the body composition as well as the metabolic and cardiovascular status of older adults. Thus, resistance training has become even more accepted in CVD interventions [51, 53, 54].

Reviewed exercise guidelines for muscle-strengthening, which were recently published by the AHA [13], are shown in table 80. Additionally there are also some important advices for older persons beginning a strength training:

- The emphasis at the early stage of a resistance training is to allow time for musculoskeletal adaptation and to practice good technique in order to reduce the potential for excessive muscle soreness and injury.



- An initial intensity that corresponds to 30-40% of 1-RM for the upper body and 50-60% of 1RM for the hips and legs is recommended.
- Regarding adequate progression an initial increase in the number of repetitions is recommended before an increase in resistance or weight load [13].

Although resistance training has become a very important part in PA exercise for older adults, only two Austrian directors answered that resistance training is a component of their PA programme. Because no exercise specifications were asked in the questionnaire, it is not possible to make a conclusion about the concordance of the programmes with the specific guidelines.

The following table summarises the current PA guidelines, which were the basis for the comparison with the Austrian PA programmes.

Table 80. FITT¹ Guidelines to Exercise Prescriptions for Older Adults

PA Types	FITT parameters			
	Frequency	Intensity	Time	Type
Balance	2-3 days/week	Still unclear and not specified		
Flexibility	10 min/day	Stretch to the ROM [↵] at a point of tightness	10-30 sec (static stretch), 3-4 repetitions for each stretch	Static and dynamic stretch of all major muscle groups
Endurance Health related benefits	Minimum: 5 days preferably all days/week	Light to moderate RPE [↵] : 10-13 HRR [♦] : 40-50% HRmax [↵] : 60-70%	Minimum: 30 min continuously or accumulated [*]	e.g. walking, dancing, cycling, aquatic exercise
Endurance Fitness related benefits	Minimum: 3 days/week	Moderate to vigorous RPE: 12-15 HRR: 50-85% HRmax: 70-90%	Minimum: 20 min continuously	e.g. brisk walking, jogging, swimming, cycling, hiking
Strength	Minimum: 1 set on 2 days/week including 8-10 exercises	Low: 10-15 reps with < 40% of 1-RM [▪] RPE: 11-14 for persons > 50-60y, frail or cardiac persons Moderate: 8-12 reps with 40-60% of 1-RM for healthy sedentary adults	Moderate speed	Multisexercise circuit (weight) training, involving a variety of major muscle groups
[↵] ROM = range of motion [↵] RPE = rate of perceived exertion (Borg RPE scale) [♦] HRR = heart rate reserve (the difference between a person's measured or predicted maximum heart rate and resting heart rate) [↵] HRmax = maximum heart rate (the highest number of times the heart can contract in one minute) [*] In bouts of at least 10 minutes for a total of at least 30 minutes per day [▪] 1-RM = one repetition maximum (the most weight that can be lifted through a full range of motion, in good form, for one repetition)				

¹ Exercise Prescriptions should include the following components: Frequency, Intensity, Time, Type and Progression.



7.1.2 Social, mental and cognitive aspects

As Austrian directors stated health promotion, disease prevention and improved physical function are main objectives of their PA programmes. But opportunities to socialise and psychosocial objectives are of the same importance (see table 24).

International policy and national health strategies are increasingly recognising that the social support within the community is a very important aspect to improve older people's well-being and quality of life. But this aspect strongly depends on income inequality. Research findings emphasise that a lower socioeconomic status leads to a poor social integration and inferior social support within the community as well as vice versa. It also indicates that educational and social activity group interventions can prevent social isolation and loneliness among older people [60]. In this regard, physical activity provides a helpful opportunity to socialise and therefore to remain active and independent.

Furthermore, research has shown that physical activity can help to improve the emotional and mental well-being of older people. It is also associated with reduced symptoms of depression in older age and can be an effective treatment in reducing anxiety and enhancing mood [6].

Many aspects of cognitive functioning – such as quick thinking, accuracy of response, working memory and multiple tasking – decrease with age and threaten independent living. Physical activity may improve at least some aspects of cognitive function, which are important tasks of daily living. It is also associated with reduced risk of developing problems of cognitive impairment in old age, such as confusion, dementia and Alzheimer's disease [6].

7.1.3 Participants' aims

Simply knowing about the importance of physical activity is seldom sufficient to motivate a sedentary individual to initiate and maintain physical activity on a regular basis. There is a growing body of knowledge to suggest that effective physical activity interventions should combine several well established principles of behaviour change, including self-efficacy, health contracts, assurance of safety and positive reinforcement. Furthermore tailoring the exercise programme to the needs and interest of participants has also successfully motivated older adults to initiate and maintain a routine of regular physical activity [3]. Most of the Austrian PA programme directors answered that they adjust their programme according to the participants' aims (see table 26). The majority offers adapted exercise within the programme either in general age-related groups or in specific disability-related groups, to cater for the exercise needs of older adults with chronic medical conditions (see table 39).

7.1.4 Pre-participation assessment

Due to the fact, that physical activity is associated with a slight increase in acute injury risk, some organisations recommend having a physical examination and exercise test before beginning or increasing physical activity. Other scientific experts consider that having a screening requirement may impose a barrier that reduces the number of people who will begin a programme [3]. The U.S. Preventive Services Task Force does not recommend any type of cardiac screening (ECG, exercise test) before beginning a moderate-intensity and moderately progressive exercise programme. But this issue still is controversially discussed among scientific experts.

A Consensus Group from the AHA and the American College of Cardiology advise healthy men > 45 and women > 55 years of age to consult a physician before they begin a vigorous



activity programme. Experts also advise a routine exercise stress testing before beginning a new PA programme for people with chronic diseases, such as cardiovascular diseases and diabetes mellitus, or for those who are at high risk for these diseases [3, 10]. Concerning the participation in an Austrian PA programme in some cases the completion of a health-screening tool was required, but in the majority of the cases not. Information about the participant's state of health could not be derived from the data.

7.1.5 Client safety

Regarding the emergency procedures and precautions it is recommended that every community setting that offers opportunities for PA should be prepared to handle an emergency situation. Whenever possible, PA leaders and other staff should be trained in cardiopulmonary resuscitation (CPR) and first aid. Every facility should have at least one phone that remains in a designated location. Instructions should give the exact location and instruction on what door to enter or other specifics for that building [3].

As for the Austrian PA programmes most of them are not in the line with these guidelines. According to the directors' responses the staff is never trained in emergency procedures and the main part of the PA programmes have no specific emergency or equipment protocols, which have to be followed or used in emergency situations.

7.1.6 Facilities, costs and transport

Gatherings for older people occur in a variety of community locations, such as recreation centres, schools, libraries, community centres in residential neighbourhoods, parks and gardens [60]. In Austria the PA directors also named senior clubs or facilities of partner organisations also as common types of locations used by their overall programme (see table 16).

But apart from the type of location, the convenience of the location to older people is of more importance. The facility should be in their neighbourhood, with affordable, flexible transportation and access participation for people with disabilities. The events, activities and local attractions should be affordable for older participants, with no hidden or additional costs, such as transportation costs [60]. Fortunately, the participation of Austrian older adults in the PA programmes is almost free of charge (see table 48). Transport was arranged selectively but not normally for the participants (see table 50).



8 CONCORDANCE OF PROMOTION STRATEGIES WITH GUIDELINES

8.1 Discussion

The comparison of the Austrian promotion strategies with present guidelines turned out to be quiet difficult. On one hand the inventory mainly comprises medicine-specific guidelines and hardly recommendations for PA promotion strategies. On the other hand the data we received from the Austrian online-survey do not allow global or valid conclusions about the situation in Austria regarding PA promotion strategies.

Most Austrian PA promotions strategies included in this survey focused on motivational aspects in order to encourage behaviour change in relation to physical activity

Moreover, one Austrian director responded that the PA promotion strategy aimed for environmental aspects (see table 69), which is in the line with the recommendations from the WHO [7, 60]. The guidelines emphasise that outdoor spaces and public facilities have an important influence on the mobility, independence and quality of life of older people and affect their ability to “age in place”. In order to create safe and accessible surroundings and especially to make cities more age-friendly, environmental barriers for older people should be identified and surmounted.

Due to a great lack of knowledge concerning the public awareness about ageing and its issues, the WHO advises, that education about ageing should begin early and extend to all groups in society [60]. In this regard a lot of different approaches that promote educational programmes and intergenerational activities are successfully implemented worldwide. In Austria also one PA promotion strategy focuses on the reduction in misconceptions about ageing (see table 66).

Furthermore, it is recommended that there should be opportunities to socialise and activities for integration with other age groups and cultures. Social participation and social support are strongly connected to good health and well-being during ageing and therefore play an important part in addressing isolation [60]. Two Austrian directors stated that especially ethnic minority older adults are targeted by their promotion strategy. They focus on cultural differences and cater for the different levels of handicaps, like communications problems or cultural perceptions (see tables 63 and 64).

In order to reach the targeted population the Austrian PA promotion strategies mainly used community wide campaigns on national or regional level. The message, which predominately was of general nature, was conveyed by media or during events. Additionally all PA programmes were promoted by a website. Finally, all PA programme directors answered unanimously that it is useful to build partnerships with local healthcare professionals or organisations.



9 CONCLUSIONS & RECOMMENDATIONS

Due to the present data of the online survey, it is obvious that most of the national PA programmes and national PA promotion strategies target at a wide spread of older adults concerning the age group for which they are intended.

Therefore the Austrian EUNAAPA team recommends:

First, there should be more selective age-specific PA programmes for older people, dealing with the specific demands and complaints appropriate to the different phases of ageing.

Second, the design and implementation of PA programmes and PA promotion strategies should consider more current evidence based guidelines and approved models of good practice.

Third, to afford the achievement of quality issues, the comprehensive and purposive co-operation of all health-related professionals and decision makers is essential.

10 ACKNOWLEDGMENTS

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During our search for concordance between the evidence-based guidelines for physical activity especially for older adults and the PA programmes respectively the PA promotion strategies, we received additional help by our student apprentice, Nele Schreiber.

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The present Austrian National Report on 'Physical Activity Programmes and Physical Activity Promotion Strategies for Older People' is the result of a co-operation of many excellent forces.

Thank you very much!



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² This literature was not part of the inventory of guidelines.



12 APPENDIX ONE

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

	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		
	8	9	10	11		



Table 2. Physical Activity (PA)

PA ¹⁾ in %	overall (15 years and above)	15 - 29 years	30 – 44 years	45 – 59 years	60 – 74 years	75 years and above
Men						
active	31,6	42,1	32,7	28,4	27,3	12,0
inactive	68,4	57,9	67,3	71,6	72,7	88,0
Women						
active	23,3	25,5	26,8	27,7	21,6	5,4
inactive	76,7	74,5	73,2	72,3	78,4	94,6

¹⁾ 'Active people' are defined as persons who break out in sweat for at least three days a week through cycling, jogging or aerobic [58].

13 APPENDIX TWO - IDENTIFICATION DETAILS OF NATIONAL PA EXPERTS

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Walburga Steiner	Gesundheitsforum NÖ A-3100 St. Pölten, Julius Raab Promenade 7 w.steiner@gfnoe.at
Mag. Birgit Wesp	Fonds Soziales Wien Projektmanagement Gesundheitsförderung A-1030 Wien, Guglgasse 7-9 brigit.wesp@fsw.at

List of the Austrian national experts in alphabetic order of the expert's surname.

14 APPENDIX THREE - IDENTIFICATION DETAILS OF 'SUCCESSFUL' PA PROGRAMMES

Bildungsprogramm im GZ am Wienerberg	Brigitte Gadnik-Jiskra	VHS Hietzing A-1130 Wien, Hofwiesengasse 48 brigitte.gadnik-jiskra@vww.at
LeBe – Lebensqualität erhalten, Bewegung erfahren http://www.sportlandnoe.at	Stefan Grubhofer	Sport.Land.Niederösterreich Amt der NÖ Landesregierung A-3109 St. Pölten, Landhausplatz 1, Abteilung Sport grubhofer@noe.co.at
JUNG.ALT.WERDEN http://www.jungaltwerden.at/de/	Mag. Maria Lengauer	ASVÖ-Wien A-1060 Wien, Gumpendorfer Straße 65/18 maria.lengauer@asvoe.at
Minigolf kommt zu dir http://www.minigolfcompany.com/	Christine Nestler	Minigolf Company 1120 Wien, Tivoligasse 34/21 christine.nestler@chello.at



Lebenswerte Lebenswelten für ältere Menschen http://lebenswelten.meduni-graz.at/	Em.Univ.-Prof. Dr. R. Horst Noack	Österreichische Gesellschaft für Public Health A-8010 Graz, Universitätsstraße 6/1 horst.noack@meduni-graz.at
ALT.JUNG.SEIN	Dr. Hans A. Rapp	Katholische Kirche Vorarlberg A-6800 Feldkirch, Bahnhofstraße 13 hans.rapp@kath-kirche-vorarlberg.at
Ein Herz für Wien http://www.einherzfuerwien.at/	Mag. Birgit Wesp	Fonds Soziales Wien Projektmanagement Gesundheitsförderung A-1030 Wien, Guglgasse 7-9 brigit.wesp@fsw.at

List of the Austrian PA programmes and the names of the Austrian PA programme directors in alphabetic order of the director's surname.

15 APPENDIX FOUR - IDENTIFICATION DETAILS OF 'SUCCESSFUL' PA PROMOTION STRATEGIES

LeBe – Lebensqualität erhalten, Bewegung erfahren http://www.sportlandnoe.at.	Stefan Grubhofer	Sport.Land.Niederösterreich Amt der NÖ Landesregierung A-3109 St. Pölten, Landhausplatz 1, Abteilung Sport grubhofer@noe.co.at
JUNG.ALT.WERDEN http://www.jungaltwerden.at/de/	Mag. Maria Lengauer	ASVÖ-Wien A-1060 Wien, Gumpendorfer Straße 65/18 maria.lengauer@asvoe.at
Minigolf kommt zu dir http://www.minigolfcompany.com/	Christine Nestler	Minigolf Company 1120 Wien, Tivoligasse 34/21 christine.nestler@chello.at
Lebenswerte Lebenswelten für ältere Menschen http://lebenswelten.meduni-graz.at/	Em.Univ.-Prof. Dr. R. Horst Noack	Österreichische Gesellschaft für Public Health A-8010 Graz, Universitätsstraße 6/1 horst.noack@meduni-graz.at
ALT.JUNG.SEIN	Dr. Hans A. Rapp	Katholische Kirche Vorarlberg A-6800 Feldkirch, Bahnhofstraße 13 hans.rapp@kath-kirche-vorarlberg.at
Ein Herz für Wien http://www.einherzfuerwien.at/	Mag. Birgit Wesp	Fonds Soziales Wien Projektmanagement Gesundheitsförderung A-1030 Wien, Guglgasse 7-9 brigit.wesp@fsw.at

List of the Austrian PA promotion strategies and the names of the Austrian PA promotion strategies directors in alphabetic order of the director's surname.



16 APPENDIX FIVE – SEARCH STRATEGIES

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

16.1 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

16.2 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