

life quality
of senior citizens



in relation to
mobility conditions

Summary of the results of Area 3

deliverables D14 and D16

public paper from WP8 & WP9

Department of Technology and Society

Lund University, Sweden

April 2006



LUNDS TEKNISKA HÖGSKOLA
Lunds universitet

Summary of the results of Area 3

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Preface

SIZE – “Life quality of senior citizens in relation to mobility conditions” (project number QLK6-CT-2002-02399) is a project in the framework of the specific research and technological development programme “quality of life and management of living resources”, key action 6 “The ageing population and disabilities” in EU’s Fifth Framework Programme.

European policy regarding the elderly aims at maintaining their mobility. This is a central element of their integration in society. Senior citizens want to stay autonomous and independent as far as possible. Without the possibility to maintain mobility, senior citizens cannot lead an independent life, with many other problems such as isolation and health problems as a consequence.

The project **SIZE** has a life-span of 3 years and is divided into 4 research areas: State-of-the art & preparatory activities, qualitative studies, standardised survey and finalisation & distribution of the results.

*The general objectives of **SIZE** are:*

1. To explain and describe the present mobility and transport situation, the problems, needs and wishes of different groups of senior citizens from their own perspective compared with experts’ points of view (“experts” being sociologists, psychologists, traffic experts, experts on gerontology, politicians, policy makers, experts of other related EU projects, etc.);
2. To motivate action by the authorities and other relevant groups in society who are, or feel, responsible in this area, by making discrepancies in problem identification transparent;
3. To identify relevant solutions for existing problems and to provide guidance for setting up and implementing policies aimed at “keeping the elderly mobile”.



14 partners from eight different countries are involved in SIZE:

University of Vienna, Institute of Sociology • Anton Amann • Austria

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Mobility questionnaire for senior citizens

Appendix 1

1 INTRODUCTION

Obviously, in comparison to younger people, senior citizens have to face disadvantages in their every day life, partly produced by the ageing process itself, partly by the physical and social structure of their environment. If the negative aspects of their life affect their *mobility*, a decrease of quality of life and life satisfaction¹ are to be anticipated. The probability of a loss of autonomy, even of illness and need for help and care will increase. Therefore it should be the interest of modern welfare states to improve the mobility of senior citizens and to eliminate mobility barriers.

But to act in this way requires knowledge of important aspects of the problem: What are the complaints of senior citizens with respect to their mobility in detail? Are there differences among senior citizens or sub-groups with different problems? What are the conditions for a good or a bad mobility situation? What are needs and wishes of senior citizens? Which ideas do they have about the solution of mobility problems? And because a lot of experts worked on the problem of seniors' mobility already: Are there differences between the seniors' and the experts' perspectives?

The quantitative study of SIZE wanted to clarify these questions using a sophisticated questionnaire instrument, presented commonly to seniors as well as to experts.

Because of the numerous international research projects on the topic of mobility of the seniors (so to speak "preparatory works" for SIZE) the SIZE questionnaire emphasised issues less considered in these "preparatory works", but well appropriate to answer the questions cited above. International research projects of the last decade collected the main factors of influence on the mobility of older persons. Because of the great accordance among their results, it is easy to enumerate these factors:

First of all, we have to account for

- *personal resources* (financial, health, age) and
- *living conditions* (housing; living area).

Living conditions in an expanded sense are

- *traffic environment* (physical and social),
- *architectural particularities* and
- *technical aspects* of the environment (i.e. vehicles).

Social aspects of the environment are the

- *behaviour* of traffic participants and the
- *social interaction* of people outside their homes.

Also the

- *rules* under which traffic is realised...

... determine chances for seniors to be mobile or not, to what extent and in which quality mobility in old age is possible.

¹ For detailed information on the theoretical background of "mobility" and "quality of life" please see SIZE: State-of-the-art report –Deliverable D3, May 2003

According to these results, the items of the SIZE questionnaire can be assigned to four superordinated perspectives: the personal perspective, the technical perspective, the social and environmental perspective, and the law and policy perspective.

Accounting for the contents of the questionnaire we can differentiate six groups of items: Items related to

- the person of the interviewee,
- his/her state of mind and mood (above all: fears),
- his/her quality of life,
- barriers impeding mobility,
- solutions towards a (satisfying) mobility, and
- political options for solutions.

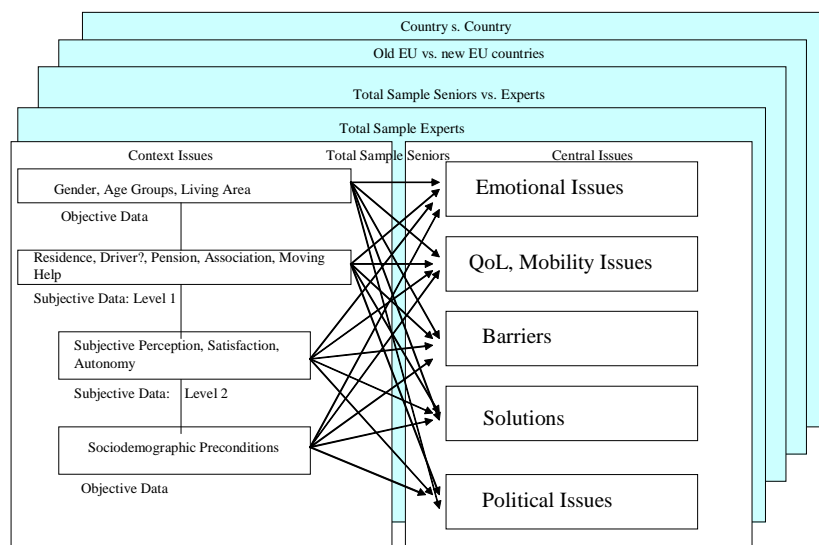
As the most important item groups we emphasised the “fear” group and the “quality of life” group, which surely shows a remarkable difference to other research approaches.

Principally, the responses of our research subjects could represent statements about objective facts or subjective viewpoints (opinions, meanings). Because of the decisive act-regulating power of subjective viewpoints (the phenomenal world of a subject) and unlike many other (quantitative-numerating) research projects we laid our balance point on these issues.

Some of the items may be interpreted as “context items”, which means, that these data describe the conditions or contexts, under which certain facts or opinions occur. But of course, most of the items can be assessed as “central items”, because they are central to our interests and research goals and address the topics directly.

Particular national supplement items were permitted. From a methodological point of view a lot of (statistical) interrelations between the six groups or contents of items are conceivable. So the design of data analysis was planned to be a statistical correlation approach, complemented by a lot of frequency analyses.

Figure 1-1: Scheme of data analysis



The correlation approach could make visible structures in our data such as certain *relations* (maybe with a causal background), *patterns* or *types*. A comparison between the results of the seniors' and the experts' questionnaire, an international comparison and a comparison between "old" and "new" EU states have been arranged. After a pre-test of the questionnaire and some corrections the study could be realised as planned.

1.1 Objectives of the quantitative study

Within the framework of the aims, previous results and methodological implications of SIZE, the quantitative study should try to create a solid empirical basis for the formulation of an elaborated description of the actual mobility and living situation of older people and for the presentation of means of problem solution. Despite the fact, that former research projects in the field of seniors' mobility have presented a lot of facts on the one hand and perspectives on future efforts, there is on the other hand a lack of detailed information about certain aspects of our issue, particularly in respect of an international comparison.

As a specific focus on mobility, SIZE has accepted the aspect of quality of life. Mobility as a precondition as well as an aspect of quality of life is the main distinctive feature in comparison to other mobility projects and gives orientation while formulating the objectives and hypotheses of SIZE.

Another distinctive feature is the emphasis on the implementation problem.

At first the implementation problem is a problem of spreading project results as information for the public (dissemination); but mainly and building on dissemination efforts implementation demands a search for the modes and ways of transforming scientific knowledge into everyday practice in individual and societal contexts.

Therefore, one of the objectives of the quantitative study is a "political" one: to find out the political and administrative structures which promote or hinder the process and progress of transformation.

1.2 The research instruments: Questionnaires for seniors and experts

The questionnaires for seniors and experts follow the objectives of SIZE textually and structurally.

The basis of the data collected by the questionnaires is formed by information about personal facts and conditions of living of the respondents: Age and gender, residential area, income, social network etc. A second part of the questionnaire is related to the self-evaluation of aspects of autonomy (as one of the preconditions of quality of life). A great deal of the tasks of the respondents is to describe their mobility by means of mobility indicators. Possible barriers against mobility are directly asked for. Mobility indicators and hints for barriers serve as the information base to estimate the interrelation between mobility and quality of life. The appreciation of subjective factors like fear and emotional insecurity has been integrated into this part of the questionnaire.

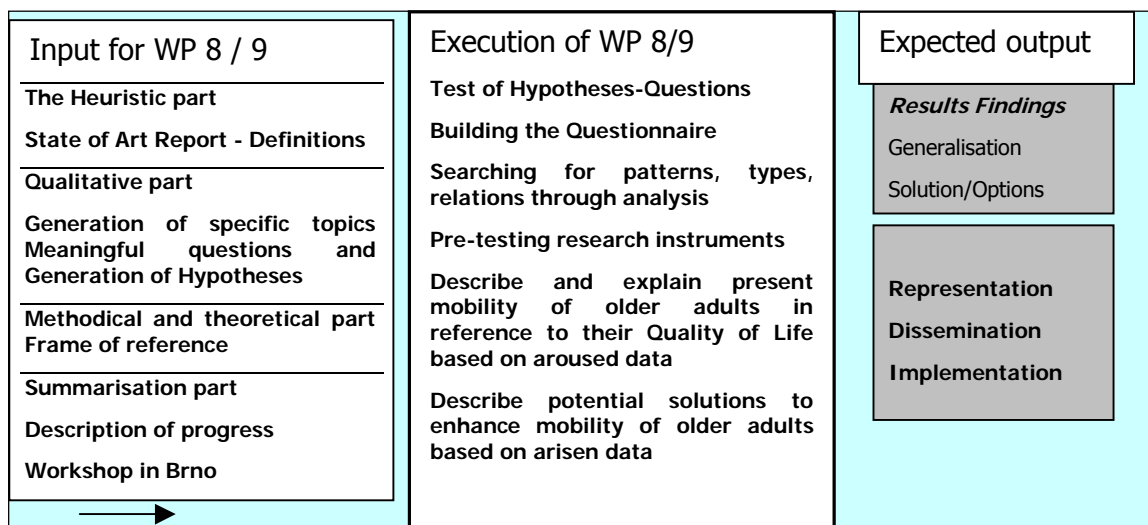
The implementation problem is represented by questions concerning measures, procedures and alternatives which are – in the eyes of the respondents – appropriate to enhance the mobility of senior citizens.

With this structure, the seniors' questionnaire is able to collect data on general aspects of mobility in older age (as collected in other national or EU mobility studies) as well as data related especially to the distinctive objectives of the SIZE project.

The experts' questionnaire follows the questionnaires for seniors to some extent. It contains questions for indicators of mobility of seniors and items related to mobility hindrances, both posed into the context of quality of life as mentioned before. Using the same items in this division of the questionnaire, we can experience the opinions and beliefs of experts on senior citizens' assessment of their own situation in the field of mobility. But, of course, the experts' questionnaire transcends the domain of questions the seniors' questionnaire has presented. The experts' questionnaire emphasises the aspect of political action for the benefit of senior traffic participants. Outlining David Banisters *Overcoming barriers to sustainable transport* (2002) the questionnaire gives an opportunity to specify the main difficulties in implementing solutions for mobility problems of seniors, as they were found by experts. To estimate the sort of expertise experts individually represent, they are asked for particulars of their professional competencies.

The embedding of the results of qualitative studies in quantifiable standardised features was one of the main issues of Work-Package 8 (WP 8) and 9 (WP 9). At that point, a comprehensive theoretical model would be of great advantage in a twofold way. The main task should be to avoid extending the Item/Questionnaire analysis excessively and to keep the explanatory statements of single items to a minimum in order to be far more traceable and transparent.

Figure 1.2-1: Diagram of processing the quantitative study in respect of SIZE-Inputs



1.3 Implementation and accomplishment of the quantitative study

According to the research design of SIZE the field research was accomplished in two different work steps with senior citizens and experts during the period of June 2004 till December 2004. Both research units were processed by each SIZE partner in his/her country. Each national research was conducted under the responsibility of the respective partner with respect to the common guidelines.

Figure 1.3-1: Map of countries involved



Figure 1.3-2: Achieved questionnaires

Countries:	Seniors	Experts
Austria	414	63
Germany	413	62
Ireland	413	45
Italy	414	65
Sweden	414	61
Poland	414	60
Czech Rep.	414	61
Spain	413	73
Total	3309	490

In order to facilitate an overview over the findings the samples of senior citizens and experts were treated separately.

In a first step the analysis of the general socio-demographic data on the senior side and the areas of competence on the expert side is focussed.

Hence, the individual groups of items were analysed by frequency and the first results of the examination were discussed.

1.4 Responsible authors of this deliverable

This deliverable is a summary of deliverable 12 and 13 and includes material directly from those reports.

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2 SENIOR CITIZENS VIEW ON MOBILITY

2.1 Residence

Our sample was well balanced with respect to their residence form: living alone or with a partner/with partners (like) children was distributed in a fifty-fifty relation. With respect to mobility, living alone doesn't absolutely seem to be a disadvantage. Those who are living with a partner in a house or a flat often were less autonomous and more handicapped. The advantage of living alone is to be forced to manage daily living without support by others and to be forced to leave the house or flat.

2.2 Income

As expected, there is a correlation between income/pension and autonomy as well as life satisfaction: The higher the income, the better the (subjective) appraisal of autonomy and life satisfaction. There is a typical inversely proportional relation between income and age too: higher age groups normally have a lower income, and the chronological age reinforces the correlation between income and autonomy and life satisfaction: the group of the oldest participants with the lowest income has the lowest values in autonomy and life satisfaction items. Age is aggravating contrasts. Our quantitative survey does not support the results of a great German longitudinal study (Berliner Alternsstudie BASE, Baltes et al. 1999²) which could not work out this dependence of life satisfaction on lower budgets.

2.3 Membership of a seniors' association

About a third of our participants are members in an association for seniors. Grouping the data according to this context condition, members of a seniors' organisation seem to be a privileged group. They are more autonomous; more satisfied with their life, they have a higher income and are better equipped with respect to mobility means.

2.4 Drivers

Driving the own car supports the independence of living, the maintenance of social networks, the arrangement of leisure activities and so on. Nowadays driving a car is mainly an option for elderly men and less for women. That is mirrored in our study, too. Nearly 40% of our sample had a driving licence; 56% were male and 44% female (with a proportion of nearly 66% female in the whole sample). Driving a car is somewhat a matter of income, of course (and older men typically have a higher income). Drivers with high income are overrepresented in our sample.

We could find a positive correlation between driving a car and membership in a seniors' organisation. We suppose that membership in an organisation and driving a car both depend on a good income, a good health status and on a high general activity (see above).

² Baltes, P. B., & Mayer, K. U. (Eds.). (1999). *The Berlin Aging Study: Aging from 70 to 100*. New York: Cambridge University Press.

2.5 Satisfaction and autonomy

Similar to other studies and to general experience in the highly developed European countries, only a small minority of aged people are restricted in their range of actions, are dependent on daily support and help: only 9% of our sample described themselves in that way. Half of the sample estimated his/her independence to be high (no gender differences). The participants' life satisfaction seems to be relatively high as well. Of course, autonomy and satisfaction decrease with age: we found the lowest values in the groups with highest age.

Though autonomy³ and satisfaction⁴ indices showed a satisfactory life situation of the seniors in general, they themselves expressed a lot of criticism concerning modern traffic and its conditions. We can conclude that improvements in the area of traffic, traffic safety and mobility opportunities will be improvements in the interest of a great part of our countries' population, because there is no big difference between the young old and old and people of middle age. But furthermore we can conclude that outdoor mobility and traffic participation are highly problematic for the "old old" and for handicapped people.

At least we have to interpret our data as a plea for a sufficient supply of financial resources for seniors. A low income turned out to be related to the risk of dependency and reduced life satisfaction.

2.6 Emotional/affective state

As modern neurophysiologic and brain research shows, all human actions are caused or at least accompanied by activities of the whole brain, including those parts which organise emotional states. Emotions seem to be the central motivational factors of human behaviour. The planning and selection of outdoor activities, the realisation of outdoor mobility are tightly linked to emotional states such as wishes/desires and aversions, hopes and fears. Because mobility in old age is a high value, we wanted to comprehend those emotions which work as a subjective barrier against mobility.

Generally speaking, we have to state, that the level of negative emotions was found to be relatively low. Outstanding negative emotions ("fears") which influence mobility decisions may be the fear of falling, of victimisation and of the behaviour of vehicle drivers (notabene: "outstanding" on a relatively low level, assessed over all participants).

Can we feel calmed down by these results? We think *not*. There is another side of the coin: 20% of our subjects indicated, that they are *very concerned* about the "fear" issues! That means that a fifth of senior citizens are affected by negative emotions in relation to their mobility.

At this point, we find a first answer to our question mentioned at the beginning: Are there differences among senior citizens or do sub-groups exist with different problems? Now we have indeed detected a sub-group with particular (emotional) problems, large enough to earn attention from experts and politicians. Further sub-groups have been identified before:

³ The autonomy/mobility index consisted in a short adaptation of the *Lawton-Brody Instrumental Activities of Daily Living* (Lawton & Brody 1969). For details please see SIZE Deliverables D11 and D12.

⁴ Satisfaction With Life Scale (SWLS) index; adapted from Diener et al. (1985). For details please see SIZE Deliverables D11 and D12.

The group of poor seniors and the "old old" seniors who have significantly more difficulties to realise their mobility than other aged people.

In relation to fears, the female participants formed another sub-group within the sample: women pronounced the hazard potential of outdoor mobility much more intensely than men. So the qualitative study of SIZE was right to claim a more gender oriented research on seniors' mobility.

Emotional issues in relation to contextual issues were proved, too. On this basis we can specify the circumstances which correlate with a low score of fears: living together with a partner, having a high income, being active in a seniors' association. Circumstances that go together with a high score of fears are: living in a nursery home, having a low income, being impaired and dependent on a mobility aid.

Fears reduce the quality of life. Participants with an increased level of fears were at the same time those who expressed a significantly reduced level of life satisfaction. The data indicate that there is a complicated interdependence between mobility, life quality, life satisfaction and emotional state. Intensity and quality of mobility may influence emotional state, life satisfaction and finally quality of life - but also vice versa! So we have to ask for the best lever points to intervene into the basic conditions of life in the interest of a "successful ageing" (in the sense of an autonomous, satisfying life in older age). It is obvious, that facilitating the conditions of mobility in old age influences the quality of life of seniors. Even "technical" or "physical" measures will have a positive effect on the emotional status of seniors in respect to their mobility.

A technical facilitation of mobility is the own car, highly valued by seniors. The reason is made clear in our study: a car does not only increase the range of mobility and reduce physical efforts, but it also reduces fear. Those who are able to drive a car indicated feelings of fear and threat to a minor extent. The behaviour of other road user is a relatively small problem for car drivers, in contrast to the whole sample. Many older drivers seem to be conscious of age related losses and limitations, e.g. in reaction time. Male drivers are more concerned about the decrease of reflexes than female. The self-critical and the less-critical group of drivers are of comparable quantity, about 50% in each case. But perhaps, many members of the less-critical group are older people without significant losses in performance.

We now have reached a level of knowledge which allows drawing a sketch of those seniors who have no problems in realising a successful mobility:

The person is not yet 75 years of age and is a "young old" male. He is living with his partner (wife) in a flat or a house. His children do not belong to his household any more. The high pension gives him excellent conditions to live and allows him to live an autonomous and active life. He is taking care of all daily needs and of course has full control in financial things. For his household a car is taken for granted and is in frequent use. He is able to choose between different modes of mobility, because he has no serious health limitations, and his housing area lies in an urban settlement with good infrastructure, accessible supply services and an easy access to public transport. Of course, he is engaged in one or more associations for seniors and is integrated in social space like his neighbourhood as well. He is in all very satisfied with life. He estimates the hazard potential when moving outdoor as very low.

Of course, the interests of such a person are not fully compatible with those of less privileged seniors; he/she could be more similar to younger traffic participants than to "seniors" in the common (stereotype?) understanding. Actually, the sketch suggests that the topic "interest conflicts between different groups of traffic participants" has to be discussed before interpreting the results of the quantitative study with regard to solution proposals.

The differences between needs and wishes of different parts of the population may be a political problem on the way to an implementation of useful measures.

So, what advice can be offered to decision makers, politicians and governmental authorities with respect to improving mobility conditions and to integrate the groups of older citizens in society at the same time? The main roles on these issues involve information, communication and cooperation.

2.7 Quality of life

Results concerning the issue "quality of life" are created by summarising and grouping data already interpreted. Quality of life is in our case a construct out of the question groups with the contents "satisfaction and autonomy index", "pension", "subjective statements about safety and fears", and "reliance on a mobility aids (rollator, stick)". But it is also necessary to prove the importance of *concrete preconditions* and *environmental framework elements*, which experts as well as seniors (in our qualitative study!) appreciate as influential on quality of life in the context of mobility. Two different approaches have been taken in fulfilling this task: A ranking of the elements which are assessed as mostly satisfying and those which are least satisfying.

In contrast to common opinion, the illumination of streets is generally satisfying most of our participants, and so are the possibility to find company to go out with and places to sit and to rest. But the senior citizens have relatively little trust that speed limits will be respected by drivers. They also criticise a bad infrastructure for cycling, a lack of financial resources for mobility aids and a lack of toilets in public spaces.

From the gender perspective we found the male participants to be consistently more satisfied with mobility conditions than the female, except for insufficient access to public toilets: both genders agree on this problem.

From the view of our participants, all conditions that facilitate the mobility of seniors are of higher quality in urban areas than in suburban areas.

Perhaps we can interpret the complaints of the seniors as examples for deficits, which can be generalised. That means: if one wants to improve quality of life he/she could begin with those conditions of mobility which were criticised: car drivers' lack of compliance with traffic rules, bad infrastructure for cyclists (and that means also: inappropriate mix of different kinds of road users), insufficient infrastructure for pedestrians in the sense of public facilities, bad supply and infrastructure in suburban regions.

Figure 2.7-1: *Enhancement of urban infrastructure: Proposal of Nuremberg students to make the Central Market more comfortable*



A second starting point to influence quality of life is the improvement of personal living conditions, especially the financial resources. A high income is a well established way to support a high quality of life, even in relation to mobility. For facilitating mobility and, subsequently, quality of life a sufficient income is the primary factor. The appraisal of infrastructure, public transport, and the affordability of mobility is strongly influenced by income. Safety, courtesy, to find company, the lack of compliance with speed limits and the lack of toilets in public space are in contrast topics that “poor” and “rich” seniors assess in a similar way.

A high quality of life is a challenge for the seniors themselves, too. The more actively they spend their life, the friendlier is their view on mobility and mobility tasks. Outstanding subgroups in this characteristic are the owners of driving licences and the members of a seniors’ association. The group of association members is particularly interesting: senior citizens in associations play an important role in dissemination activities (as “multipliers”) and even in decision processes, with the scope of mobility improvements, as representatives of their own age group.

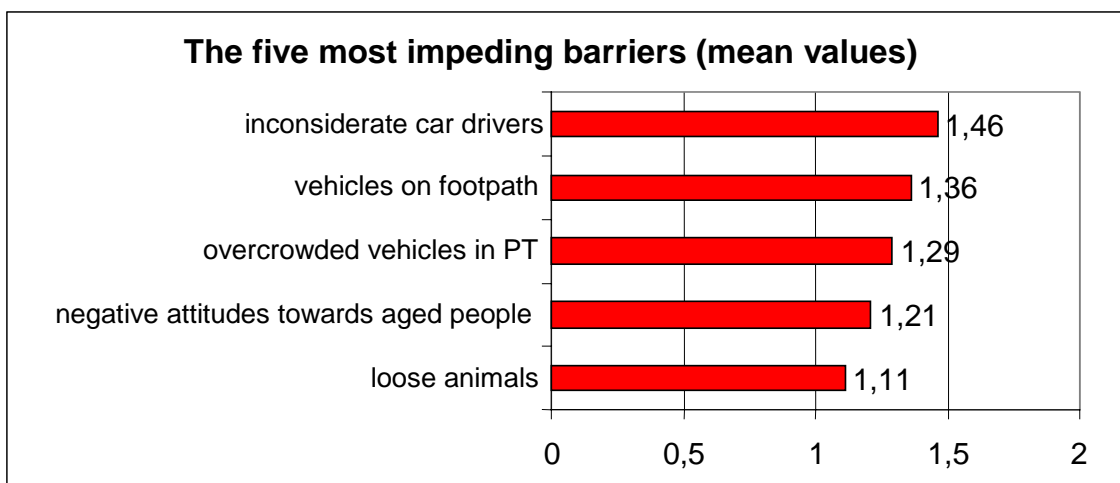
2.8 Barriers to mobility

We have collected a large amount of data concerning barriers. And because of the great variability of the data there are problems of finding the characteristics of the data pool and of interpreting the results.

Our questionnaire provided a list of possible barriers or obstacles to mobility. The task for the interviewees consisted in evaluating the single items of this list as (more or less) relevant for their own mobility. It was surprising that a great deal of answers indicated no relevance of the provided barriers. We may conclude that the older people nowadays are in common and in general relatively competent, capable and autonomous. Mobility problems seem to be problems of sub groups of seniors – as mentioned before. This differs from our goal to improve the mobility of the *majority* of aged people.

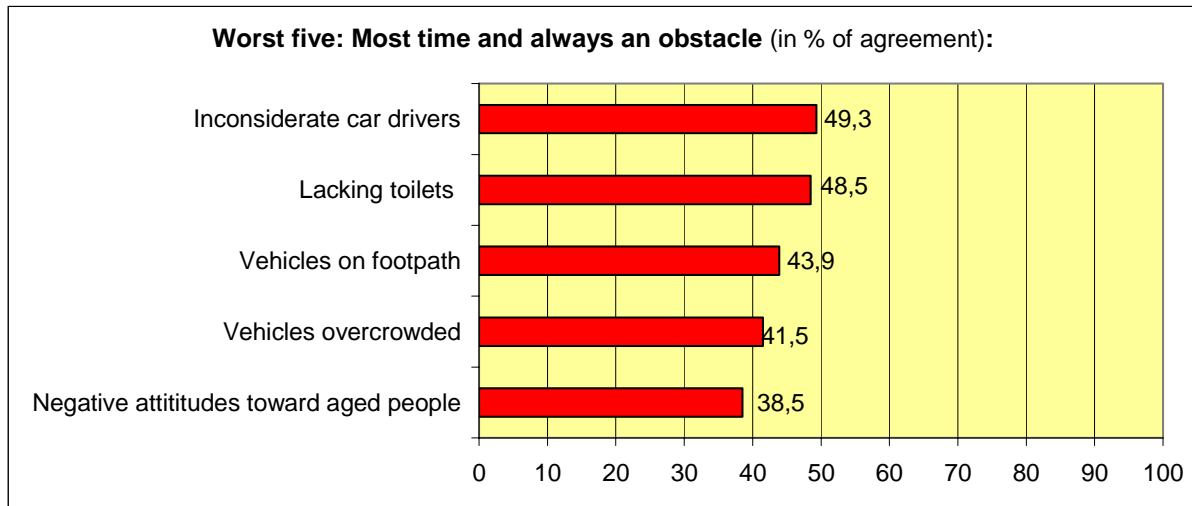
Calculating the statistical means of the scale values of all barrier items we found five barriers which were evaluated as most impeding:

Figure 2.8-1: Most impeding barriers



Apart from statistical means, if we also consider the numbers of answers that indicate the single barriers as “mostly or always an obstacle”, we are able to point out the “worst five” of those barriers – they are nearly the same:

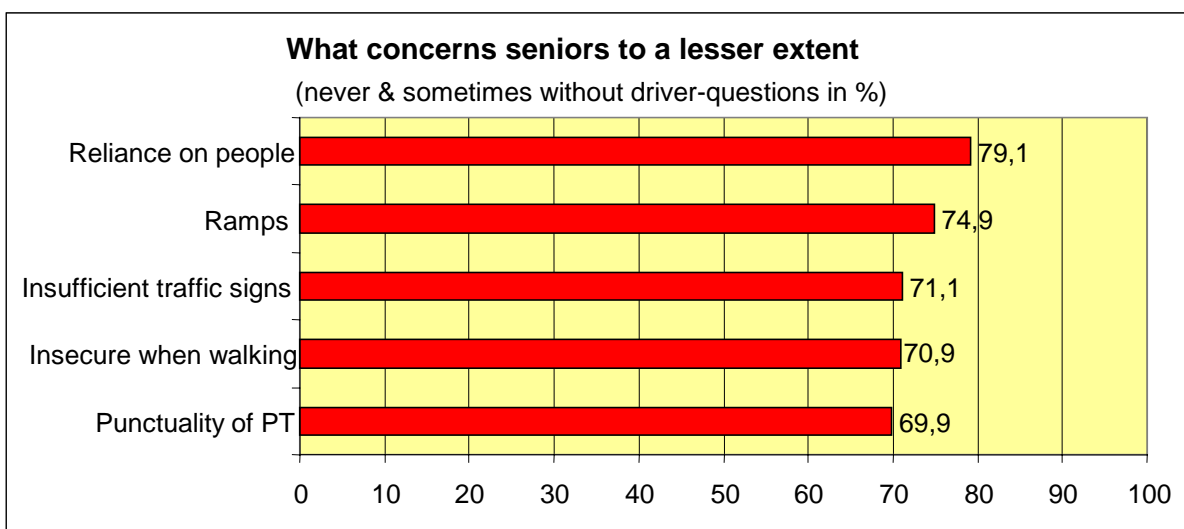
Figure 2.8-2: Worst five obstacles



It is a bundle of five aspects of outdoor mobility that bother older people most. And it is notable that four of the five are directly dependent on *human behaviour*, not on *physical conditions*.

At the same time there are also positive assessments of others' behaviour. The seniors are of the opinion that they can rely on persons in their narrow personal environment as supporters of their mobility. Some other (physical/individual) conditions also only play a *minor* role as barriers to a satisfactory and successful mobility:

Figure 2.8-3: What concerns seniors to a smaller extent

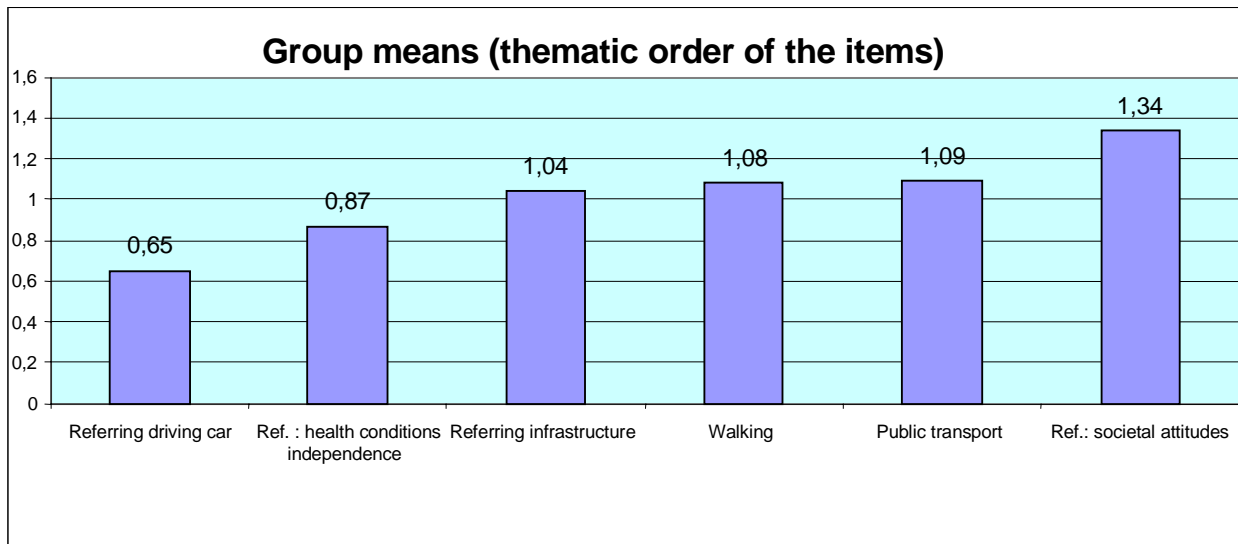


Including items which have only been presented to the drivers among our participants, also badly adapted cars or traffic signals are *not* matters of concern for most of the aged people.

We can assume that all over the world the technique of motorcars for example has progressed and has developed in a direction mostly suitable also for the needs of older citizens.

Grouping the “barrier items” into a thematic order we could form a ranking list of areas of concern. The barriers of most importance are concerning social attitudes; the barriers of least significance are concerning car driving in its technical and capability aspects:

Figure 2.8-4: Areas of concern



On the background of this ranking we could analyse the data material according to questions with maximum relevance for the search for solutions:

Who are the people that seem to be affected most by certain problems? Let us give some important examples:

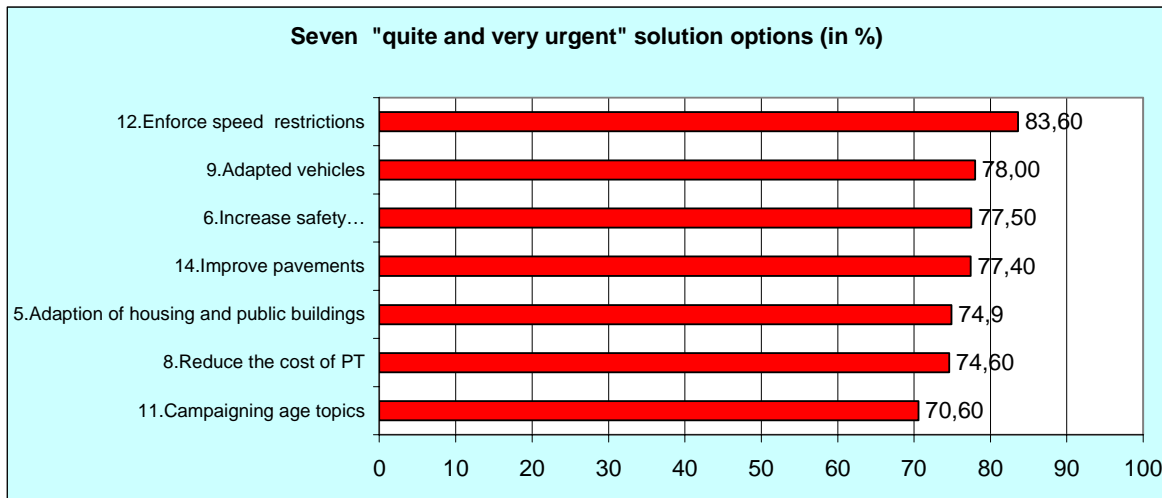
- People over 85 years of age, those who are living in a nursing home, with children or flatmate (that means: people with a higher risk of need of care) are often affected by problems in the area of walking (like vehicles on footpaths, lack of ramps, loose animals).
- The same group has most problems with public transport (overcrowded, technically maladapted, maladapted in route and frequencies).
- High dependence indicators also mark a high level of mobility problems.
- Participants with high income and high autonomy and satisfaction scores have little problems with infrastructural conditions (but lack of toilets is a problem for nearly all seniors!).
- The perception of social attitudes as mobility problems is dependent on pension income and health status and is interlinked with the autonomy and satisfaction score. People living in suburban or urban areas have more problems with social behaviour on the streets than those from rural areas; seniors living alone (autonomous seniors) have, in contrast, few problems with the social behaviour of their fellow citizens.

2.9 Perspectives of solutions

The answers of our participants to barriers, fears and quality of life items are mainly the source of ideas for problem solutions. Beside that, the results of the qualitative study gave valuable hints for concrete measures which could solve the identified problems. On the basis of these hints a list of possible measures was presented to the participants of the quantitative study (seniors and experts), in order to rate the urgency of the measures.

The rating showed seven options of solutions which have been appraised as "quite urgent" or "very urgent" by the seniors:

Figure 2.9-1: Urgent solution options



Taking other studies into account, the ranking is congruent to our expectations, but not congruent to the answering modes in other parts of our questionnaire. There is a remarkable contradiction between the appraisal of problems and that of problem solutions. But the high importance of speed restrictions and the relatively high importance of social campaigns is what we really could expect.

At the end of the list of nineteen urgent options are the following five (= least urgent):

Figure 2.9-2: Redundant approaches to solutions

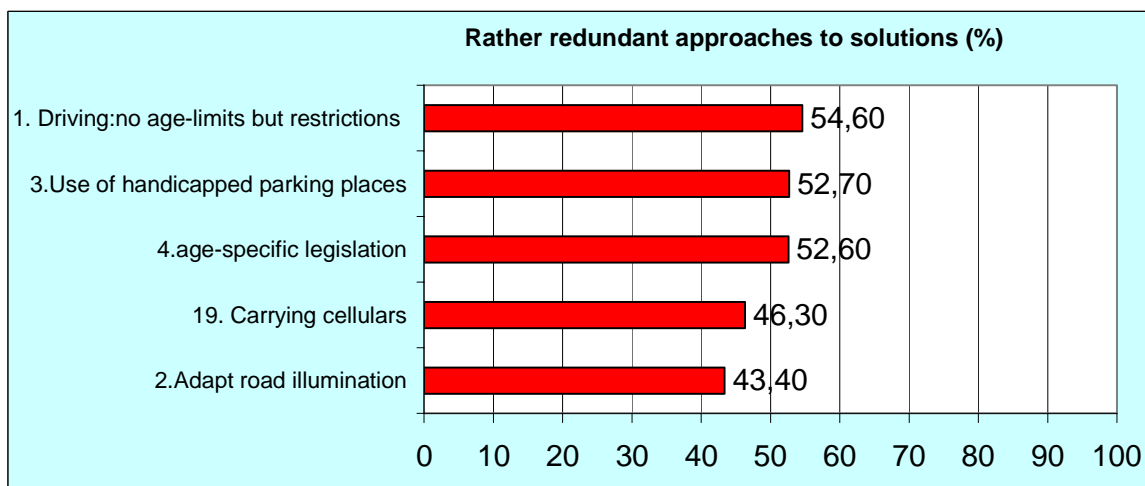
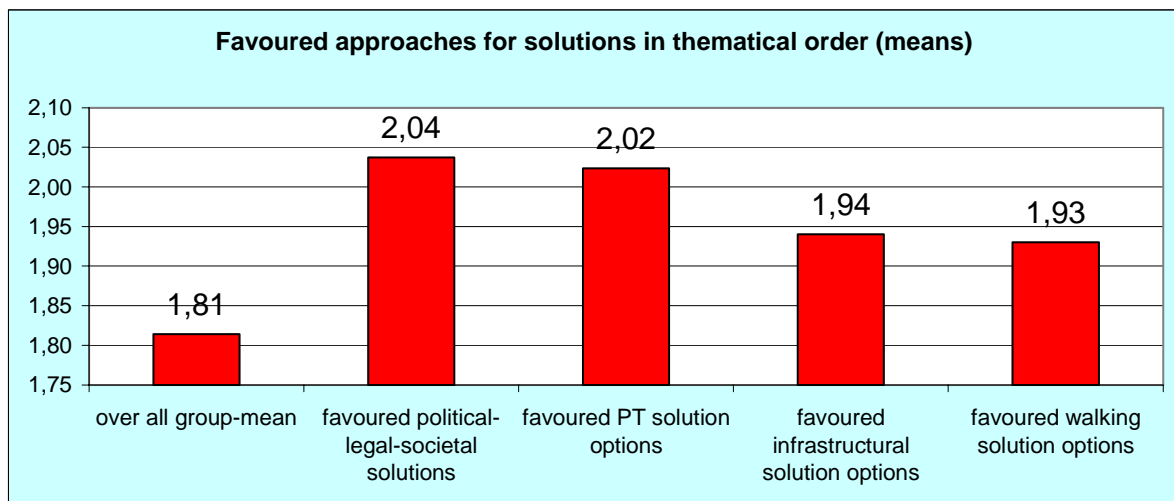


Figure 2.9-3: Adaptation of road illumination: A plan for Nuremberg’s Central Market – Last position on the agenda of seniors!



Like in the issue “barriers”, we also related the solution items to certain *thematic* topics to get an overview on a ranking of areas the measures should work in. The political, legal or societal area were the “favoured” area from the viewpoint of the seniors, followed by measures appropriate to improve public transport and by some infrastructural measures:

Figure 2.9-4: Favoured approaches for solutions



These results prove the general finding of our study, and that is the high importance of *social* factors in the mobility of old aged persons. The political, legal, and societal issues includes measures to increase the *sense* of security and safety for older people, to campaign age issues and understanding of age, to enforce speed restrictions, and to be better represented on administrative and governmental level.

Like in the issue “barriers”, we looked for sub groups of senior citizens which take up a particular position with respect to the areas of solutions.

- A gender differentiation shows higher agreement to all of the favourite solutions by women.
- Age is an intensifier of problems as well as of proposals for solutions.
- Drivers are a privileged group; they rated most of the measures as less urgent than others.

- People with high scores in life satisfaction and autonomy are more inclined to favour technical measures like carrying a cellular, or to restrictions for elderly drivers; members of the low score group are more inclined to ask for a specific legislation that protects senior road users. They seem to experience their situation in outdoor mobility as more risky than others.

From an expert's perspective, the problems expressed by the seniors, and the solutions considered as relevant and important, even the "less important" ones, may be relevant and important for all road users, car drivers or users of public transport. Thus, nothing of the problem analysis and none of the proposed solutions should be neglected a priori.

2.10 The political dimension

What we called a "social" or "societal" aspect of mobility reflects the results of political action. And all proposals for solutions, even the technical ones, call for political action, if they are to be implemented into citizens' everyday life. But the question is, whether political action in the interest of a safe, satisfying and comfortable mobility will be accepted by the target groups, and whether acceptance by the public is given.

But that is only one side of the political dimension. The other side is given by the idea, that politicians, local authorities and city planners also constitute a target group, because the results of scientific research must be implemented into their professional systems, and direct their actions.

First of all, let us have a look at the opinion of our participants concerning possible political decisions in the field of mobility and traffic.

Priority of cyclists and pedestrians in traffic planning?

46,2% of our sample expressed a rather sceptical attitude to this measure, but 52,8% showed a high affirmation (answering: "I fully agree" or "I mostly agree"). Drivers rated significantly lower in comparison to non-drivers, and female participants agreed to a larger extent than male.

Under the social, societal and political perspective we have to consider the possibility of conflicts between groups of road users, even between sub-groups of senior citizens.

Priority for public transport (PT)?

According to our results, public transportation systems seem to be a kind of "key technology" for the everyday mobility of older adults. Therefore it is no surprise, that nearly two thirds of the sample agreed with priority for PT as a central goal. Older people perhaps count on the improvements in PT as an enduring development.

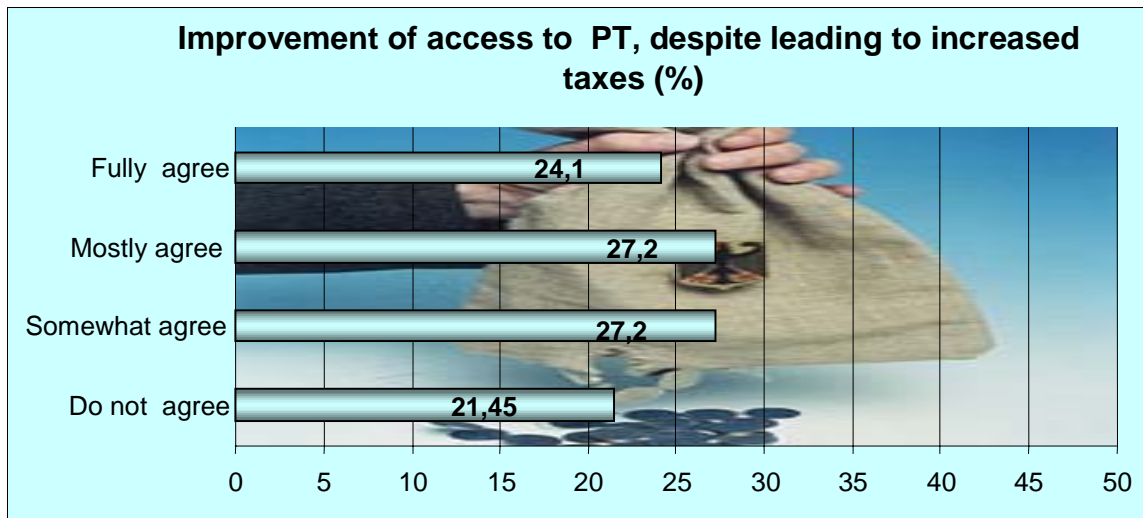
Within PT evaluation we found a significant trend line from urban to rural inhabitants, with the highest values for urban inhabitants.

We have aggravated the question:

Priority of access to PT, despite increased taxes?

Here the responses are more inconsistent. Disagreement is nearly as high as agreement, with all alternatives between, as Figure 2.10-1 shows:

Figure 2.10-1: Improvement of access to public transport despite increased taxes

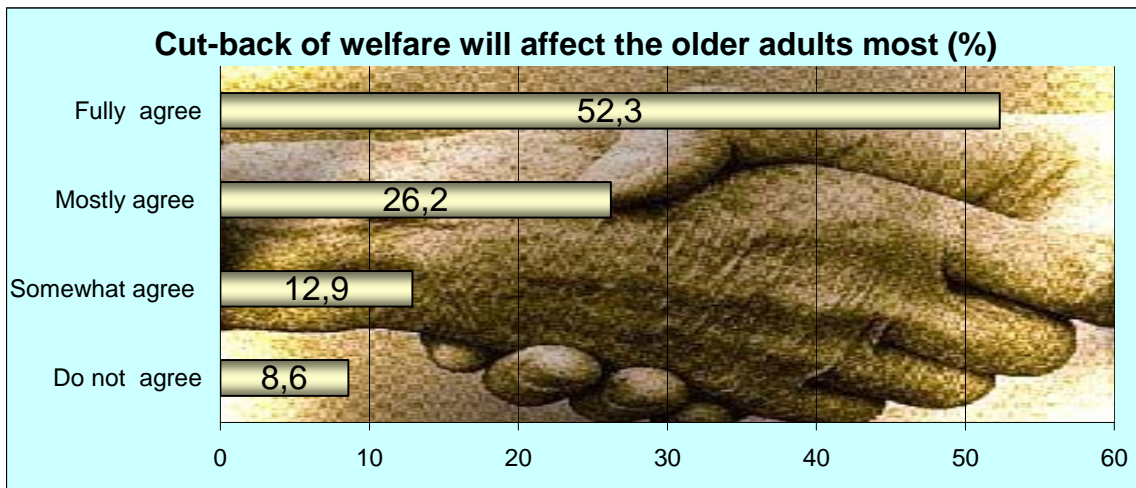


There are only low correlations between the responses on the one hand and certain characteristics of the participants on the other. The rural population showed most agreement with improving public transport at the price of increasing taxes, the urban population least.

Priority to sustaining welfare?

In accordance to the great importance of financial resources for a satisfying mobility a great majority showed a largely spread insecurity about future welfare of seniors. They did not want to accept any cut-back of welfare state funding, with the argument that such a cut-back would affect older people most:

Figure 2.10-2: Cut-back of welfare will affect the older adults most



Of course, the participants with the highest pension and highest autonomy score agreed significantly less with this statement, female respondents and non-drivers in contrast expressed a higher agreement. In the present situation of a globalising world many senior citizens are feeling pushed to the lower end of the scale of social relevance.

3 EXPERTS' VIEW ON MOBILITY IN OLD AGE

3.1 General conclusions regarding experts' sample

During the process of searching for and inviting 60 experts, equally from three different areas of responsibility (namely: political, technical and advisory/research) in each country to participate in the survey, the following characteristics and regularities have been observed:

- experts of the technical disciplines were the most willing to participate in the survey; this group of experts was the group most interested in the project's aims and outcomes; as a result, experts of the technical disciplines were the largest group in our experts sample (40% of all experts),
- experts with advisory/research competencies were interested in the project area, but sometimes too busy to attend the survey; this group of experts was the smallest in our sample (23,5%),
- the most difficult group for co-operation was the group of experts with political background; the best experts with political responsibilities are usually very busy; it is difficult to contact them personally; they are not used to participating in research studies like SIZE; they very often refused being interviewed, sometimes they asked their junior co-workers from administration to deal with our survey; we had time-keeping problems with obtaining their completed questionnaires and at the end the group of experts with political background (26,5%) was also much smaller than the group of technicians.

3.2 Fears

Experts' opinion on what seniors fear most:

- victimisation is the most serious seniors' fear,
- in our experts' general opinion, seniors also feel fear of falling down in the street,
- aggression from vehicle drivers is also assessed as a frequent fear of senior citizens,
- as well as generally the aggressive behaviour of other road users.

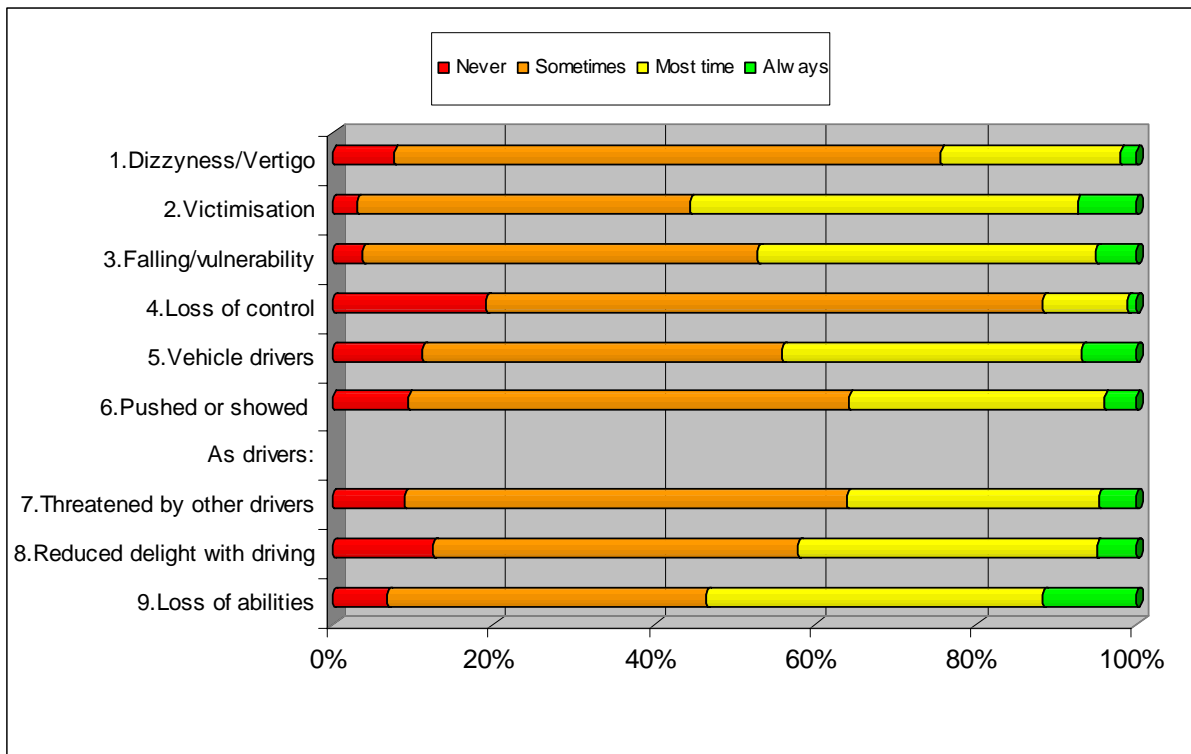
And what seniors fear least in the experts' opinion, viz. events assessed as happening to seniors seldom or only sometimes, are:

- dizziness in the crowd,
- loosing control.

Senior drivers' fears in the experts' opinion:

- seniors feel fear of loosing abilities to drive a car
- feel fear of other drivers' aggression.

Figure 3.2-1: Fears of seniors (experts' view)



Swedish experts assumed the lowest levels of fears (8 out of 9 types of fear received the lowest rates in Sweden), and, de facto, Swedish seniors are less afraid of victimisation, aggressive driving, etc. than seniors in other European countries!

The most significant difference between countries was shown in relation to the fear of vehicle drivers that invade the footpaths or crosswalks: Czech Republic, Italy and Poland seem to be the most dangerous for seniors walking along the streets, according to experts' assessment.

It does not happen in general to seniors that they are confused or lost, or that they feel dizzy in the crowd, experts believe.

3.3 Quality of life factors

In general, the interviewed European experts rated as most important:

- seniors' satisfaction with special rates for public transport (mean rate 2,02),
- sufficient illumination at public places/in the streets (mean rate 1,47),
- financial conditions of seniors to have an own car (mean rate 1,43).

The lowest ratings of relevance European experts gave to:

- seniors can not be confident that speed limits will be respected (the lowest rate in all countries, mean rate 0,71!),
- seniors have no or bad access to cycling infrastructure (mean rate 0,98),
- seniors have no good access to public toilets (mean rate 1,03),
- seniors can not feel safe in public areas (mean rate 1,08).

Financial situation:

The worst financial situation (affording mobility aids, private car, petrol or taxi) was assumed in Poland, then in Spain; the best financial situation accordingly to the experts can be found in Germany, then in Sweden and in the Czech Republic!

Social climate:

More importance than average is attributed to social behaviour (giving seating place in public transport, getting company to walk, feeling safe in public places due to police presence) in Poland and the Czech Republic, while this is the case less than average in Sweden and Italy.

Infrastructure:

The highest rates were received in the Czech Republic, then in Austria; the lowest rates were given by the experts from Ireland and Germany.

Public transport:

Higher degree of contribution in Austria and in the Czech Republic; less weight was attributed in Germany, Ireland, Italy and in some cases also in Sweden.

Politicians have a less differentiated opinion, especially on safety aspects, police presence, quality of bus stops and so on than experts with technical and advisory background.

3.4 Barriers and obstacles

In general, European experts agree that the following are the most serious barriers to seniors' mobility:

- lack of toilets (mean rate 2,03),
- inconsiderate car drivers (mean rate 1,98),
- decreasing senses (mean rate 1,97),
- vehicles on footpaths (mean rate 1,88),
- reliance on other people (mean rate 1,81).

All other barriers were regarded as fairly important (means 1,5 - 1,7). Only three of the barriers were assessed as not so often limiting seniors' mobility:

- loose animals (mean rate 1,32),
- uncomfortable design of cars (mean rate 1,33),
- lack of punctuality in public transport (mean rate 1,35).

Social attitudes and health:

- the polled experts from the Czech Republic, from Poland and also from Austria assessed that social attitudes and health problems - inconsiderate car drivers, decreasing senses, feeling insecure when walking - are often a barrier
- Swedish experts with respect to all social and health related barriers (especially negative attitude towards seniors), and also Irish experts (with respect to degeneration of senses) assessed that these are barriers only sometimes.

Walking:

- experts from Poland find that ramps are very often a mobility barrier, unlike all other experts, especially Germans, Austrians, Swedish and Irish,
- experts from the Czech Republic said that roundabouts are very often mobility barriers, unlike all others, especially Swedish experts,
- big differences with respect to loose dogs: not considered a big barrier in Sweden, but a serious barrier in Poland,
- big differences with respect to vehicles that drive on pavements: not a frequent barrier in Germany, Spain, Sweden and Ireland, but often a barrier in the Czech Republic, Austria and Poland.

Infrastructure:

- in relation to lack of toilets as a frequent barrier, the highest rates were received in the Czech Republic, followed by Poland,
- the most critical opinion about insufficient amount of traffic signs was given by experts from the Czech Republic and also from Italy, in contrast to Poland and Ireland.

Public transport:

- Lack of punctuality was seen as a real barrier to seniors' mobility by Austrian and Swedish experts,
- only experts from Ireland said that the ruthlessness of public transport drivers is very rarely (or never) a barrier,
- the most critical opinions in relation to public transport schedules and punctuality were received in Italy,
- overcrowded buses were seen as a frequent barrier in Italy, also in the Czech Republic and in Poland, sometimes in Spain, but not so frequently in Sweden.

Driving a car:

- huge differences in opinions concerning uncomfortable design of cars: very frequent barriers in the Czech Republic and in Poland, but not so in Austria, Germany, Sweden and Ireland,
- significant differences in relation to the bad adaptation of signals: Polish and Czech experts assess them as a frequent barrier, while Swedish experts don't.

Experts with political background expressed significantly different opinions on public transport barriers, (punctuality, frequencies, transfers, crowded busses and ruthless drivers), much less critical than experts with technical and advisory background.

Is this because politicians (maybe) do not use public transport or is there another reason for this result?

A statistically important difference between political and advisory experts' opinions relates to the seniors' health conditions, reflected by insecurity when walking and reliance on others. Politicians think that this is much less of a barrier to senior citizens mobility than technicians and advisors do.

3.5 The political dimension

Experts in general agree with all four demands discussed, namely Priority of cyclists and pedestrians in traffic planning, Priority for public transport, Priority of access to PT despite increased taxes, and Priority to sustaining welfare.

The demands for priority

- for busses and trams in towns despite more burden for car drivers (mean rate 2,34),
- for cyclists and pedestrians in towns despite more burden on other road users (mean rate 1,92)

received the highest levels of agreement.

A slightly lower level of agreement was received on with respect to the improvement of access to public transport to be enhanced by governments and local authorities (mean rate 1,85).

The lowest support (still 65% of agreement) was expressed by experts for the statement that cut back of welfare/state funding would affect older people most (mean rate 1,67).

Differences between countries are not systematic, varying for each individual problem:

- experts from Poland showed lower agreement with priority for cyclists and pedestrians than all other partners,
- experts from Spain showed lower agreement with priority for busses and trams than all other partners,
- experts from Sweden showed disagreement with the statement that cut back of welfare/state funding would affect older people most (in contrary to all other countries),
- there were big differences between countries in agreement for improving access to public transport; especially great agreement in Italy and Ireland, relatively low level of agreement in Sweden.

Experts with technical background showed the highest rate of agreement with three out of four stated solutions. However, only with respect to two problems there were statistically significant differences:

- politicians show lower agreement than technicians and advisors with a priority for busses and trams in towns,
- experts with advisory and research background agree less than politicians and technicians that cut backs of welfare/state funding would affect older people most (which may be explained by less interest in financial matters in this group).

3.6 Solutions

Social and political solutions:

- experts in general assessed as the most urgent solution the enforcement of speed restrictions (mean rate 2,27), but also the carrying-out of campaigns in order to make people more aware of the problems of older adults (1,90), and measures to increase the sense of security and safety of older people (1,89),
- not very urgent they believe are: introducing age-specific legislation (mean rate 1,09), carrying mobile phones by seniors (1,29) and nominating a senior representative in government/administration (1,33),
- Swedish experts, in contrast to all other experts, do not attribute high urgency to two types of measures: campaigns in order to make people more aware of the problems of older adults, and introduction of age-specific legislation,
- Austrian experts, more than others, advocated the urgency of mobile phones for seniors and the nomination of senior representatives in the government.

Walking:

- all experts agree that the most urgent solution for walking seniors is to improve pavements (mean rate 2,16), but all other solutions in this group were also assessed as fairly urgent: more foot-paths (mean rate 1,91), reducing crossing distance (mean rate 1,89) and prolonging crossing time at some traffic lights (mean rate 1,74),
- only German experts said that it is not very urgent to improve the pavements,
- relatively big differences concerning longer crossing times at traffic lights, compared to the other countries, appeared in Poland, Spain and Sweden, where this is considered less urgent,
- Austrian experts, on the other hand, attributed high urgency to prolonging crossing times and reducing crossing distances.

Infrastructure:

- in general, the experts' opinion was that all infrastructure related solutions are urgent and the most urgent are: adaptation of housing for seniors needs (mean rate 2,18) and increase of resting places in the public area (mean rate 1,92),
- road illumination received the highest rates in Austria and in Sweden, in contrast to Poland, the Czech Republic and Italy where this solution is assessed as less urgent,
- housing adaptation is most urgent in the opinion of Austrian experts, but less urgent in the opinion of experts from Ireland and Germany.

Public transport:

- in general, the experts' opinion was that two out of three public transport related solutions are very urgent: introduction of adapted vehicles (mean rate 2,17) and upgrading public transport stops (mean rate 2,11), while the reduction of travelling costs is less urgent (mean rate 1,56),
- Polish experts expressed lower urgency with respect to all infrastructural solutions than other experts,
- Austrian experts expressed the highest urgency of an introduction of adapted vehicles, while the most urgent solutions for the Czech Republic and Sweden are upgrading public transport stops and the introduction of adapted vehicles.

Driving a car:

- solutions related to senior drivers were not assessed as urgent (means 1,16 and 1,32),
- significant differences in relation to driving licence procedures (health checks, restrictions) for seniors were observed between countries: Austrians and Swedish experts think that is very urgent, while Polish, Spanish and Italian experts think that this is not urgent,
- allowing seniors to park at parking places for handicapped (and at other special places) was assessed as more urgent by Polish, Irish and Italians experts, in contrast to Swedish, German and Austrian experts, who found this less urgent.

Experts with political background expressed a significantly different opinion on:

- enforcement of speed restrictions than experts with technical competencies: politicians consider it more urgent than technicians do,
- they think, however, that it is less urgent to reduce crossing distances for pedestrians than technicians and advisors do

Experts with advisory/research background expressed significantly different opinions than technicians and politicians on the following:

- introduction of age adapted traffic lights (more urgent for politicians and technicians),
- introduction of age-specific legislation (more urgent for politicians and technicians),
- no age limits for driving licence (more urgent for technicians),
- upgrading comfort and access to public transport stops (more urgent for advisors than for technicians).

3.7 The Banister approach and barriers for solutions

This part of the analysis follows the David Banister (2002) classification of the causes which prevent measures that are considered useful from being implemented. Based on this author, we have established 7 types of hindrances:

COORDINATION PROBLEMS, which are focused in the conflicts among the different administration and/or government levels (municipal, regional, national,...), power voids, conflicts in competencies or in the power distribution.

LEGAL PROBLEMS, which refer to difficulties of new regulations to fit into legal requirements, legal requirements that complicate the implementation or make them even impossible by law, and other legal barriers that are raised.

FINANCIAL PROBLEMS include lack of money, problems to get it, costs which are considered too high, and (stated) lack of resources related to budget and schedule.

NEGATIVE SIDE EFFECTS ON OTHER ACTIVITIES referring to the secondary non desirable effects on other activities (transport, tourism, national industry, ...); e.g., traffic calming decreases car speeds but also affects public transport negatively.

OPPOSITION OF OTHER COLLECTIVES (ecologists, handicapped, trade-unions,..) refers to conflicts of interest with other social agents; e.g., a new road construction can find some

opposition from ecologists, ramps to facilitate the wheelchair access can be dangerous for the balance of older adults.

CULTURAL BARRIERS refer to the public non-acceptability of measures or to social refusal due to conflicts with beliefs (culture, religion) or social values (freedom, equity); e.g., a restrictive measure (like to reduce the use of car) would be perceived as an attempt against individual freedom and provoke failure.

PHYSICAL-TOPOGRAPHICAL BARRIERS refer to space restrictions or hindrances related to the topography of an area; e.g. the construction of parking lots needs enough space, the design of a bicycle route requires a relatively even terrain,...

General experts' classification (which is the main barrier, hindrance for proposed solution)

Social and political solutions:

- experts in general expressed the opinion that the majority of social and political solution are of a complex nature and that there are several barriers to implementation,
- only in the cases of mobile phones and increasing safety they selected financial problems as the main dominating barrier,
- five significant barriers to introducing the enforcement of speed restrictions were selected: co-ordination problems, legal problems, financial problems, cultural barriers and opposition from other collectives,
- four significant barriers to carrying out campaigns in order to make people more aware of the problems of older adults were selected: co-ordination problems, financial problems, cultural barriers and opposition from other collectives,
- four significant barriers to the introduction of representatives of seniors in administration/government were selected: co-ordination problems, legal problems, cultural barriers and opposition from other collectives.

Walking:

- experts decided that the most important barrier to solutions for walking (improving pavements, more foot-paths, reducing crossing distance) are financial problems,
- prolonging crossing time at some traffic lights is hindered by three barriers: co-ordination problems, oppositions and negative side effects.

Infrastructure:

- experts agree that the most important barrier to infrastructural solutions (road illumination, traffic lights, housing for seniors' needs, and increase of resting places in the public area) are exclusively financial problems,
- in general, the experts' opinion is that all other barriers are marginal for infrastructure related solutions.

Public transport:

- experts agree that the most important barrier to public transport solutions (adaptation of vehicles, accessible and comfortable stops, reduction of public transport costs for seniors) are exclusively financial problems,
- opposition from other collectives was the only other, but not very important, barrier mentioned in this respect.

Driving a car:

- legal problems are the most important barrier to introducing certain restrictions for car use by seniors,
- opposition from other collectives is a main barrier to introducing a solution of parking cars at places for disabled people or other special places.

3.8 Barriers to solutions – country comparison**Social and political solutions:**

- Quite different barriers to the introduction of better enforcement of speed restrictions in order to reduce pedestrian accidents were seen in the different countries:
 - opposition from others is most important in Austria (40%) and Germany (38%),
 - financial problems dominate in Ireland and Sweden (58%, 55%),
 - co-ordination problems dominate in Spain (34%),
 - legal problems are most important in the Czech Republic (39%),
 - cultural problems are there in Italy (32%),
 - cultural (28%), legal (22%) and opposition (27%) problems in Poland.
- introducing specific legislation for seniors has mainly a legal barrier in all countries, except for Spain and Italy where co-ordination problems dominate,
- introducing campaigns concerning seniors' problems received a very heterogeneous assessment: co-ordination problems dominate in Ireland, Poland and Germany, cultural barriers in Austria, Sweden and Italy, and financial problems in Spain,
- nominating a Senior Citizens Representative mainly meets co-ordination problems in most countries, but in Sweden opposition by other groups is considered most important and financial problems are assumed as main barriers in the Czech Republic,
- carrying a mobile phone mainly meets financial problems, except in Sweden and Germany, where cultural barriers are assumed to dominate.

Walking:

- introducing more urban pedestrian paths has mainly financial barriers, especially stressed in Poland, Ireland and in the Czech Republic; in Spain and Austria the opinion regarding this issue is very heterogeneous,
- reducing the distance of pedestrian crossings meets an especially strong financial barrier in Poland and Czech Republic, while in Spain, Austria, Italy, Germany and Sweden the opinion is more that co-ordination problems and physical-topographical barriers play a role,
- prolonging the crossing time at some traffic lights has a large but similar distribution of main barriers, except in Sweden where opposition from other collectives dominates

Infrastructure:

- no significant differences regarding barriers to infrastructural solutions (financial problems dominate in all countries)

Public transport:

- no significant differences regarding barriers to solutions for public transport (financial problems dominate in all countries)

Driving car:

- barriers to allow seniors to use special parking places: oppositions from other collectives were most important for all experts, with the highest ranks in Spain and in Ireland, while additionally only Austrian experts noted legal problems as important,

Only two statistically significant differences were found, in which experts with political background expressed opinions significantly different from other experts:

- enforcement of speed restrictions: politicians said that legal problems are the main barrier, while technicians and advisors choose financial problems as most important,
- allowing older drivers to use the parking places reserved for disabled people or reserving other special and adapted places for them: experts with political background see negative side effects, while technicians and advisors mostly see opposition from others as the most important barrier

3.9 Final remarks and recommendations from experts

It is a well known demographic fact that the number of seniors is rising, which reflects the increased needs for adapted housing for this group of citizens.

Nowadays the fulfilment of those needs becomes an important social problem in all developed countries in the world. The quality of housing influences older people's health. Between 5 and 10% of the world population suffers from accidents and injuries in their own homes.

A very important part of architectural and urban planning and design deals with senior citizens' problems, as part of interior, housing and condominium (groups of buildings) design. However, the separate discipline of "gerontologic architecture", the architecture theory and practice that takes the needs of older people into consideration, does not exist, yet.

The general expectations of senior citizens for their houses are:

- independent flats or houses, but situated in a natural urban structure,
- situated in a properly landscaped surrounding,
- closely connected with the environment.

The environment created for seniors is supposed to facilitate the fulfilment of everyday needs in the adjacent surrounding. It is also important for seniors to remain in a social and environmental connection with all their living environment, namely close inter-personal relations with neighbours, friends, children, etc., or favourite places of rest and leisure.

Living in the integrated urban structure enables senior citizens to fully participate in social life and easy use of all services. This is true for seniors only when the architecture of the living area and public spaces is properly accommodated and equipped with the necessary means of assisting older peoples' mobility.

There is a lack of research and, consequently, literature in this area. It is hard to find the publications which would compound elements of classification, policies and design rules, spatial program conceptions and interior design for seniors.

The good but unique example of literature in the area of how to create the housing environment in the spatial structure of a town is the work "A Pattern Language" by Christopher Alexander, issued in 1977 by Oxford University Press.

The public space, including traffic environment, is not included there.

4 SENIORS VS EXPERTS: COMPARATIVE ANALYSIS

The comparison between the viewpoints of seniors and those of experts should be an exciting expansion of mobility studies on seniors' mobility. The viewpoints of seniors and experts may be different, perhaps in some aspects incompatible. The judgements of seniors about their every day life and their own circumstances are made from a subjective perspective, mostly without considering common interests, while experts prefer the position of an objective observer with a background of empiric and nomothetic research or general experience. Seniors and experts both have a bias in their standpoints; seniors may deceive themselves about their own matters, experts may follow wrong theories. But sometimes seniors and experts are expected to have similar opinions or to come to comparable conclusions. In these cases the proposals and recommendations for intervention have a solid ground. In cases of dissent one has to balance the arguments of both sides. One way to reach sustainable problem solutions could be the dialogue of seniors and experts. The SIZE approach may be interpreted as the beginning of such a dialogue.

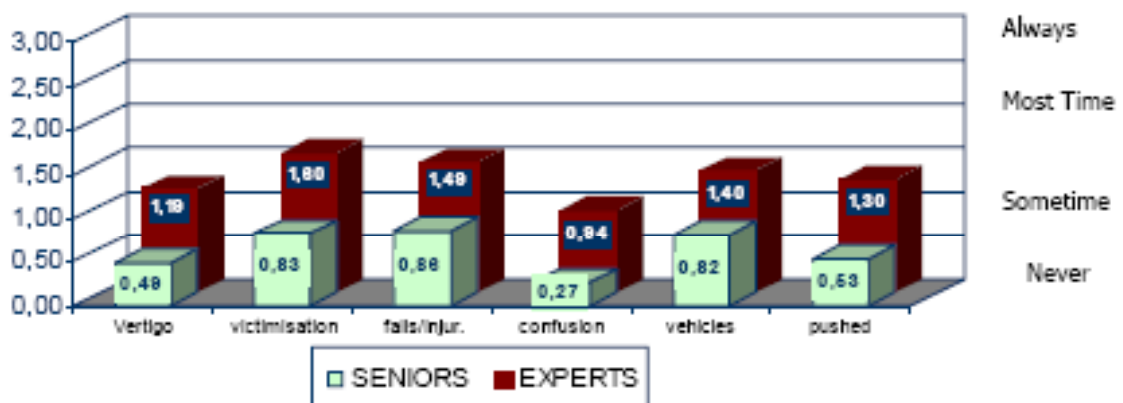
Because the experts' questionnaire contained the same main frames as the seniors' questionnaire we can accomplish the comparison according to the well known topics:

- Fears (related to the hazard potential of outdoor mobility for the seniors)
- mobility (and its relation to quality of life),
- barriers and obstacles (complicating mobility),
- solutions (with the goal of improvement of seniors' mobility) and
- political topics (the superordinated perspective).

4.1 Fears

The image of fears seniors and experts used showed contra-intuitive differences: seniors tended to appraise the role of fear with respect to several hazard potentials of outdoor mobility significantly less than the experts. The seniors' view on their mobility was friendlier and more easy going. This is valid for all fears listed in the questionnaire. That means that experts supposed a higher level of fear in the senior citizens than they themselves expressed. However, the rankings of fears are similar. The next table shows the relations:

Figure 4.1-1: Seniors-experts comparison of fears 11.f. (without driver questions)



Perhaps the opinion of experts shows a bias caused by a typical research perspective: In gerontological research the “normal case” seldom is the object of analysis but rather the “pathological” case. It seems to be important to perceive life in old age mainly as an example of “normal life” with some critical deviations.

With respect to, e.g., the fears related to driving, the senior-expert differences are still more pronounced. The values given by the experts for the following particular aspects of fear...

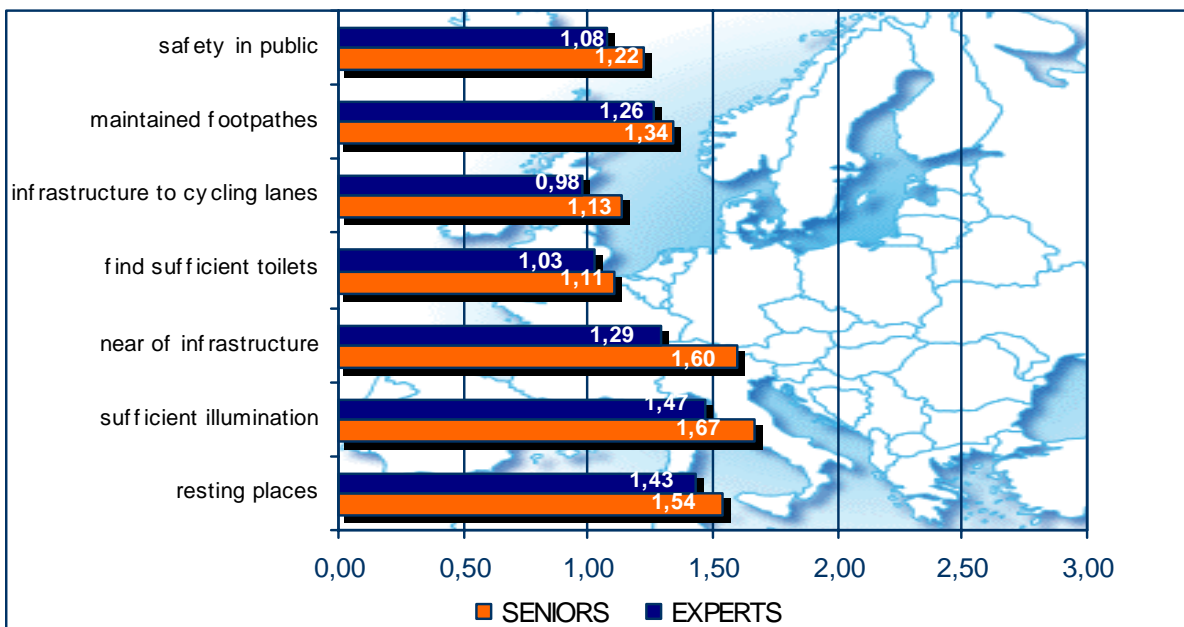
- “threat from others”
- “do not like driving any more”
- “reflexes become worse”

... are at minimum twice as high as those of seniors. We think that an important difference in the appraisal of the hazard potentials of older drivers is expressed here. More research effort is needed to reach a realistic image of the older driver.

4.2 Quality of life factors

The financial resources (as one of the great supports for quality of life in old age) are estimated as better by the experts than by the seniors themselves. On the other hand, seniors gave a somewhat more positive view of *objective* quality of life conditions than the experts, too (see figure 4.2-1):

Figure 4.2-1: Comparison in quality of life factors between experts and seniors



We can also see that some appraisals of seniors and experts are not so far apart from each other. Both groups seem to believe there is a call for action in the areas shown here.

Public transportation systems

A concordance in the opinion of seniors and experts could be found in the evaluation of the public transportation systems. The state of bus stops, the friendliness of drivers, the

courtesy of fellow passengers and the adaptation of vehicles as well as of schedules and lines to the needs of the seniors could be enhanced.

4.3 Barriers and obstacles

The response tendencies in the different parts of the questionnaire support the supposition, that experts and seniors differ in their appraisal of the extent that given barriers and obstacles play a role as hindrances for mobility. That was found true. As it was stated before, the experts have drawn a far more negative image for the mobility conditions in old age than the older adults themselves did. What must be pointed out as important barriers and obstacles for mobility from the viewpoint of our experts?

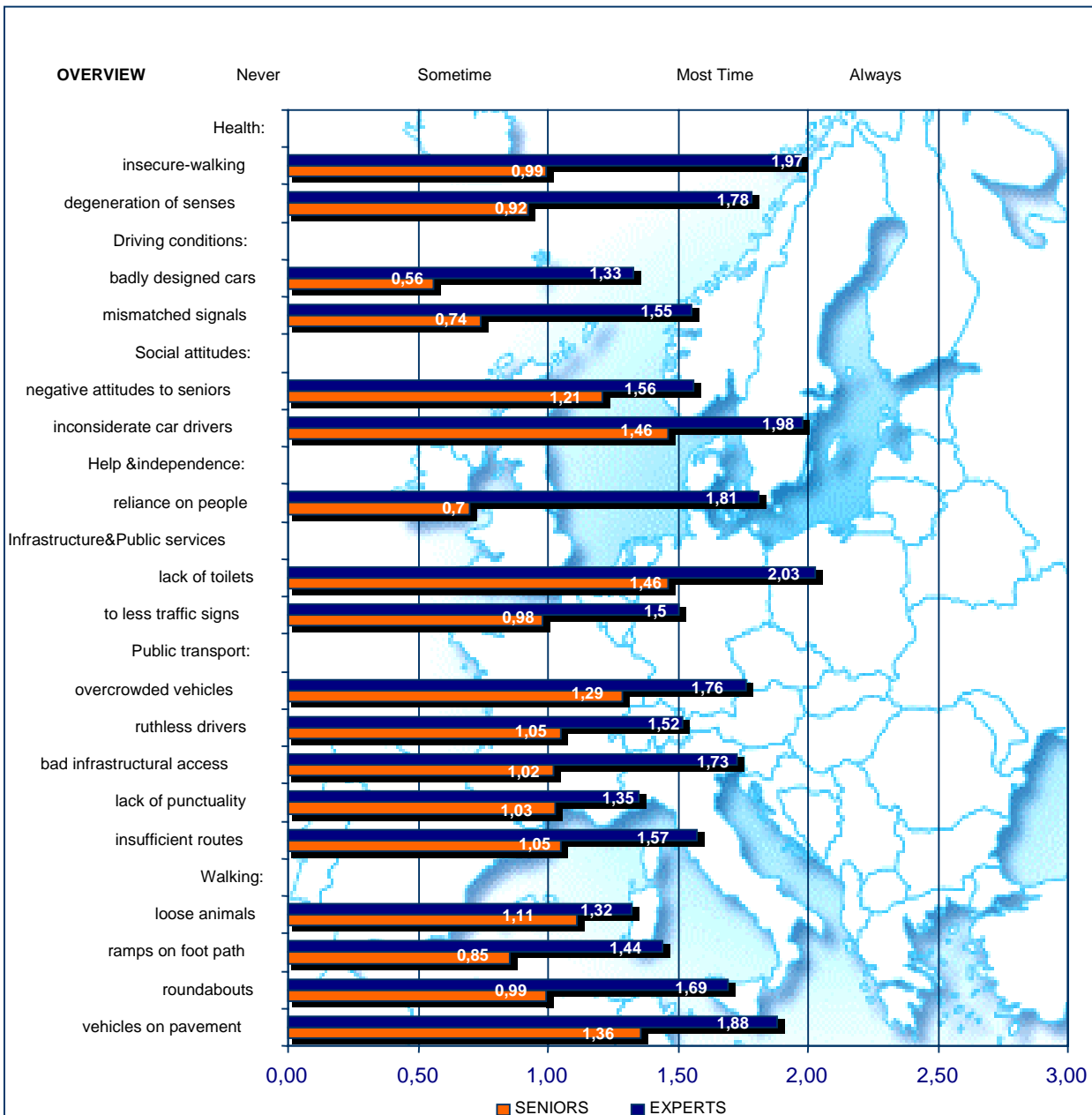
For example, aged people are handicapped by the following conditions:

- 1 Seniors have bad sensu-motoric abilities; therefore they are insecure while walking.
- 2 A degeneration of their senses is a source of risk potential.
- 3 Cars are badly designed, maladjusted to the older driver.
- 4 Signals are not adapted to the sense organs of the seniors.
- 5 The mobility of the seniors is in a high degree dependent on the reliance of other people.
- 6 Roundabouts are forms of traffic control older people cannot master.
- 7 The infrastructures offer only a bad access to mobility goals and mobility means (public transportation).
- 8 The seniors suffer from a lack of ramps on footpaths.

The seniors do not agree with those suppositions. Of course, these conditions can be barriers and obstacles sometimes, but they aren't always and everywhere.

The differences can be highlighted by the following table (figure 4.3-1); mostly they are statistically significant:

Figure 4.3-1: Comparison experts-seniors – barriers and obstacles



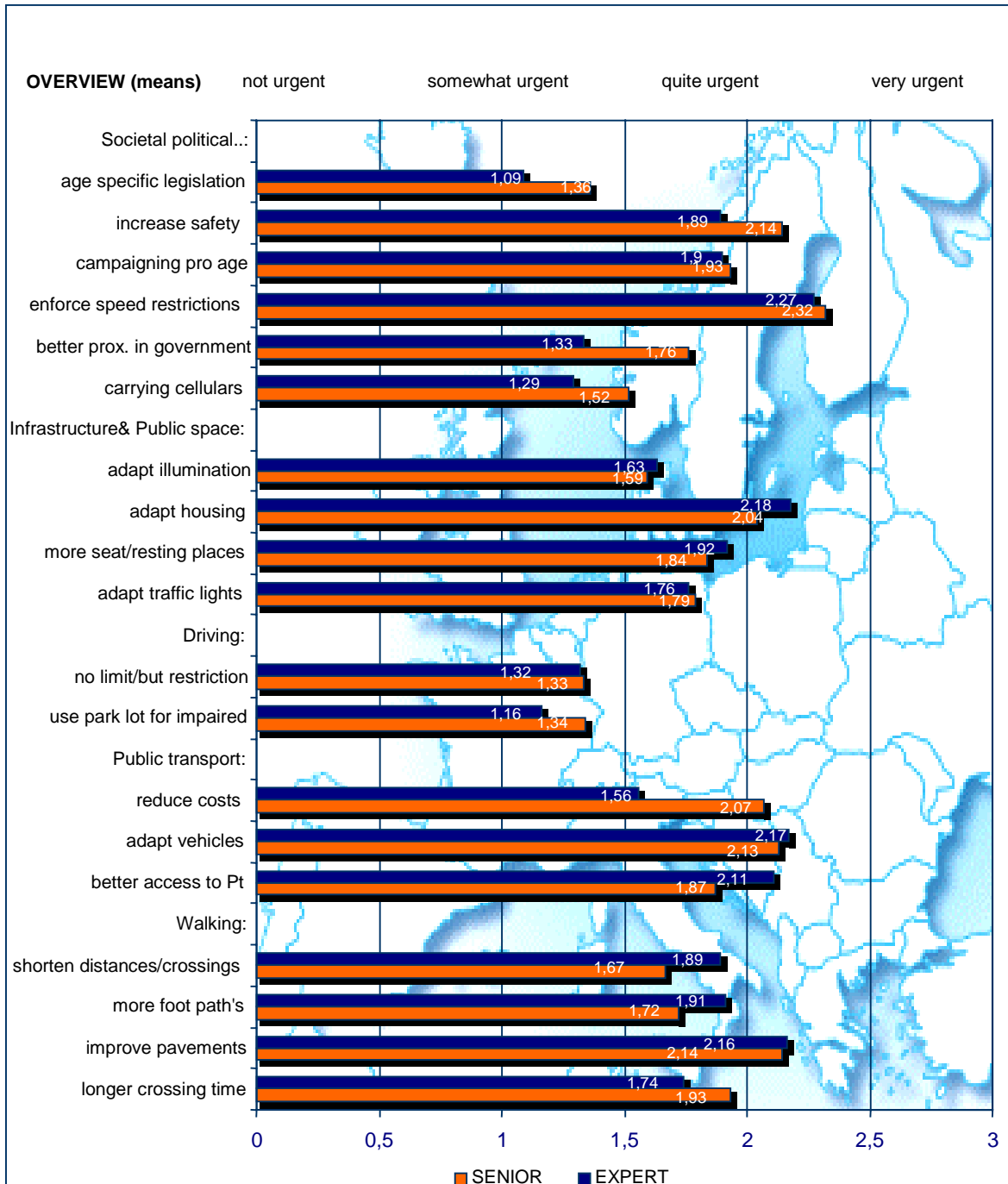
Some of the conditions supposed by the experts to be great barriers wer *minimal* barriers from the viewpoint of the seniors: having to rely on people, lack of ramps on footpaths, insecure walking, degeneration of senses and the mastering of roundabouts.

What could be the explanation of such great differences? As we said before, the view of the experts could be dominated by a research bias, by a concentration on general findings and general laws. Experts look at the *problems* of the seniors *in principle*, while seniors interpreted the items of our questionnaire in accordance with their individual experience, probably reflecting the variance there is much more than experts. Because of the fact that many participants have been asked who represent their group, the results can be understood as a mirror of the majority of the older people, and that is a competent, flexible, mobile and autonomous group, cum grano salis.

4.4 Solutions

In spite of the differences previously discussed in relation to proposals for solutions for the mobility problems seniors could have, seniors and experts showed an astonishing accordance. There are rather little deviations in the opinion of seniors and experts about the urgency of particular solutions; the direction and even the extent of the proposals are very similar:

Figure 4.4-1: Comparison experts-seniors - solutions to mobility problems



Seniors are oriented to safety and advantages by an age specific legislation. They apparently represent their own interests.

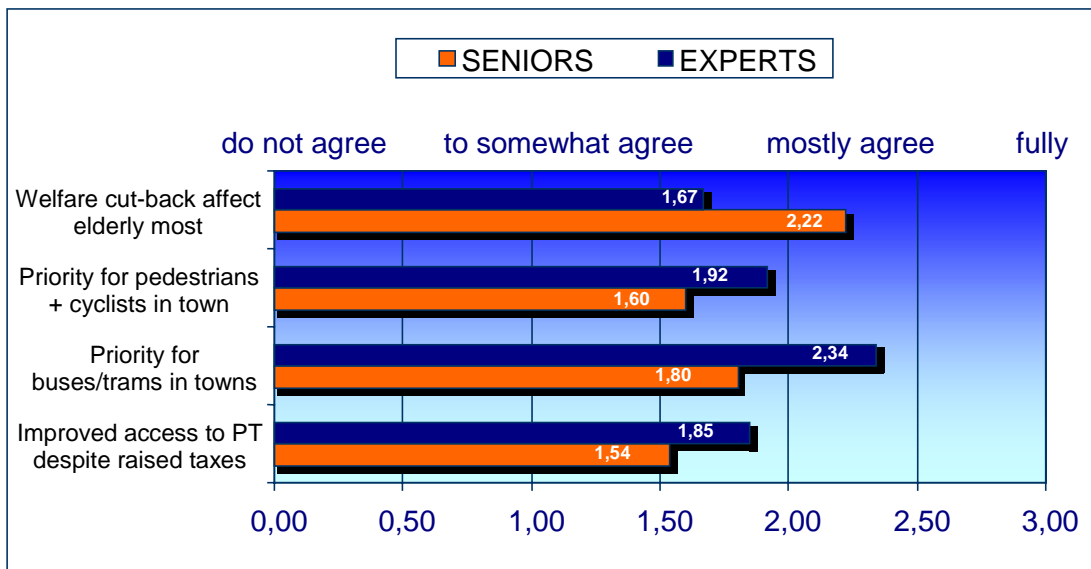
A great accordance can be seen in the estimation of seniors and experts in reference to the most urgent measures of solution (responses "quite urgent" or "very urgent"):

Seniors and experts agree on the demand for speed reductions, well adapted vehicles in public transport, improvement of pavements, adaptation of houses and public buildings and campaigning "pro age" (in order to improve intergenerational understanding). For experts a reduction of costs of public transport is less urgent than for seniors; the same applies for the promotion of safety in the public space.

4.5 The political dimension

We have selected – and already dealt with above - four possible developments and problem solutions which are to a high degree "political" because they need complex political action and political decision making processes. On a legislative level we find for instance: A cut back of welfare, priority for pedestrians and cyclists in the cities, priority for buses and trams and a markup of taxes to improve access to public transportation systems.

Figure 4.5-1: Comparison experts-seniors – political dimension



In relation to the whole sample, there were more seniors than experts who feared a welfare cut-back because of its negative effects especially on seniors. The opinion of experts was very inconsistent; they either agreed fully or not at all. Experts preferred arrangements with priority for certain road users: pedestrians, cyclists and buses/trams. Experts usually plea for a "flexible" implementation of measures for different modes of mobility; perhaps in some EU countries this is corresponding to a "political correct" form of problem solving.

Priority for pedestrians and cyclists is also reasonable from the viewpoint of geriatrics, because walking or riding a bicycle in a safe way is a good measure to maintain physical abilities and health. Also in this sense supporting priority for pedestrians and cyclist will be "politically correct" in a "greying world".

Priority for buses and trams is often a request of ecological oriented persons, also of some NGOs. The reduction of individual motorised traffic with its noise and pollution could be the effect of such a measure; with respect to senior citizens, this measure is targeted at a reduction of traffic accidents, too. If it is combined with a de-mixing of modes of traffic it

could be a solution in the interest of all road users because of its accident reducing effect. The participants of our study agreed to this strategy intensively.

It might be a sign of inconsistency of opinion that a notable fraction of the same people did not agree with the demand that local authorities should be forced to improve access to public transportation systems, even if this requires to introduce higher taxes.

Financial contributions to the improvement of the mobility situation of senior citizens seem to be a knock out criterion to the seniors themselves; experts do not think so.

5 SENIOR CITIZENS IN NATIONAL COMPARISON

Our primary hypothesis is that it is advantageous for all societies in the EU to enable lifelong mobility, because it reduces costs and guarantees that hundreds of millions of people in the EU are able to take care of themselves and others, being valuable, independent and satisfied members of future societies.

5.1 Country by country

The following description tries to characterise and visualise the national specialities of older adults' mobility in different partner countries in a short written form. The characterisations are analogous to the empirical data and the explanations given by the SIZE partners; they are clichés, we agree, but more colourful than thorough statistics-based descriptions. Unnecessary to say that the characterisations below are not suitable for every senior citizen in the countries.

Austria

"Tu felix urban Austria"

An older adult in Austria is mostly very satisfied with life and of high autonomy with respect to mobility. She/he is rather self-conscious and ready to engage. Older adults in Austria are enjoying themselves and have the means to enjoy a highly developed, well equipped public transport and traffic-infrastructure, particularly in urban areas; in rural areas, though, there are some short-comings, there, as matters of concern. They mostly fear falling and possible injuries, and the cut back of social welfare.

As car drivers they feel some indisposition connected to driving (stress, feeling threatened by other drivers). The high standards allow them to focus on problems within the social dimension. They see not so many and not so strong barriers which impede their mobility.

They seem to be very well informed regarding priority of PT as an important political issue and wish further development (more low floor busses; better PT in rural areas).

Germany

"..we could be worse off"

We can see a contrast between high autonomy and lower satisfaction by older adults in Germany. They are in a defensive position in the present German society. They are very mobile, have mostly the financial means to enjoy mobility due to low levels of fears and experienced disturbances by barriers. They are supported by a mostly good infrastructure. Like in Austria, they emphasise supportive road conditions and a priority in development of PT (despite their image as a self-declared driver nation).

Ireland

"Confidence"

The Irish sample is far more satisfied with life but less autonomous than the German sample, despite a higher proportion of drivers. The level of expressed fears is low. However, the rating of the mobility and quality of life indicators is also low. They reflect a rather low quality of life of older people in Ireland, in spite of the fact that they enjoy free travel on public transport. Barriers do not seem to annoy them very much, they are used to coping with them, their main demand is better supply and access of public transport, independently from owning a driving license or not (the sample proportion of drivers is over 50%).

A certain matter of concern is a decreasing local infrastructure for satisfying their daily needs.

Italy

"The only constant is change"

The Italian sample is drifting in various directions, with contrasts in responses within the sample that are more different than between other countries in total – for instance the contrasts of autonomy and satisfaction with life. "Seniors with a high score of autonomy live in big cities and are "young-seniors". Between the fear-dimension and the autonomy index there is clear relationship; correlation is high between a high score in the autonomy and a low score in the fear-items, as in all other countries. It seems that a new class of seniors emerges, with a high level of autonomy, quite satisfied with quality of life and with a high public spirit. This particular feeling leads them to consider all the aspects of their daily mobility problems in a wider social context. Therefore, the accent is on the laws and the norms that can regulate living together and could prevent especially the fear of "inconsiderate" drivers so clearly expressed. In fact we could translate "inconsiderate drivers" as drivers who do not consider the laws; the inability to understand that such behaviour causes fears, while the respect of common laws is reassuring.

Sweden

"Mobility is strongly (pronounced) in Sweden"

Swedish older adults are to some extent outstanding. They have a high income. They are fearless. They indicate high quality of life as mostly independent and mobile people. They are satisfied with their own mobility preconditions as a crucial factor for life quality. They either underestimate or ignore barriers to some extent, or do not have (m)any problems. Some problems were outlined, though: that speed limits not respected, that safety problems are experienced, and that one sometimes depends on other people.

Here is a visualisation of a "typical Swedish older adult" which is to be found in the sample:

Karin is a 75 years old woman and married. Her husband and she are living in their own flat near a big city, but in a rather suburban area. Of course, they own a car. A couple of years ago they owned two cars due to their work. They used to live in an other, smaller rural city, but since the children left the house, they decided to move to a bigger, more urban area, because it was too much work to care for the household and the garden. She sometimes felt insecure being alone in the house. She thought of not being able to rely on people around her. Together they have high income and spend a lot of time on travelling abroad.

For a few years she is an active member of a seniors' association in her municipality. She is managing all the daily supply by bike. For bigger purchases she takes the car because it is too far for cycling. She enjoys good health, despite that her doctor has discovered a slight age related Diabetes. Owing to this, she joined a senior sports program of the local community. She does not like to care for the financial affairs any more, though she would be able to. Last year she bought a net card from the local PT-provider and found the offered services sufficient; frequencies of PT lines are a matter of criticism, though.

She does not see an increased hazard potential due to personal decreasing abilities. She enjoys the choice and use of different modes of mobility as a certain aspect of her quality of life. She would perceive a restriction in mobility as reduction of quality of life. All over, she is very satisfied with life.

During her frequent presence outdoors she minds that public space is not that safe. Sometimes, when waiting for the bus she experienced the feeling of fearing for her life. She

is open-minded to new developments but sometimes she also is concerned about the lack of social graces.

In general, she is reserved and critical against governmental regulations or interventions. In doubt she would argue for individual responsibility against too generalised governmental regulations. Therefore she would not underline a specific priority or an abstract political target.

What is she missing in outside mobility?

As stated, she does not feel really safe in public space. In her opinion, there is also some discomfort in the public space that comes along with too few benches and toilets. Sometimes she feels forced to use the car because of feeling safer in it and she does not find someone to accompany her.

Poland

“Missing confidence”

In the new EU-state Poland we see the answers of both senior citizens and experts reflect worse conditions in nearly all analysed aspects, compared to other nations. It is striking that Polish senior citizens achieved a level of rating values similar to the level of experts' statements about older adults mobility. Remember: in all other countries, the expert levels are quite a bit higher (see figure 4.4-1), while the ratings of Polish older adults regarding older adults' fears, quality of life indicators, barriers and solutions to mobility are quite similar in extent to those of the experts.

Czech Republic

A typical statement from a Czech participant could be: “Things change too fast, they may exclude the older people”

We can see the Czech Republic as the country on the point of being integrated into the older EU-States. On the one hand, the statements give a testimony of adaptation processes which are on the run, and they seem to run quite well (see car owning, income, and quality of life indicators). On the other hand, they rated similarly high as Polish participants with respect to barriers, for instance. Their view on problems and the fear dimension is to some extent oscillating between confidence and concern; between confidence to cope with future developments and being concerned about being of little importance for society. They want to be involved, want to be asked, want to assist, but they are uncertain how to participate in political or governmental processes. Owing to this, they are afraid that no one will ask them and at the same time that the changes will be too fast and potentially disadvantageous for them.

Older adults search their way in new life situations with curiosity and concern. A typical "poster" could be:

Thereza, she is 69, widowed and living alone in a flat near a large city in a predominantly rural area. She has a son working in Austria. He is working very much and does not come home often. Moreover, she does not like to travel so far in her age. She is satisfied with her life because her pension income is not that bad, but on the other hand things are getting more expensive from year to year. She hopes that her pension will be sufficient to afford the things needed. A cut-back in welfare services would affect her situation severely.

In earlier days, she was in the city more often, now rather seldom. Now it takes 45 minutes to go there by bus or train. She is suffering from an occasional incontinence. She realises that shops in the city are now quite expensive but much more beautiful with more lights, styling and interesting goods.

Nowadays the pavements are a little bit better, but there are many construction areas and she has to concentrate on walking and sometimes feels insecure when walking. Annoyingly, sometimes vehicles on the footpaths obstruct her way and she is forced to make detours. Due to this she is getting tired faster and has to look for a bench, but it seems to be difficult for her to find one. Actually, she often thinks that drivers are very inconsiderate against older people and in general they drive too fast. Police and government should keep the speed limits under surveillance. Generally, she thinks that pedestrians, buses and trams should be given priority, even if other road users were more burdened by that.

Despite these difficulties, she likes to be in the city and to see all the young people moving around. They are so self-conscious, driving their own cars and wearing all the new things, like for instance cellular phones. Now, many things are better and living is somewhat easier but even more expensive. A cellular phone might be a good thing for her, too, she thinks.

Past times were not that bad either. People had more time for talking, it was easier to go to the city because in former days the train was departing each 30 minutes. Now the train is running only a few times a day and often is overcrowded. Besides, it is a little more expensive than earlier. In her opinion the costs of public transport should not rise. The state should provide inexpensive rates for older adults.

If she was asked she would express the wish for a better comfort of public transport, in particular a reduction of heights of entrances onto trains and buses. This would make trips much easier for her. Actually, she is not as frequently outdoors as in former times.

She can purchase goods for her daily needs nearby and a doctor is not so far away. A constant matter of concern is her flat. Sometimes she looks at her bathroom and kitchen and is afraid of stumbling and falling. Moreover, she is living on the third floor, the stairs of the stairway are uneven, and the handrails are rather wonky. Even public buildings are, from her point of view, not easily accessible for older people. She thinks an age-adaptation of housing and public buildings would be a very important issue to be solved in the future.

In the public space she mostly feels safe, but she avoids to go out when it is getting dark. She has heard a lot about criminals. But when being at home she can rely on her immediate vicinity, on her neighbours and friends. One neighbour is bringing her the newspaper every day.

Spain

"Loosing confidence that once was there?"

We see a prospective loss of confidence in their ability to sustain mobility in age. They are hurt by the idea of getting aged and immobile. In contrast to this, they have clear ideas of what kind of support would help them to sustain mobility. They believe in their own personal strength to cope with problems, but they stress the fear of falls (which would undermine their strength.)

They are convinced they can rely on support of friends and family. But they are concerned about financial conditions (insecure to afford mobility aids), and they stress specific infrastructural problems. They demand a better equipped PT and a better representation in governments. Notable in general is that they experience decreasing social support for older adults (e.g., being offered a seat) and a lack of safety.

Life quality and autonomy is in the midfield of compared nations. Satisfaction with life is identical with German older adults. A somewhat lower autonomy status is to some extent explainable with a lower portion of drivers in the sample. Those who drive indicate a rather reduced fun when driving, and the fear of decreasing reflexes (loss of abilities).

5.2 General conclusions

The results reflect a few outstanding issues as a basis for improvements, i.e. for the implementation of important measures. In total, they provide a detailed view on how present mobility is perceived by older adults, as a complex system of components:

- Generally one can say that older adults in the countries participating in SIZE do not appear to be the fearful and withdrawing persons as they are often seen according to stereotypes.
- They are interested in their environment, and their primary demands are on issues that would also benefit other groups.
- A well adapted and affordable PT is seen as the most valuable and important precondition for mobility in older age, by most.
- Speed limits should be enforced.
- Social climate should be improved.
- If a single topic is pointed out, for example, a lack of toilets, there is an amazing consensus about this, despite national, developmental, and cultural differences.

Here are some assumptions concerning the results of analysis:

Autonomy and satisfaction

We can build roughly three classes of levels within autonomy/mobility and satisfaction indices: 1/3 high mobile group – 1/3 with slight restraints – 1/3 with severe restraints.

In total, the level of highly satisfied, independent and mobile older adults among the sample is enjoyably high.

The percentages of older adults with very low satisfaction (<3) and independence/mobility level (<7) are oscillating around 15-25 percent.

The differences between the countries are considerable, though.

About fear(s)

“Fears” are not estimated as major hindrances for mobility by older adults in the involved countries (except, to some degree, Poland). Interviewees are aware of them and they underline the ability to cope with them, but do not allow them to rule their mobility. On the one hand, an explanation for this could surely be an underestimation of hazard potentials as the experts state. But it is also a sign of self-consciousness.

Falls should be a topic for discussion, leading to efficient measures, especially in newer EU-countries.

About life quality and mobility.

Discrimant analysis showed that quality of life depends on autonomy, satisfaction and income. The statistical treatment produced a set of variables which can define to a high extent the satisfaction or autonomy of a participant and have the predictive power to classify groups of participants based in high or low levels of their satisfaction or autonomy as well. Those respondents who could be classified by lower score in autonomy/mobility & satisfaction indices gave specific answers to the questions concerning fears and barriers:

They expressed satisfaction and autonomy levels by underlining fears of limitations or a possible loss of mobility, which means a loss of quality of life. Reducing fears and barriers would impede such losses, and help to gain quality of life. The thinking behind this is a kind of difference-scale between minor losses/limitations and huge losses/limitations. On this

Public Transport (PT)

The interviewees are in favour of more barrier free public transport vehicles. However, not only the technical conditions are important for them. The friendly service, well educated drivers, and an affordable PT are the important criteria for satisfaction with PT. Especially in rural areas the PT services must be improved.

Solutions

There are good reasons to suspect that there could exist a common set of transnational solutions options in connection with mobility that are identified in the analysis. Identified options are indicating mainly two directions:

- a. Regarding social – political issues (social benefits, considerateness, respect, enforcement of regulations, priority of PT, safety and comfort in the public space).
- b. Regarding the dynamic of traffic (slow down motor-vehicle speeds, prolong green phases for pedestrians)

6 OLD VS NEW EU MEMBER STATES

Within the sphere of income disparities one can point out that major differences appear in the distribution of pension income. The older EU-states participants tend to indicate a rather high income and to a smaller extent a medium one, while the newer EU- States tend to indicate a lower one.

As emphasised in the mean sample description a significant difference appears with respect to the participation in seniors' associations. Almost twice as many respondents in the old member states affirmed to be organised in such an association.

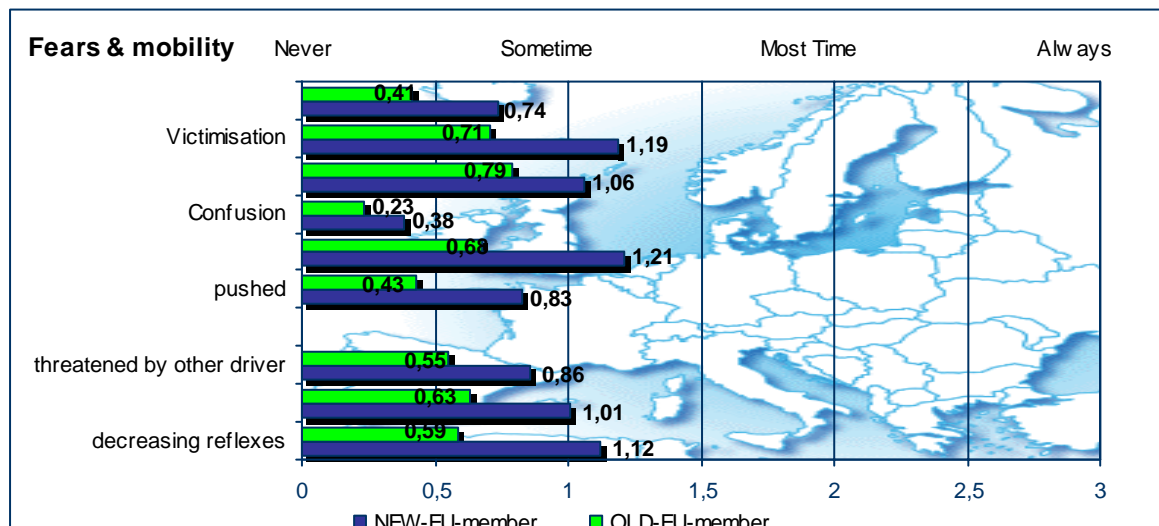
Interestingly, participants of the new member states indicated to use a walking aid more frequently.

The interpretation of the total sample has shown the main differences in the assessment of satisfaction with life and the sensed status of autonomy/independence between the participants of older EU states and newer EU-states. Satisfaction with life was manifestly lower and autonomy was similarly rated lower in newer EU-states.

6.1 Fears

A comparison of the two new EU-states shows that the sample of Poland and the Czech Republic are comparable because the achieved values of each one are significantly above the level of the older EU-states. However, the score of the Polish sample is slightly dominating the group mean.

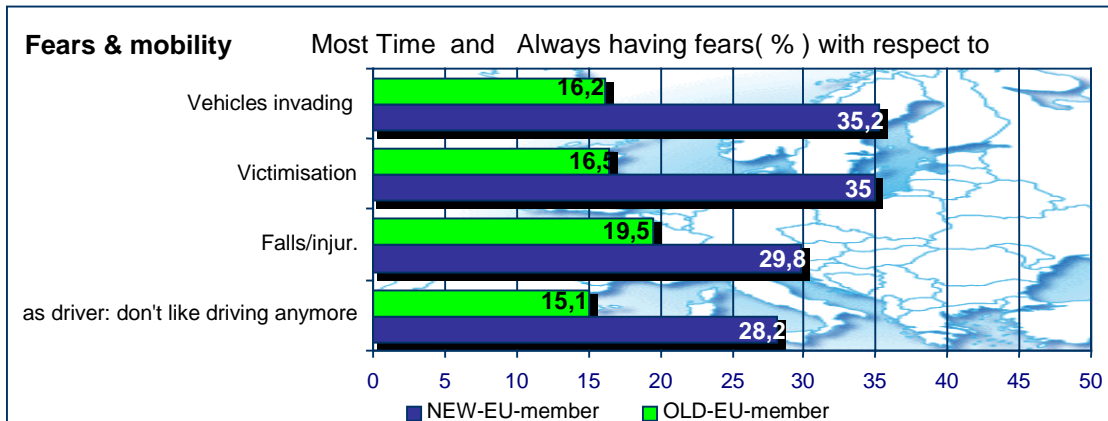
Figure 6.1-1: Fears and mobility



The differences in means between the old EU-states and the new EU-states are highly significant.

In all topics the sample from newer EU-states scores higher in the fears-related item group. A graphical illustration makes the differences visible.

Figure 6.1-2: Fears and mobility (valid percentage)



The high agreement of nearly one third to the statement that they do not like driving any more underline the assumption that the drivers in the Czech Republic and in Poland experience problems in coping with the present situation in traffic.

6.2 Quality of life issues

In order to display the differences we compare the results from the total sample with the two artificially framed groups. Furthermore, some single values of interest will be described with the focus on selected financial infrastructural and public transport issues as well as on relevant questions of the social climate in present situation of older adults.

The following tables shows an overview what older adults in both groups rated as rather positive with respect to some selected questions:

Figure 6.1-3: Item group 12 (valid percentage)

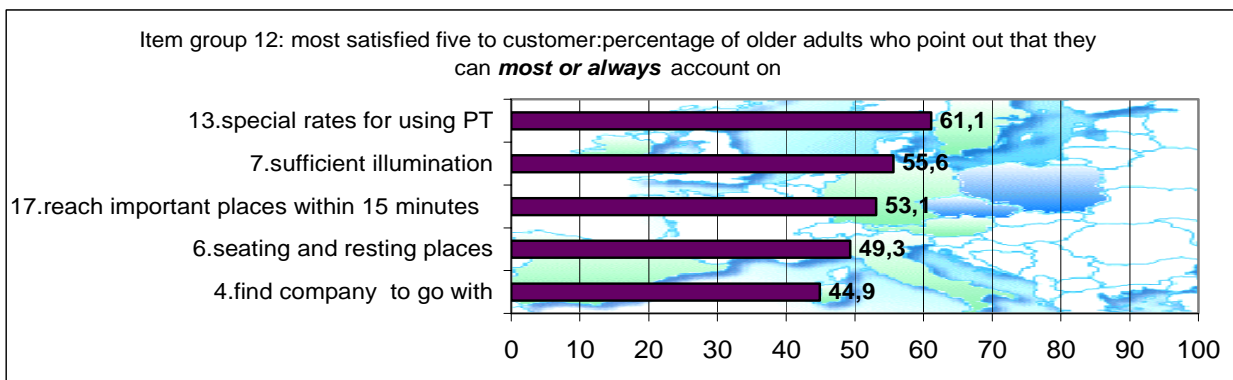


Figure 6.1-4: Item group 12 in old EU countries (valid percentage)

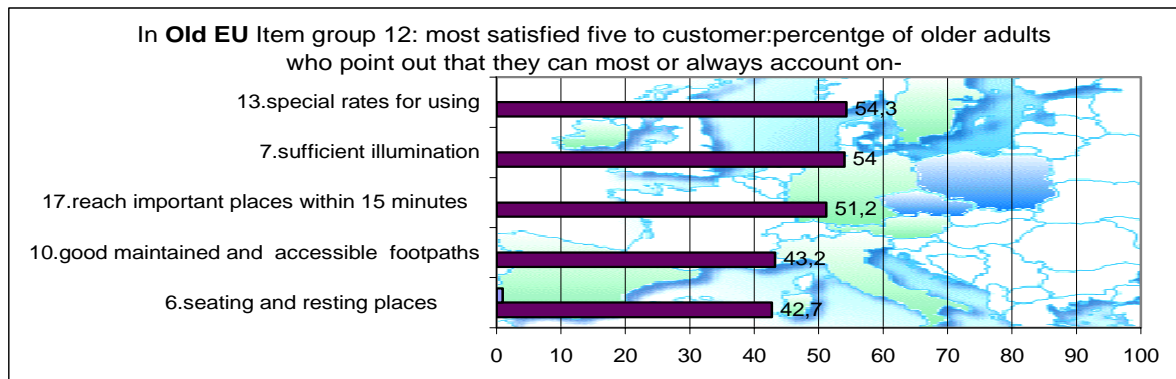
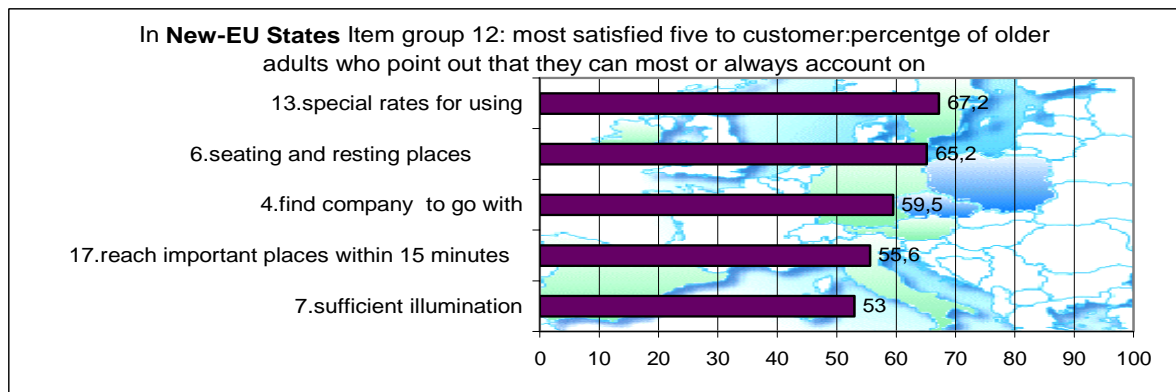


Figure 6.1-5: Item group 12 in new EU countries (valid percentage)



Outstanding is that the senior citizens in the older EU-States are more conservative with respect to their statements, probably owing to the more positive present mobility and quality of life conditions. They tend to respond the questions in the medium range for this item group. The senior citizens of newer EU-States stated more clearly what conditions they find satisfying.

Besides the different ranking of the single statements, one can see that the selection of topics is similar with two exceptions. The newer EU-States participants ranked in the third place with 59,5%, that it is easy to find company for going out, compares to 38,9% of the old states participants.

In older EU-states, 43,2% of the participants rated access to well maintained footpaths as one of the five most satisfying conditions but only 33,5% in the new EU states found access to well maintained footpaths satisfactory.

Financial conditions

The financial conditions of older adults within newer EU-States, as mentioned before, seem to be poorer. Owing to this they find it harder to afford mobility aids, technical helps or an own car. The percentage values of "never" finding the present financial conditions facilitating mobility are in average 10% higher in the new EU-countries. The car seems to be "not affordable" to 36,4% of older in newer states compared to 20% in the older states.

Infrastructural conditions

The participants in the new EU-countries indicated with their answers that the access to toilets and seating and resting places in their environment is somewhat easier for older adults in their countries. In contrast to that, the participants of the old EU-countries point out a greater satisfaction with illumination of streets, paths and the public space.

The majority of both groups agree in their statement that accessibility of the main mobility targets in daily life is warranted. Despite this result, it is interesting to remark that in the new states *15,6% rated that it is never easy to reach the important places within 15 minutes, while in old states 21,3% of respondents say so.* This result deserves attention because mobility in later age is rather a matter of short distances. The possibility to reach the essential targets for daily supply is crucial for sustaining mobility and independence of older adults.

Public transport

There are two interesting findings with respect to PT. First, we found significant differences between the groups concerning age-adapted PT. In the new EU-states, participants state that the equipment of PT has to be improved. 74,5% of older adults do "never" or only "sometimes" find that it is easy for senior citizens to use public transport, compared to 53,9% in the old EU-countries. Second topic was the complaint about insufficient support by public transport drivers. 68,6% in the new member states are concerned about this, compared to 53,5% in the old member states. Despite the fact that it is not acceptable that a majority of older adults perceives such a lack of service, this is a hint that in the old member states the training of public transport drivers in supporting older adults is somewhat more advanced.

Furthermore, we can state that the majority of older adults of both groups appreciate the offer of special rates for them in PT. Both groups see special offers as a welcome and necessary improvement for their mobility and their quality of life. In general, satisfaction with public transport in both examined groups is in the lower central area.

Social climate

It seems, on a general level that the older adults in the new member states are better treated. The results point out that in comparison to the old member states it is easier to find someone who offers a seat in PT, to find someone to go out with, and to feel safe in public due to the presence of police.

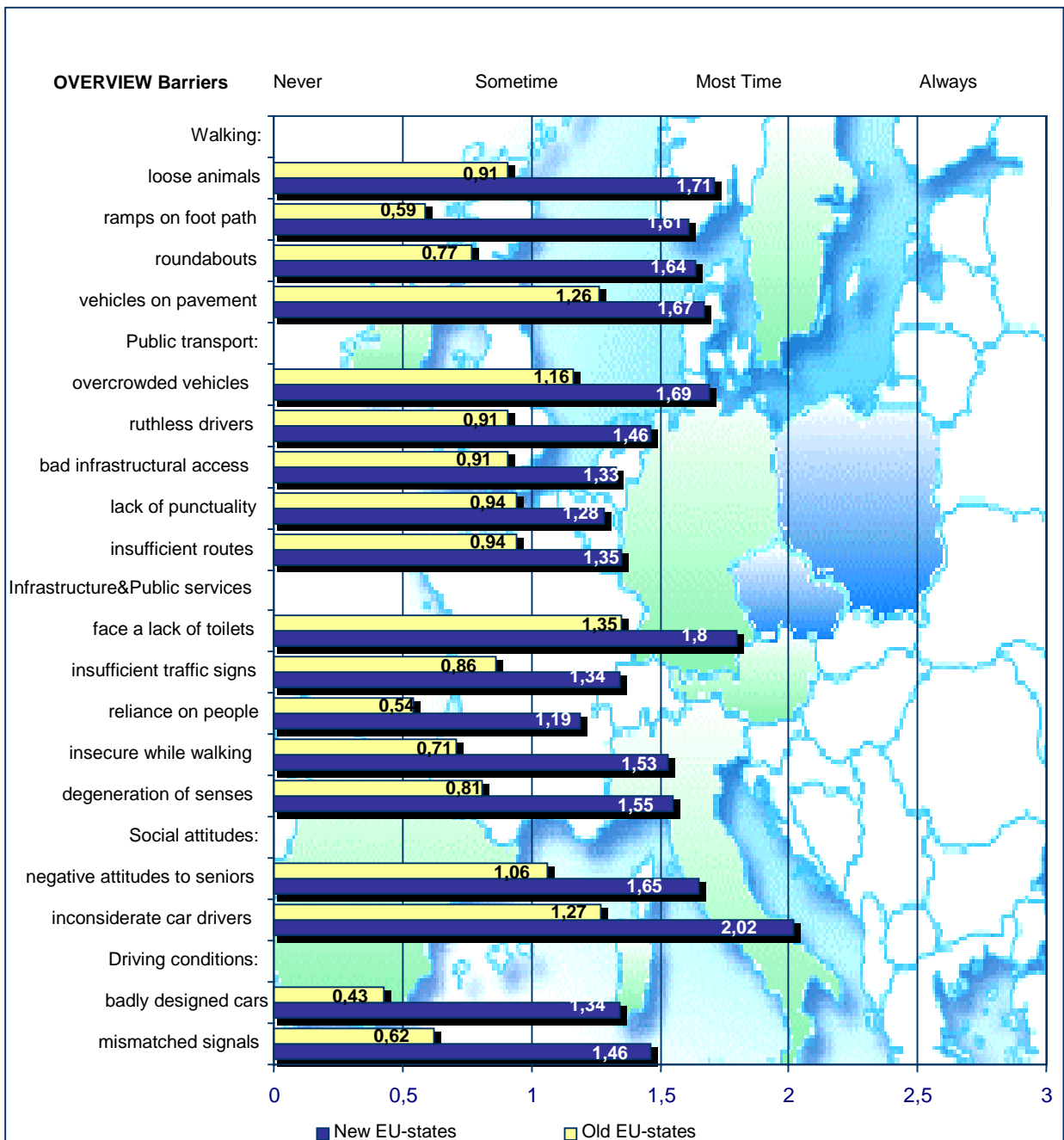
With respect to the mobility- and quality of life-defining factors of the experienced safety in the public space as well as the uncertainty that speed limits be adhered to, the respondents gave significantly better values in the new member states. That older people cannot feel safe at all in the public area is stated in the new member states by merely 18,2% of the respondents, compared with 34,9% in the old EU-states. The difference in the confidence concerning observance of speed limits is not that dramatic. 48,6% of respondents in the old member states are of the opinion that one could "never" be confident, compared to 38,6% in the new member states.

6.3 Barriers

To display the significant differences between the groups we compare responses of each group using the Mann-Whitney-U-test. Furthermore, some single values of interest related to selected topics of health & independence, social attitudes, infrastructure and public services, public transport and walking as well as to car driving of older adults are described.

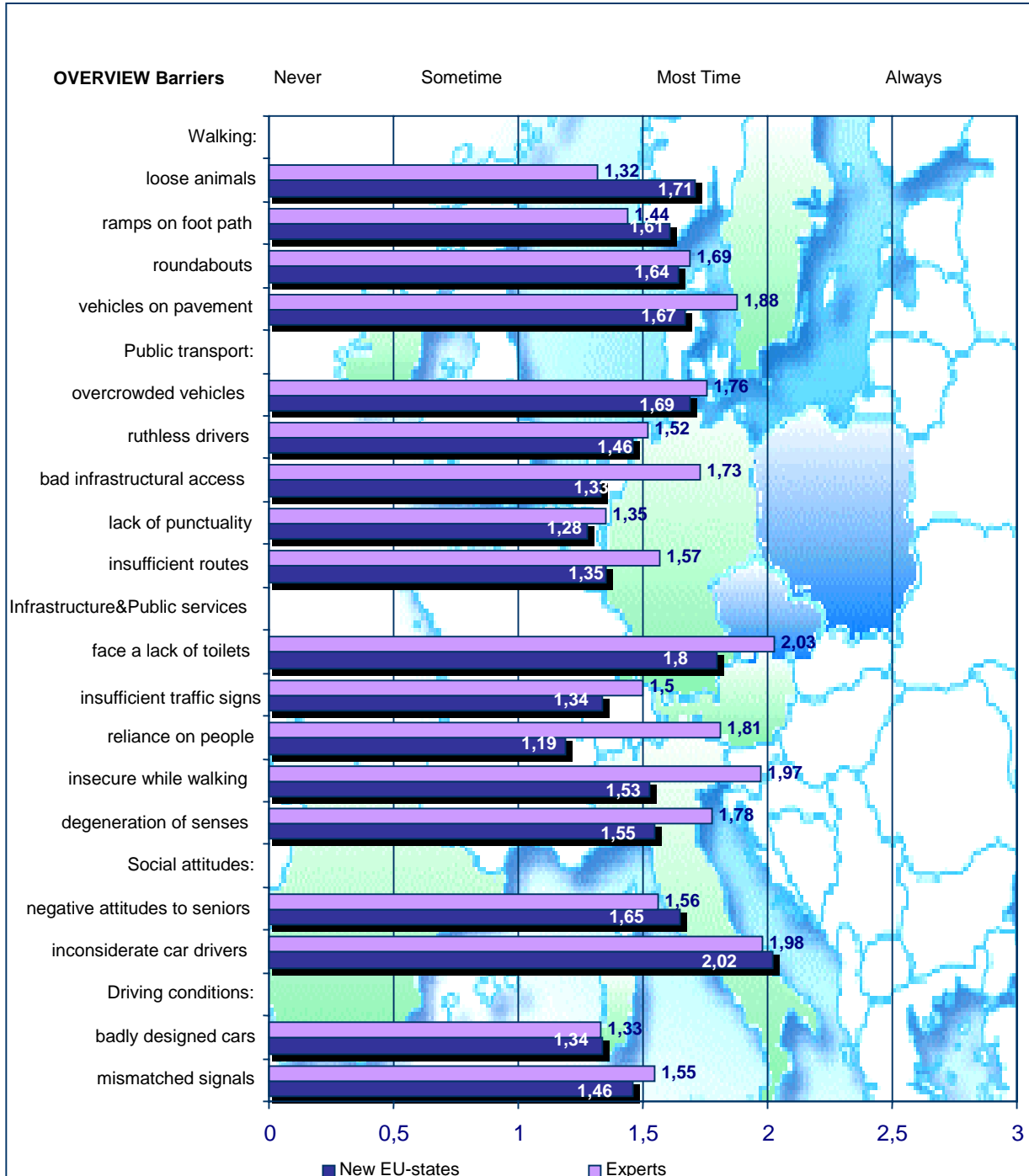
The following tables show in overview what older adults in both groups rated in average with respect to all questions in item group 13, in terms: "To what extent do the following situations represent an obstacle for older adults' mobility."

Figure 6.3-1: Overview barriers – old EU states vs. new EU states



At first glance, we can confirm a large gap between the groups in all observed ratings. However, if we compare the expert sample results with the ratings of the older adults in new EU- countries we can see that they are similar.

Figure 6.3-2: Overview barriers – new EU states vs. experts



Thus, the older adults in the new member states expressed serious problems with multiple barriers, which could definitely be the reason for minor satisfaction with their mobility preconditions and their quality of life.

the concrete obstacles that are under discussion here underline this fact even more strongly than the more general examination of the areas of mobility and quality of life did.

These obstacles require a more detailed examination:

Walking and health conditions

In the new member states 58,2% of older adults state that loose animals "most time" and "always" represent a problem for mobility, against 27% in the old member states.

Walking is also more often disturbed by vehicles on the foot path in the new member states.

Concerning urban roundabouts and ramps as barriers, one can state that a clear majority of participants in the new member states experienced them as most of the time or always a problem for their mobility, against 20% in the old states. Similar percentages have been received concerning the problems of insecurity when walking and "degeneration of senses".

Public transport

Among to barriers to the use of public transport, the most relevant problem for older adults in the new member states is overcrowding (56,4%) followed by ruthless drivers of PT-vehicles with 46,4%. In the old member states the problem of overcrowding is also the most often reported problem (32,2%).

For all other topics the differences must be evaluated on the background of the possibility of the choice of modes of transport. If a car is available, which is more often the case in the old member states, and if the conditions for walking or cycling are assessed better, it will be much easier to state that punctuality, badly designed routes, or insufficient frequencies of PT 'never' are barriers for ones own mobility.

Infrastructure

Somewhat surprising is the high relevance of lacking toilets in the public space as a problem that impedes the mobility of older adults in the new member states (59,3%, compared to 42,4% in the new member countries).

Social attitudes

In the analysis concerning mobility and quality of life we stated that the participants from the new member states tend in general to the opinion that older adults in their countries find company for outdoor activities a little more easily, and/or feel a little safer in the public space. Furthermore, they trust more that they will get offered a seating place in public transport. Despite this result, we stressed that both groups consider in a similar way that basically social benefits are no longer available.

It would be interesting to see how these statements on an abstract level can be compared with the statements on concretely experienced barriers.

A clear gradient between new and old EU-states is again appearing here. 57,6% in the new states find the time spent in public space awkward because they assume to meet mostly or always negative attitudes against older adults outdoor. Still 31,2% in the old states mention such types of perceptions as barriers.

A very big difference is ascertainable regarding inconsiderate car drivers and their fast and aggressive way of driving, lack of responsibility, etc. 57,6% in the new member states indicate that this is a barrier for their mobility, against 39% of old states participants.

Drivers/driving

An uncomfortably designed of cars and old-fashioned cars might be a barrier for mobility in the new member states, but it is not an essential one for the majority of drivers. In the old member states 71,1% stated that they have "never" been negatively affected in their mobility due to an old or uncomfortable car.

6.4 Political decisions acceptance

The differences in agreement regarding the political questions are not as significant as within the most other item dimensions. It is remarkable that participants from the old EU member states more often stress the necessity to give priority to public transport than in the new ones. Perhaps the higher amount of users of public transport in the new member countries put the vote for priority of public transport into a perspective. Nevertheless, both samples put the priority of public transport out of the question.

Regarding political ideas and acceptance, in spite of the differences, the analysis has shown that there is a similarity between the results from the old and the new EU-states. It is an interesting result that neither in the question of priority for pedestrians and cyclists nor in the acceptance of tax-driven improvement of public transport could a significant difference be found. In an analogous manner both groups agreed that a cut-back in welfare would burden the older adults most.

6.5 Summarising comment

The assessment of mobility preconditions and quality of life items, on a general level, is better in the new EU-member countries. At the same time, all barriers are experienced as stronger and more disturbing, in the new member countries. What looks like a contradiction can probably be interpreted quite easily; the mediating variables probably are experiences and expectancies: The concrete problems can be very well identified ("barriers") but in general the situation could be worse, and "things only can improve". Another way to interpret the results could be by applying dissonance theory: The situation is not so good, but one cannot change it. Therefore, one adapts once private attitudes towards the prevailing situation.

7 EPILOGUE

Since it has become a general discussion in policy, economy and society that modern societies have to face basic demographic changes, the scientific research turns to the topics of "ageing societies", "mobility in age" etc. A huge amount of knowledge, especially in Western civilisations has been produced and provided.

If we look back, we can see a lot of empirical and scientific data from the last two decades providing knowledge about problems connected for instance to mobility of older people. But accumulation and compilation of data is obviously not enough. Beyond it we have to head for a model of implementation; after all, many problems have been known during the last two decades, but real solutions have not been implemented.

A precondition for this is that we do not miss facts about the mobility and the quality of life of the older adults. "Improvements" for the target groups can only be something that the members of the target group experience as improvements. We assume that this is the case, in the widest sense, when quality of life is improved. Thus, when assessing mobility preconditions, the choice is to look at the relations of mobility preconditions to quality of life. This is relevant because nobody can renounce in mobility.

It turns out that the demands concerning public transport are getting a higher priority the older people become. Combined with the importance of walking and the future prospect of more active aged cyclists and aged drivers and car owners (in particular female ones) one should follow a strategy which provides the highest potential for older adults' choice of modes of mobility. Making different transport modes available would challenge traditional mobility patterns.

This concerns knowledge about accessibility and usability as well as about the principles like the often mentioned five "C"⁵ that are used in connection with walking and cycling:

- Connections - do pedestrian and cycle routes lead to where people actually want to go?
- Convenience - are they direct and are crossings easy to use?
- Convivial - are the routes attractive, well lit, and safe, is there variety along the route?
- Comfortable - are barriers removed and is the path of good quality and well maintained?
- Conspicuous - is it easy to find and follow a route? Are there a variety of surface treatments and good signs?

SIZE results so far allow the assumption that this should be a primary focus for setting an agenda on solutions. Clearly identified and physical and infrastructural barriers should be removed first. Supporting EU-guidelines, time schedules and strategies of implementation should be provided.

Social inclusion

The result of our research shows a certain emphasis on the topics that show differences between the degree of social inclusion felt by older people in our present society .

Regarding satisfying life quality and mobility conditions, the older adults in our research express no doubts that these relations are crucial, for their personal well-being as well as for

⁵ Give People Transport Choices. www.buildinginsustainability.co.uk

their identity as fully integrated members of society. The standards achieved so far were broadly seen as progress. Nevertheless, they even stated, that the situation might be unstable. It depends on public budgets as well as on social attitudes to age and last but not at least on how the societies will deal with the demographic development.

The interaction between demographic challenges to the road/traffic systems and the ability of the states to reach the aged population and to act appropriately in view of increasing economic and political integration in Europe will be an important challenge for the future.

European integration involves the creation of supranational political and economical institutions which seemingly challenges the concepts of national welfare systems and interferes with their ability to provide welfare-services. It was often argued that this kind of integration would lead to a "race to the bottom" where traditional welfare states dramatically decrease welfare services and policies in order to remain competitive with those states that seemed unconstrained with such welfare provision.

The term "welfare" has to be understood here as the states' capacity to provide different kinds of social protection for their members in order to secure a basic equity. In economic terms, one speaks of reallocation of resources (pensions and other types of support).

One can identify two major political goals standing in the foreground to explain why states would intervene in this distribution processes. Firstly, they want to maintain political stability and subsequently their power. Secondly, they want to facilitate participation in economic and social life of certain segments of the population by improving social "consensus" and within it social inclusion. The "good" reason for these endeavours is to generate and to improve the forces of intra-society cohesion. This concerns primarily a stable set of opinions, beliefs, values and perceptions of citizens towards a given societal-political system.

It was often argued that the efficiency of security benefits and welfare transfers have to be proved because we are going through a period of economic and social austerity. Moreover, many economic studies blamed social processes of distribution like "Welfare interventions" from the side of the state as being inefficient.

Nevertheless, under the present situation of decreasing employment rates and an increasing aged population, social welfare is an anchor for social inclusion of older adults which guarantees crucial elements to support them as "citizens" in the sense of active and participating members of contemporary society. A cut in welfare may perhaps lead to social exclusion of older adults.

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MOBILITY QUESTIONNAIRE FOR SENIOR CITIZENS

PARTICIPANT DETAILS:

Telephone:..... Address:.....

Town:..... County:..... 1-Country:

2-Living Area: Urban in a big city.
 Suburban in the outskirts of a big city.
 in smaller city as a regional centre/satellite town.
 Rural in a country village.
 in a farm or house in the country.

3-Age group:
 65-74 75-84 85+

4-Gender Male Female

--- NOTE TO INTERVIEWER: THE ANSWER CATEGORIES "DON'T KNOW" AND "REFUSE" SHOULD BE LEFT IN BLANK ---

5-Residence...
 Live alone in own house/flat/apartment
 Live with his/her spouse/partner in a house/flat
 Live with one or several flatmates
 Live in a son/daughter's family home.
 Live in a nursing-home/geriatric/institution

6-Pension amount / Income (per month):
 Lowest/minimal (less than)
 Medium (between and)
 Highest/maximal (more than)

7-Belong to an Older Adult association?
 No Yes

8-Independence/Autonomy Index
 [sum of (a),(b)&(c)]:

Interviewer note: if answer is "no" descend to next level until to find a "yes" & mark it.

(a)Doing the shopping (mark only one):
 Takes care of all shopping needs, independently.
 Shops independently some goods, but not all (e.g. loads).
 Needs to be accompanied on any shopping trip.
 Completely unable to shop.

(b)Transport mode (mark only one):
 Drives own vehicle (car, motorbike, bicycle, ...).
 Does not drive, but uses public transport independently.
 Travels only as a passenger, assisted or accompanied (e.g. other's car, taxi, ambulance, special services as dial-a-ride).
 Does not travel at all.

(c)Handling finances (mark only one):
 Able to negotiate and to buy financial products (shares, investments,...).
 Has full control of bank accounts and charges, can sign-write checks, collects and keeps track of income.
 Manages daily purchases but needs help with banking.
 Unable to handle money.

(a)In most ways his/her life is close to their ideal: No Yes.
 (b)The conditions of his/her life are excellent: No Yes.
 (c)He/she is satisfied with their life: No Yes.
 (d)So far he/she has gotten the important things they want in life: No Yes.
 (e)If he/she could live their life over, he/she would change almost nothing: No Yes.

9-Life Quality Satisfaction Index
 [sum of (a) to (e)]:

10. Moving helps:	No	Yes
- Do YOU regularly use any kind of help to moving?	0	1
[In case of "yes":] - What of the following?		
1) Walk-stick	0	1
2) Walking-Frame (Rollator)	0	1
3) Wheelchair	0	1

11. Fears: - Has it happened that you felt a ...	Never (No)	Some times	Most time	Always (Yes)
1) Fear of feeling dizzy in a crowded street/place.	0	1	2	3
2) Fear of assaults, theft (victimisation).	0	1	2	3
3) Fear of falling down/being injured.	0	1	2	3
4) Fear of becoming completely confused (for example, fear of being lost and not recognising people in the streets).	0	1	2	3
5) Fear of vehicle drivers (e.g. fear that they invade the footpaths or crosswalks).	0	1	2	3

Appendix 1, Mobility questionnaire for senior citizens

6) Fear of being pushed or shoved by others. [Only if they are drivers –or hold the driver licence-]:	0	1	2	3
7) Sense of being overwhelmed or threatened by other drivers (when driving).	0	1	2	3
8) Sense that You don't like to drive as much anymore.	0	1	2	3
9) Sense that your reflexes are not what they were.	0	1	2	3

12. Mobility and Quality of Life indicators: <i>-Do you think that in YOUR COUNTRY OLDER ADULTS can easily ...</i>	Never (Not)	Some times	Most time	Always (Yes)
1) Afford their mobility aids (electric wheelchairs, crutches, sticks, walkers...) when they need them?	0	1	2	3
2) Drive their own car?	0	1	2	3
3) Afford the regular needs for mobility, e.g. petrol for the car, taxi,... (no financial problems)?	0	1	2	3
4) Find company /companions for going out and about (some one to walk with and to talk to)?	0	1	2	3
5) Access toilets when needed (outside of the home)?				
6) Access resting places and seating areas in public places?	0	1	2	3
7) Enjoy good lighting in public places (streets, underground, public transport stops..)?	0	1	2	3
8) Feel safe due to the presence of the police in public places?	0	1	2	3
9) Access proper infrastructure for cycling (e.g. cycle lanes)?	0	1	2	3
10) Find/Access footpaths which are in good condition (not slippery, good winter maintenance, no holes, even, smooth, broadened footpath corners...)?	0	1	2	3
11) Find someone who gives up their seat for an older person in public transport?	0	1	2	3
12) Use adapted transport for older and handicapped people (handles, handrails, low floor, kneeling buses...)?	0	1	2	3
13) Enjoy reduced/special rates for older adults across the whole public transport network?	0	1	2	3
14) Find that public transport drivers facilitate slower moving older people?	0	1	2	3
15) Find bus stops properly sheltered and comfortable?	0	1	2	3
16) Be confident that the speed limits for cars in residential areas will be respected?	0	1	2	3
17) Find the places which one needs to get to (food store, medical centre, transport stop,...) within an area of 1/2 Kilometre or less than 15 minutes walking?	0	1	2	3

13. Barriers to mobility: <i>-Do the following situations represent an obstacle to YOUR mobility ...</i>	Never (Not)	Some times	Most time	Always (Yes)
---WALKING---				
1) Vehicles that drive on the pavement/footpath (bikes, scooters, skateboarders, roller-skaters ...)	0	1	2	3
2) Roundabouts in urban areas (which make it difficult for walking/crossing the road)	0	1	2	3
3) Ramps (for wheelchairs or for access to garages) on footpaths (e.g. may cause loss of balance)	0	1	2	3
4) Loose animals (usually dogs)	0	1	2	3
---PUBLIC TRANSPORT---				
5) Public transport which does not match the needs of older people regarding routes and frequency.	0	1	2	3
6) Lack of punctuality of public transport	0	1	2	3
7) Public transport transfers that are not well designed (e.g. when changing lines seniors must overcome long distances, barriers and busy roads.)	0	1	2	3
8) Ruthlessness of public transport drivers (don't wait for seniors to be seated, are rude, don't lower steps, drive too fast, etc....)	0	1	2	3
9) Overcrowded public vehicles	0	1	2	3
---INFRASTRUCTURE & PUBLIC SERVICES---				
10) Insufficient amount of traffic signs (especially on dangerous segments of roads)	0	1	2	3
11) Lack of toilets in public spaces	0	1	2	3
---HEALTH (PHYSICAL & PSYCHOLOGICAL) CONDITIONS---				
12) Awkwardness, bad balance, a feeling of insecurity when walking	0	1	2	3
13) Degeneration of the senses, sight, hearing, etc.	0	1	2	3
---HELP & INDEPENDENCE---				

Appendix 1, Mobility questionnaire for senior citizens

14) Reliance on people around them (family, neighbours, volunteers, other passengers)	0	1	2	3
---SOCIETAL ATTITUDES---				
15) Inconsiderate car drivers (bad manners and arrogance, fast and aggressive way of driving, lack of responsibility)	0	1	2	3
16) Negative attitudes of society towards older people (e.g. lack of respect for older people, ignoring them)	0	1	2	3
---AS DRIVERS---				
17) Signals not adapted to the sensorial and motor limitations of older drivers	0	1	2	3
18) Uncomfortable design of vehicles (too old and out of fashion car)	0	1	2	3

14. Solutions to mobility: - How urgent do you think the following are for the mobility of OLDER ADULTS?	Not urgent	Somewhat urgent	Quite urgent	Very urgent
1) Allow older drivers to retain their licenses without age limits although introducing proper restrictions (type of road, area, hours, medical-psychological checks, etc.)	0	1	2	3
2) Adapt road illumination to the conditions of older adults	0	1	2	3
3) Allow senior drivers to use the parking places reserved for handicapped people (or to reserve other special & adapted places for them).	0	1	2	3
4) Specific legislation related to older adults should exist.	0	1	2	3
5) Facilitate the adaptation of houses and public buildings for older people	0	1	2	3
6) Increase the sense of security and safety of older people (e.g. extra police presence, security cameras at public transport stops and stations)	0	1	2	3
7) Increase the number of seating areas/resting spaces in public places	0	1	2	3
8) Reduce the cost of public transport for older adults (including taxis) or introduce free public transport for older people	0	1	2	3
9) Introduce more low-floor vehicles: buses with low platforms, and kneeling buses	0	1	2	3
10) Make public transport stops more accessible and comfortable	0	1	2	3
11) Introduce campaigns in order to make people more aware of the problems of older adults, thereby improving consideration and cooperativeness	0	1	2	3
12) Introduce greater enforcement of speed restrictions to reduce pedestrian accidents	0	1	2	3
13) Prolong the crossing time at some traffic lights and pedestrian crossings (green-times) for pedestrians	0	1	2	3
14) Improve the conditions of pavements (e.g. removal of unnecessary obstacles, unevenness...)	0	1	2	3
15) Introduce more urban pedestrian paths (itineraries specially designed to pedestrians)	0	1	2	3
16) Reduce the distance of pedestrian crossings (e.g. maybe introduce a resting spot in the middle of the crossing)	0	1	2	3
17) Install traffic lights that would facilitate the mobility of older people (sonorous or visual signals: like numbers...)	0	1	2	3
18) Nominate a "Senior Citizens' Representative (or Campaigner)" to each level of Administration (municipal, councils..., EU government).	0	1	2	3
19) (The circumstance of) Can carry a cellular/mobile (ordinary) telephone.	0	1	2	3

15. Political estimations/moods and concrete solution options: -To what extent do YOU agree with the following statements?	Do not agree	Some-what	Mostly	Fully agree
1) Cyclists and pedestrians should be given more priority in towns/cities, even if it makes things more difficult for other road-users.	0	1	2	3
2) Buses/trams should be given more priority in towns/cities, even if it makes things more difficult for car drivers.	0	1	2	3
3) Any cut-back of welfare/state funding would affect older people the most.	0	1	2	3
4) Governments or local authorities should be forced to improve access to public transport even if this leads to higher taxes.	0	1	2	3