



Ambient Assisted Living project ICT concept for smart ageing seniors



AAL Joint Programme 2011- 4 Grant Agreement n° 2011-AALI_004-01 Project Acronym: Mobility Motivator (MoMo)

<u>Project full title:</u> A motivating game-like environment for the promotion and monitoring of mobility and cognitive skills amongst elderly people.

Application areas addressed: Mobility, Serious Gaming and Active Aging.

Deliverable D2.1_User Consultation Protocol and Tools

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Project coordinator: Yasser Alayli Project coordinator organisation: LISV-UVSQ, France





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Ambient Assisted Living project ICT concept for smart ageing seniors

Content

6.	Bibliographie	30
5 5 p	2.2 Study 2: Usability tests with health care professionals	24 26
5. 5	UCCP "Requirements of seconday enduser in Switzerland" .1 Study 1: Requirements analysis with health care professional	14 Is I 9
4. Fra	UCCP "Focus groups Activity and functional requirement in ince"	12
3.	UCPP "Focus groups: functionality requirements - Germany"	.9
2.	UCPP "Identification of target groups"	. 6
1.	Introduction	. 5

Figures

Figure 1: Model of focus group environment	21
Figure 2: Model of living lab of a medical practice	23
Figure 3: Flow chart of recruiting in WP3	26
Figure 4: Flow chart of recruiting in WP4	29

1. Introduction

The aim of the MobilityMotivator project is to design and develop a comprehensive and engaging environment for promoting mobility and the maintenance of cognitive competencies amongst elderly people (primary users) in both indoor and outdoor environments. Furthermore, the MobilityMotivator solution will provide those for whom the care and welfare of the elderly end user is of particular concern (i.e. secondary users), with monitoring mechanisms to assess both range of motion and cognitive skills so that challenges within the gaming environment can be used as mobility promotion activators and indicators of progress over time.

The MobilityMotivator technology will provide an innovative environment in which primary users can collaborate and encourage each other to address challenges which often inhibit them from venturing out into the urban environment. Furthermore, the technology will provide secondary users with unique tools which can be used to assess progress improvement in both movement and cognitive abilities. The development of the solution will be based on a rigorous assessment and monitoring of user needs and interests and will be tested through three user representative organisations in three European countries. The project will run for 36 months and culminate in a comprehensive and practical serious gaming solution ready for commercialisation."

This report describes the procedure of the first part of the evaluation: Focus groups with primary end users in France and Germany, Contextual inquiries and focus groups with secondary end users in Switzerland. The next steps will be discussed after the publication of D2.2 and D3.1.

5

2. UCPP "Identification of target groups"

The research team will conduct a questionnaire-based survey with 970 participants. To disseminate the questionnaire, two strategies will be used: A paper-based version will be spread via mail in the city of Mettmann, an online version will use the SosciSurvey of the TU Munich.

The survey focuses on:

- Socio-demographic data (sex, age, education, income);
- Self-related health status (Quality of Life Index; WHOQOL-8);
- Activity index (daily life and sports activities, barriers of activity);
- Self-responsibility in health;
- Use of technical equipment;
- Self-efficacy (general and special focus on technical acceptance).

The participants will make a self-rated analysis of their activity level for four periods of life: child, growing-up, middle-aged person, senior. The aim of this step is to identify different types of activity (cluster analysis).

To get a deeper understanding of the activity of the different types research team will conduct narrative interviews with older persons from different activity types.

Sample & Recruitment

A minimum of twenty (20) interviews will be conducted. Research teams will aim to include equal numbers of men and women. They will also aim to include a diversity of older people in their sample, for example, socio-economic status, age group and ethnicity (activity types). Participants will be recruited by the German Red Cross (GRC) Mettmann. Exclusion criteria include:

- People with cognitive impairment;
- Persons under the age of 60;
- Persons not capable to speak German.

Data Collection

Researchers will use a range of methods to collect data during the individual interviews including: a (I) personal information sheet, (II) the interview itself, and (III) field notes.

Personal information

Personal information will be collected as part of the interview. The interview schedule (Appendix) will guide researchers to ensure all information is collected in a conversational manner.

In-depth Interviews

Researchers will conduct narrative interviews with the participants. The interviews will be conducted based on following guidelines:

- Family members will not participate and will not be present in the interview.
- Interviews will be recorded with either digital or tape recorder and transcribed for analysis.
- Interviews will be conducted in the participant's own home whenever possible.
- Interviews will take place in a setting affording privacy and comfort for the participant with adequate time to enable the conversation to develop and deepen.

The interviews will follow the guidelines of narrative interviews (for further information see: Küsters, 2009)

Interviews will focus on the experience with prevention and the subjective state of health.

3. UCPP "Focus groups: functionality requirements - Germany"

The aim of the focus groups is to gain a deeper understanding of the needs of the elderly with respect to software solutions. Research teams will undertake a minimum of two focus groups in each country (Germany and France).

- Participants will be recruited from the potential user groups (GRCM, E-Seniors).
- Each group will ideally have eight participants (minimum of six and a maximum of ten). Researchers are encouraged to include a diversity of older people in their focus groups.
- The interviews groups will be recorded with either digital or tape recorder with data transcribed verbatim for analysis.
- There will be a period of three hours scheduled.

Selection criteria of participants:

- Age 60 and older
- Understanding of German language

Groups:

- Group I (03.01.14, Gelsenkirchen): Participants with an "activity background and low technical experience"
- Group II (19.01.14, Mettmann): Participants with a "technological background mixed with low technical experience"

Role of moderator (IAT):

The moderator...

- ... uses a non-directive interview style;
- ...promotes the debate by asking open questions when the discussions stagnate;
- ...teases out different meanings;
- ...gives everyone the chance to speak.

Guidelines for transcription:

- Do not transcribe every fill word as "ehm" or "mmh" etc.
- The participants are anonymous and should be marked with synonyms (e.g. P1, P2)
- Longer breaks should be marked with (...)
- Emotions should be marked like [laughing]

The focus group is divided into two parts. After the discussion (phase I) the end users will actually use the devices (phase II) and will be observed by the researchers.

Phase I: Group Discussion

The moderator gives a short introduction and presents provocative statements as stimuli for the following discussion:

Presentation of stimuli:

- "Modern technology is rather something for younger people."
- "Older persons cannot handle modern technology."
- "When I use technical devices I'm often afraid of breaking something"

Interview guideline:

- What kind of technology do they use?
- Experience with technology (life course)
- Way and design of handling
- Requirements for the instruction and support
- Anxieties and fears against technology
- Willingness to pay

Phase II: Testing the devices

The aim of this part is to evaluate the handling of technical devices by the elderly. The members have to solve specific tasks with different devices (Smartphone, Tablet PC). The researchers observe the behavior of the elderly and intervene as little as possible. After the observation there will be a short discussion about the experiences.

Devices:

- Smartphone (4-5 inch)
- Small tablet (8 inch)
- Standard tablet (10 inch)

Tasks:

- Taking picture with front and back camera (easy)
- Painting a simple picture (easy)
- Start youtube-app and find a video (medium)
- Start train-public transport app and find a train from hometown to another previously defined city (medium)
- Change the background picture (difficult)
- Check the available disc space of tablet (difficult)

<u>Analysis:</u>

The results of the focus groups will be analyzed by a content analysis (Mayring, 2002).

4. UCCP "Focus groups Activity and functional requirement in France"

Each participant received and signed a consent form (in duplicate, one copy for each party), established to guarantee the anonymity of the personal data and then completed a questionnaire created by IAT and translated from German into French by the CEREMH and HUG. This questionnaire on activities, health, and social factors was modified slightly with respect to the original German version to correspond better with the French environment.

The overall aims of the MobilityMotivator project were not presented until the end of the session in order not to influence the responses of the participants.

The Focus Group Framework document created by the CEREMH was used to guide the open discussions.

The discussions of this first group were led by Ariane Girault, with interventions by M'Ballo Seck and Peter Wagstaff.

The later three sessions were led by M'Ballo with notes and interventions by Peter Wagstaff. Marie–Madeleine Bernard was also present at the last session with ADAL and intervened at the end. Finally, the last focus group held at the Gym Club was held by Ariane Girault and Estelle Ziegler (from e-Seniors association). Dr Marie-Madeleine Bernard was also there and presented the project at the end of the session. We noticed that the fact that Dr Bernard was there was an advantage; people felt reassured by the attendance of a doctor. The exchanges were on themes such as daily living, mobility, physical difficulties and infrastructure, financial means and the use of technical devices without losing sight of their appreciations at the end of the session.

12

The focus groups were relatively open to encourage a better exchange of information. The idea was that with the target population which is the elderly and in need we should study and reveal the maximum information on their needs without stigmatisation.

5. UCCP "Requirements of secondary end users in Switzerland"

This research protocol describes the method targeted to answer the research questions that arise in the scope of the MobilityMotivator project:

Technical research questions:

- How to build a platform for serious games that enables elderly people to do more physical and cognitive exercises?
- How to build an in-system social network to enable elderly people to train cognitive and physical tasks together with pairs?
- How to build a monitoring system targeted at healthcare professionals to follow elderly people's physical, cognitive and social activities?

Research questions on human factors

- What motivates elderly people to do cognitive and physical activities?
- What factors have to be taken into account to build a user interface targeted to elderly people?
- What game scenarios are apt to improve physical, cognitive, and social activity? What factors have to be taken into account to make the game immersive and addictive to play?
- How can the system reduce social isolation?
- What are the needs of healthcare professionals to monitor the physical and cognitive capabilities of elderly people?
- What are the needs of healthcare professionals to initiate and keep-up the motivation of elderly people?

Evaluation of system

- Is the preliminary prototype of MobilityMotivator utile, usable, and satisfactory for the healthcare professionals? What can be improved?
- Is the preliminary prototype of MobilityMotivator utile, usable, and satisfactory for the elderly? What can be improved?
- Is the final MobilityMotivator system adapted to the needs of healthcare professionals?
- Is the final MobilityMotivator system adapted to the needs of elderly people?
- Does it integrate well in the living conditions of the elderly and the work conditions of the healthcare professionals?
- What is the projection of medical-economic impact?
- What is the forecast of the system's economical and clinical outcome?

Research goals

The goal is to (1) gather qualitative input from healthcare professionals to enable the developers to (2) create a system that promotes mobility, cognitive capacities, and reduce social isolation, that is (3) evaluated for its utility and usability with the target group.

Introduction to methods

We introduce in the following the methods that are used for acquiring knowledge regarding the research questions.

<u>Living lab</u>

Living labs are a research concept where potential users are confronted with novel technologies in a realistic use context. Følstad defines living labs as "environments for innovation and development where users are exposed to new ICT solutions in (semi-)realistic contexts, as part of medium- or long-term studies targeting evaluation of new ICT solutions and discovery of innovation opportunities" (Følstad, 2008). Their aim is to co-create and evaluate new technical solutions in a context that is typical for its future use. The end users are implicated in the design of the solution.

Contextual inquiries

Contextual inquiry is a user-centered, qualitative, and ethnographic research method. It is used to gain information about the needs of the client, in our case the healthcare professional. The method is described in literature (Beyer & Holtzblatt, 1998; Holtzblatt, 2008) and has been applied in the clinical context (Viitanen, 2011). The method uses semi-structured interviews conducted at the user's workplace or other context of activity. The advantage of this method is that healthcare professionals can refer to other sources of information and tools they use in their daily work.

Focus group

A focus group is a qualitative method to elicit expert's knowledge on a given question. The experts share their factual knowledge, ideas, and opinions in a discussion between them. The moderator assures that all the topics are discussed but intervenes as little as possible. The method has been applied in the medical domain (for example, Weingart, et al., 2009))

Participatory design

The participatory design is not a method but rather a system design approach. It postulates that user's should be involved in the design of the product.

A participatory design session involves:

- 1. Critiquing existing approach;
- 2. Envisioning future;

3. Implementing movement to the future (Kensing & Madsen, 1991 cited in (Muller, 2003)).

Participatory design is usually conducted as a workshop where end users or other stakeholders are implicated in the co-creation of a system design.

<u>Usability tests</u>

Usability tests are a scenario-based approach where realistic tasks have to be completed by the target users. The aim is to test whether the system at hand is effective, efficient, and satisfying to use. Common measures are success rate in completing the scenarios, completion time, and satisfaction measures. The procedure of usability tests demands that the evaluator let the user solve the scenarios without intervening. The user is asked to think aloud while accomplishing the tasks. The evaluator is noting problems that the user encounters and measures time and success rate.

Usability questionnaires

Usability questionnaires are used for summative usability testing. They measure with a score the degree of usability that the system has achieved. The computer usability satisfaction questionnaires (CSUQ) (Lewis, 1995) are an example of this type of questionnaires.

General population

Two user groups are studied in the scope of the MobilityMotivator project.

The first group consists of general practitioners, geriatrists, nurses, and other healthcare professionals that are in contact with elderly people.

The exclusion criteria are that they:

- have less than 1 year of work experience;
- are not fluent in the French language.

The recruitment will take place in the University Hospitals of Geneva and by using previous contacts with healthcare professionals in the Geneva area.

The sample should include participants of different professional background, work experience, sex, age, and medical specialty.

The second user group consists of elderly people.

The exclusion criteria are that they are:

- younger than 60 years;
- not fluent in the French language;
- suffering from pathologies that affect discernment (e.g. dementia) or make it impossible to use a common electronic device (blindness, Parkinson disease, etc.)

Reduction of bias

The researchers are aware that there is a possible selection bias in the recruitment. Healthcare professionals and patients that are open to new technologies are more likely to participate and have a positive regard on novel technologies and work processes. The study is qualitative and the researchers will take into account this bias in the interviews. The researchers will state this fact in the discussion of the results.

Benefits and risks

There are no risks or benefits for the participating physicians and elderly people.

5.1 Study 1: Requirements analysis with healthcare professionals

<u>Population</u>

A sample of 32 healthcare professionals is targeted. The sample is to be taken from the general population of healthcare professionals (Fig 1).

Contextual inquiry

The following material is required:

- Interview guide;
- Voice recording equipment;
- Photo camera;
- Notebook for taking notes.

The recruited healthcare professionals are visited in their work environment which can be a practice or an office at the hospital.

The healthcare professional is informed about the study goal and a consent form is filled out. The healthcare professional is informed that interviews are voice recorded. Permission is asked to take photographs of tools they are using.

In a first step demographic information on the healthcare professional is gathered:

- Length of work experience;
- Statistical information on patients (age range, most frequent primary diagnoses, other particularities about the patient population)

In a second step information is gathered on how the healthcare professional is motivating patients to do more physical exercise in daily life:

- What tools healthcare professionals are using to follow patients physical exercises (medical record, paper charts to fill out, spreadsheet, etc.)?
- What tools healthcare professional provide to patients (example exercise to follow, exercise plan, pieces of sports equipment, etc.)
- How does healthcare professional initially motivate patient to do more exercise?
- How does healthcare professional keeps up patient's motivation?

For all these questions the healthcare professionals are invited to show the tools that they are using.

If they are interested they are invited to the subsequent focus group. Healthcare professionals can point us to other potential participants. All interviews are transcribed and documented with photos.

Focus group

The following material is required:

- Equipped focus group room at the Geneva University Hospitals (see Fig. 2) including two cameras with voice recording capabilities;
- Interview guide for focus group;
- Notebook for taking notes.





A sample of 16 healthcare professionals is targeted. They are invited to participate in a focus group in the Evalab (evaluation laboratory) at the Geneva University Hospitals. The focus group takes place in a conference setting (Fig 2). Two focus groups are formed. Participants are attributed to the group in such a way that in both group different professional backgrounds are represented.

The focus groups take each approximately one hour. The discussion guide includes following (not exclusive) list of questions:

- What are the current problems of motivating elderly people to exercise?
- What tools work, what tools do not work for that purpose?
- What motivational techniques work, what techniques do not work?
- What would it need to increase the motivation of elderly people to do physical exercise?
- What measures do they want to record physical activity/progresses?
- How do they encourage elderly to interact with others (social isolation)?

Participatory design

The following material is required:

- Interview guide;
- Material for design of solution;
- Sample technology (Smart phone, 4D contact station, Video Conference station, Skype, etc.)



Figure 2: Model of living lab of a medical practice

The goal of the subsequent participatory design workshops is to build a low fidelity prototype of a monitoring system for healthcare professionals. The members of the focus groups stay in their group. The participatory design workshop takes place in the living lab in a simulation of a medical cabinet (Fig. 3).

- Identification of use cases
- Identification of (typical) scenarios
- Adaption of scenarios to screen design or to a work process visualization
- Choice of tools

Materials to build a low fidelity prototype (either computer based or paper based) of an interface are provided. Example technologies (desktop computer, GPS, Smart phone, 4D contact station, Video Conference station, Skype, etc.) are provided to implicate these technologies in the creative design process.

The participatory design workshop takes about two hours.

<u>Results</u>

These main outcomes are expected:

- Transcribed interviews from the contextual inquiry
- Photos of tools from the contextual inquiry
- Transcribed interviews from the focus group
- Low fidelity prototype of healthcare professional monitoring system or/and visualization of work process
- Preference for example technologies and rationales.

5.2 Study 2: Usability tests with healthcare professionals

<u>Population</u>

A sample of 16 healthcare professionals different from study 1 is targeted. The sample is to be taken from the general population (Fig. 4).

<u>Material</u>

A preliminary first prototype and a second improved prototype of MobilityMotivator are developed by the MobilityMotivator project members.

Six test scenarios are prepared. They include use cases that are typical for healthcare professionals who monitor physical, cognitive, and social activities and motivate the elderly people.

The healthcare professionals' interaction with the prototypes and their audio comments are recorded with TechSmith Morae version 3.3. TechSmith Morae is software that records the computer screen, a front view, and the voice of the participant.

<u>Procedure</u>

In a first step, an expert review is conducted to identify usability flaws using the criteria of INRIA (Bastien & Scapin, 1993). A list of usability flaws and proposed solutions are given to the developers in order to improve the system.

An iterative approach with two usability tests is planned.

In the first iteration 8 healthcare professionals are recruited from the general population (Fig. 4).

The healthcare professional is informed about the study goal and a consent form is filled out. The healthcare professional is informed that the usability test is video and voice recorded.

The healthcare professionals test a preliminary version of the monitoring and communication system of MobilityMotivator.

The qualitative and quantitative results gained in the first iteration of usability tests are used to fix usability issues and to improve the system for a second improved prototype.

The improved system is tested again in order to verify that the problems of the first iteration have been solved and that no new issues have been added.



Figure 3: Flow chart of recruiting in WP3

<u>Results</u>

- List of usability issues
- Time per scenario
- Scenario (successful) completion rate
- Score in CSUQ questionnaire

5.3 Study 3: Evaluation of final system with pairs of healthcare professionals and elderly people

<u>Population</u>

A sample of 16 healthcare professionals different from study 1 and 2 is targeted. The sample is to be taken from the general population (Fig. 5).

Another sample of 30 elderly people is targeted. The sample is to be taken from the general population and recruited by the 16 healthcare professionals. The healthcare professionals are informed about the exclusion criteria.

<u>Material</u>

- A final version of Mobility Motivator is developed by the members of the consortium.
- Interview guidelines and field notes templates are prepared.
- A French translation of the CSUQ questionnaire is prepared.

<u>Procedure</u>

In a first step the MobilityMotivator system is installed at the healthcare professional sites.

The healthcare professionals are visited in their work environment. A first contextual inquiry is conducted in order to learn about the present status of their work to monitor and motivating elderly people.

The mobility motivator is introduced to the healthcare professionals. A subsequent training is conducted in their work offices.

The healthcare professionals are asked to select and train one or two of their elderly clients.

The elderly people are trained by the healthcare professionals how to use the MobilityMotivator. The MobilityMotivator is installed in the homes of the elderly people.

After four weeks of utilization the healthcare professionals are visited at their workplace and the patients are visited at home. The

two user groups fill out the CSUQ questionnaire. Subsequently a contextual inquiry is conducted in both user groups.

The aim of the contextual inquiry is to learn:

- How is the acceptance of MobilityMotivator?
- What effect MobilityMotivator has on physical activity?
- What effect MobilityMotivator has on cognitive activity?
- What effect MobilityMotivator has on social activity?

<u>Results</u>

- Acceptance of MobilityMotivator
- Effect measures of using MobilityMotivator
- Score in the CSUQ questionnaire



Figure 4: Flow chart of recruiting in WP4

N = 30

6. Bibliography

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7. Annex





Sehr geehrte Damen und Herren,

Angebote aus den Bereichen "Prävention" und "Gesundheitsförderung" sind in aller Munde, weil sie nachweislich dazu beitragen können, die eigene Gesundheit zu erhalten.

Bislang ist allerdings wenig bekannt, welche Angebote vor allem ältere Menschen bereits wahrnehmen. Mit dieser Befragung möchten wir dazu beitragen, diese Wissenslücke zu schließen. Sie ist Bestandteil eines europäischen Projektes, an dem Organisationen aus sechs Ländern teilnehmen. Das Projekt wird sowohl von der Europäischen Kommission als auch vom Bundesministerium für Bildung und Forschung gefördert.

Die Befragung verläuft selbstverständlich anonym, es können keinerlei Angaben auf Ihre Person zurückverfolgt werden. Vermerken Sie daher bitte nicht Ihren Namen und Ihre Adresse auf dem Rücksendebrief, damit die Vertraulichkeit vollständig gewahrt bleibt. Die Auswertung der Fragebögen erfolgt durch das Institut Arbeit und Technik in Gelsenkirchen in Zusammenarbeit mit dem DRK Kreisverband Mettmann e.V..

Wir bitten Sie, den Fragebogen sorgfältig durchzuarbeiten und vollständig zu beantworten, damit wir ein Gesamtbild Ihrer Wünsche und Bedürfnisse erhalten. Für das Ausfüllen des Fragebogens benötigen Sie schätzungsweise 20 bis 30 Minuten.

Für Fragen stehen wir Ihnen gerne zur Verfügung.

Vielen Dank für Ihre Mitarbeit!

32

1	Sind Sie?	
\bigcirc w	⊖ weiblich	
⊖ n	⊖ männlich	

2	Wie alt sind Sie?
	Jahre

3	Bitte beschreiben Sie Ihre Wohnsituation. Ich wohne in einem/r	
CE	gentumswohnung	
	🔿 Eigenen Haus	
	lietwohnung	
OH	aus/ Wohnung mit Angehörigen	
\bigcirc W	/ohngemeinschaft	
	eniorenheim	

4	Wie viele Personen leben in Ihrem Haushalt?
	Personen

5	Bitte geben Sie Ihre Größe und Ihr Gewicht an!
Gröf	3e: cm
Gew	richt: kg

6 Was ist Ihr höchster Bildungsabschluss?

Okeiner

○ Hauptschule

O Mittlere Reife

OAbitur

○ Abgeschlossene Berufsausbildung

(Fach-) Hochschulabschluss

7 Sind Sie aktuell...?

○ berufstätig (auch Teilzeit)

 \bigcirc verrentet

 \bigcirc arbeitslos

○ nicht berufstätig

8 Wie hoch ist Ihr derzeitiges monatliches Haushaltsnettoeinkommen?

Das Haushaltsnettoeinkommen ist die Summe aus den Netto-Einkommen aller Haushaltsmitglieder, also Lohn, Rente,...

○ 500 Euro und weniger

- **500 900 Euro**
- **900 1500 Euro**
- **1500 2000** Euro
- **2000 2500 Euro**
- **2500 3000 Euro**
- **3000 3500 Euro**

3500 - 4000 Euro

4000 - 4500 Euro

 \bigcirc mehr als 4500 Euro

9	Leiden Sie an folgenden Erkrankungen?		
		ја	nein
Herz	z-Kreislauferkrankung		
Diab	Diabetes		
Oste	Osteoporose		
Augenerkrankungen			
Erkrankung des Bewegungsapparates			
Seelische Erkrankungen			
Sonstiges:			

10	Wie würden Sie Ihre Lebensqualität einschätzen?	
	ehr gut	
	⊖ gut	
⊖ n	⊖ mittelmäßig	
	⊖ schlecht	
	ehr schlecht	

11	Haben Sie genügend Geld zum Leben?	
() ii	nmer	
() n	Omeistens	
() n	nittelmäßig	
⊖ s	elten	
\bigcirc n	ie	

12	Haben Sie ausreichend Energie für Ihr tägliches Leben?			
⊖ir	⊖ immer			
() n	⊖ meistens			
() n	⊖ mittelmäßig			
	⊖ selten			
() n	ie			

13	Wie zufrieden sind Sie mit?								
		sehr zufrieden	zufrieden	weder noch	unzu- frieden	sehr unzu- frieden			
Ihrer Gesundheit		0	0	\bigcirc	\bigcirc	0			
sich selbst		0	0	0	0	0			
lhre Allta	r Fähigkeit den 1g zu meistern	0	0	0	0	0			
Ihre and	n Beziehungen zu eren Menschen	0	0	0	0	0			
Ihre Lebe	n ensbedingungen	0	0	0	0	0			

14	Bitte bewerten Sie	folgende Aus	sagen:						
"Fü	"Für meine Gesundheit ist verantwortlich"								
				Stimmt					
		genau				nicht			
Ich s	elber	0	0	0	0	0			
Mei	n Hausarzt	0	0	0	0	0			
Der	Staat	0	0	0	0	0			
Mei	ne Krankenkasse	0	0	0	0	0			
Ang	ehörige	0	0	0	0	0			
Freu	nde/ Bekannte	0	0	0	0	0			

15 Es besteht sehr häufig die Forderung, mehr Eigenverantwortung für die Gesundheit zu übernehmen.

Was verstehen Sie unter Eigenverantwortung in diesem Zusammenhang?

Bitte ergänzen Sie folgenden Satz: 16

"Um meine Gesundheit zu erhalten, mache ich… "

17	17 Wie häufig führen Sie folgende Tätigkeiten durch?							
		mehr als 2 mal pro Woche	1 bis 2 mal pro Woche	mehrmals im Monat	einmal im Monat	gar nicht		
Zu Fuß zum Einkaufen gehen		\bigcirc	\bigcirc	0	\bigcirc	\bigcirc		
Haus Gart	sarbeit/ enarbeit	\bigcirc	0	0	0	\bigcirc		
Trep	pensteigen	0	0	0	0	0		
5 bis Stüc	s 30 Minuten am k gehen	0	0	0	0	0		
Meh Stüc	r als 30 Minuten am k gehen	0	0	0	0	0		
Freu treff	nde/ Bekannte en	0	0	0	0	0		

18	Was hindert Sie daran, die oben genannten Tätigkeiten häufiger durchzuführen?

19	Treiben Sie Sport?
⊖ja	
\bigcirc n	ein

20	Wenn ja, Welche Sport	tart haben Sie i	n den letzten vi	er Wochen wie	oft ausgeübt
Sportart		mehr als 2 mal pro Woche	1 bis 2 mal pro Woche	mehrmals im Monat	höchstens 1 mal im Monat
Fahrrad fahren		\bigcirc	0	\bigcirc	0
Wandern/Nordic Walking		\bigcirc	0	0 0	
Schwimmen		0	0	0	0
Kurs	training (z.B. Pilates)	0	0	0	0
Sons	stiges	0	0	0	0

21	Falls Sie keinen Sport treiben, warum nicht?
<u> </u>	rans sie kennen sport treisen, warant ment.

22 Wenn Sie auf Ihr bisheriges Bewegungsverhalten in den genannte	Leben bl en Lebenspł	icken, v nasen bes	vie würde chreiben?	n Sie ihr	
	sehr aktiv	aktiv	weniger aktiv	passiv	
Als Kind und Jugendlicher (bis 18 Jahre)	0	0	0	\bigcirc	
Als junger Erwachsener (18 – 30 Jahre)	0	0	0	0	
Im mittleren Lebensalter (30 – 60 Jahre)	0	0	0	0	
Im Seniorenalter (ab 60 Jahre)	0	0	0	0	
Ab 80 Jahre (falls zutrifft)	0	0	0	0	



24	Bitte bewerten Sie folgende Aussagen:				
			Stin	nmt	
		genau	eher	kaum	nicht
Wer Weg	Wenn sich Widerstände auftun, finde ich Mittel und Wege, mich durchzusetzen.		0	0	0
Die wen	Lösung schwieriger Probleme gelingt mir immer, n ich mich darum bemühe.	0	0	0	0
Es b und	ereitet mir keine Schwierigkeiten, meine Absichten Ziele zu verwirklichen.	0	0	0	0
In ui micł	nerwarteten Situationen weiß ich immer, wie ich n verhalten soll.	0	0	0	0
Aucl ich g	h bei überraschenden Ereignissen glaube ich, dass gut mit ihnen zurechtkommen kann.	0	0	0	0
Schv mei	wierigkeiten sehe ich gelassen entgegen, weil ich nen Fähigkeiten immer vertrauen kann.	0	0	0	0
Was klarl	auch immer passiert, ich werde schon kommen.	0	0	0	0
Für j	jedes Problem kann ich eine Lösung finden.	0	0	0	0
Wer ich c	nn eine neue Sache auf mich zukommt, weiß ich, wie Jamit umgehen kann.	0	0	0	0
Wer Kraf	nn ein Problem auftaucht, kann ich es aus eigener t meistern.	0	0	0	0

25	Wie würden Sie Ihren Umgang mit modernen technischen Geräten (Computer, Handy, etc.) bewerten?
Os	ehr gut
	ut
\bigcirc m	nittelmäßig
	chlecht
⊖ s	ehr schlecht

26	Bitte bewerten Sie folgende Aussagen:				
			Stin	nmt	
		genau	eher	kaum	nicht
Hinsi neug	ichtlich technischer Neuentwicklungen bin ich sehr ;ierig.	0	0	0	0
Den kann	Umgang mit neuer Technik finde ich schwierig – ich das meistens einfach nicht.	0	0	0	0
Ich b tech	in stets daran interessiert, die neuesten nischen Geräte zu verwenden.	0	0	0	0
Wen häuf gege	n ich Gelegenheit dazu hätte, würde ich noch viel iger technische Produkte nutzen, als ich das nwärtig tue.	0	0	0	0
Ich h kapu	abe Angst, technische Neuentwicklungen eher Itt zu machen, als dass ich sie richtig benutze.	0	0	0	0
Ob ic bin, l	ch erfolgreich in der Anwendung moderner Technik hängt im Wesentlichen von mir ab.	0	0	0	0
Ich fi Neue	nde schnell Gefallen an technischen entwicklungen.	0	0	0	0

27	Welche Geräte benutzen Sie in Ihrem Haushalt bzw. haben Sie sich angeschafft?
○ Computer/ Laptop	
○ Einfaches Handy	
○ Smartphone	
○ Tablet-PC	

Vielen Dank für Ihre Mitarbeit!