



Evaluation toolkit on seniors education to improve their quality of life

518227-LLP-1-2011-1-ES-GRUNDTVIG-GMP

**Document type:** Deliverable Nr 2.1

<b>Title:</b>	<b>Requirement Analysis Psychological aspects of the seniors</b>
---------------	--

**Work Package:** 2.1

**Editor:** Ulla Eloniemi-Sulkava

**Dissemination Level:** Public

**Preparation Date:** March 2012

**Version:** 1.0

### Contributors

	<b>Name</b>	<b>Organisation</b>
1	Cecil Issakainen	PCCE
2	Ulla Eloniemi-Sulkava	PCCE
3	Irene Wichmann	PCCE

## TABLE OF CONTENTS

1	Introduction.....	1
2	Aging, cognition and intelligence.....	2
3	Experienced aging.....	4
4	Successful aging.....	4
5	Stressors associated with aging.....	2
6	References.....	3

# 1 Introduction

This research aims to reach a better understanding of the psychological state of senior citizens. As people get older both their physical and mental state change. Their position and role in society (work, family, duties, activities, etc.) will also change. This article is framed in the QEduSen project which focuses on Quality of Life and Education. The focus of this review looks at which changes are more prominent based on the criteria that produce change (increase or decrease) in the well-being of senior citizens and which can be influenced by education. This is part b. of the deliverable D.2.1, and must be understood in conjunction with all other parts. This deliverable (D.2.1.b) overlaps with D.2.1.a. about Quality of Life, D.2.1.c. Pedagogy, D.2.1.d. Models of education, and D.2.1.e. European Context, and with the collaboration of all the experts of the institutions. The revision and quality increase of this document in the context of D.2.1. has led to the correct addressing of education and quality of life.

Aging is characterized by large interindividual variability in level, rate, and direction of change. Aging is a very individual process in regard to mental, behavioural, and social outcome variables. There are 60-year olds that look and think like 80-year olds and vice versa. Three factors affect heterogeneity. Genetic factors may be augmented over the course of life, and there may be some late-life genes. Each person influences the course of his or her life and produces an individualizing effect to aging. Third, in later life, variability is due to different patterns of pathologies (illnesses). Seniors are a more heterogeneous group than e.g. middle aged people. This means that we should not talk about 'elders' as one group of people. Instead we should emphasise that each senior is to be treated as a person and as an individual whose wellbeing, functional capacity and quality of life is affected by very complex factors. All factors are interdependent and require a comprehensive approach e.g. through planning and implementing educational activities.

Successful aging is quite a new concept in gerontological research. Successful aging in a biomedical model emphasises the absence of disease and the maintenance of physical and mental functioning while sociopsychological models emphasise life satisfaction, social participation and functioning, and psychological resources, including personal growth.

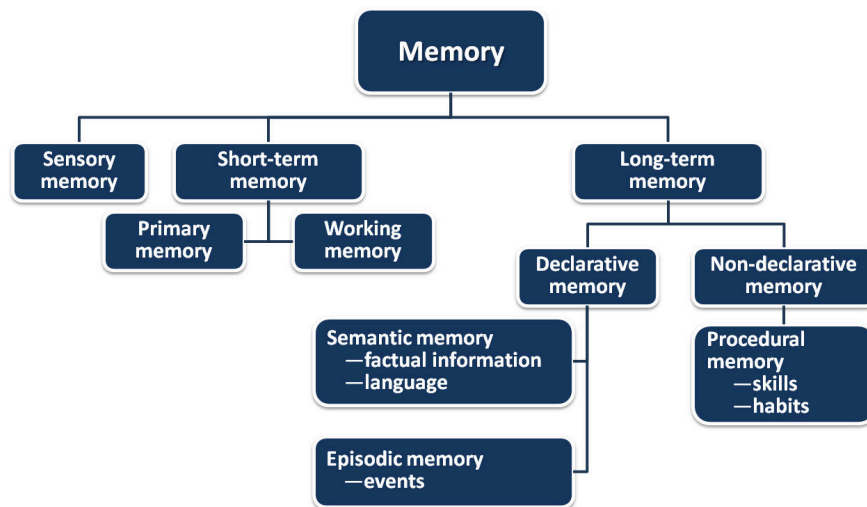
The psychological aspect of aging is an extremely wide and complex issue. Some qualities influencing this are personality, motivation, coping skills, adaptation, cognition, intelligence,

experienced aging and mental health issues. Life history, present life circumstances as well as people and society around a person strongly affect psychological aging. This article points out those factors relevant to the focus of the EduSen project. These factors should be taken into consideration. Certain psychological aspects such as cognition, intelligence, experienced aging and stressors of aging should be taken into consideration when educational activities are planned and implemented. Furthermore, understanding the concept of successful aging helps in understanding the holistic aspects of gerontology.

## **2 Aging, cognition and intelligence**

The cognition e.g. perception, memory, attention, comprehension, is fully developed by the age of 25. From middle-age onward, degeneration occurs in all aspects of cognition on a similar trajectory as the individuals' age. However, it has to be emphasized that despite decline a person's cognitive capacity on the whole is well preserved enabling a normal and good life with the ability of lifelong learning. Only dementia pathology produces remarkable decline threatening quality of life in many perspectives.

The dimensions of the memory are in figure 1. Not much is known yet about the relationship between aging and the sensory memory. On short term memory, due to the slowing down process that takes place in aging, a decline has been found in the working memory. Respectively, long-term memory is usually well preserved except performance on episodic tasks, which is the most vulnerable to age-related changes. Decline in episodic memory starts from young adulthood (around 30+). Changes in other dimensions of memory start much later and are weaker. Again, it must be pointed out that there are wide differences between individual performances. There are seniors between the ages 75-90 without any noticeable decline in their memory performance. There are many variables that either enhance or deteriorate memory functions (table 1).



**Figure 1.**  
The dimensions of the memory (Suutama 2010)

**Table 1. The negative and positive factors affecting memory functions (Suutama 2010)**

**Positive factors**

- Activity
- New experiences and stimulations
- Exercise
- Good motivation
- Positive attitudes
- Positive mood
- Health, good condition
- Physical education
- Vitality, good sleep
- Good nutrition

**Negative factors**

- Passivity
- Non-stimulating environment
- Low use of memory functions
- Lack of motivation
- Negative attitudes
- Depression
- Illnesses, poor condition
- Lack of physical education
- Fatigue, insomnia
- Poor nutrition

Previous cross-sectional studies state that intelligence declines in aging. This study bias was caused by an improper methodological approach. The study results do not reveal changes in aging but changes between generations. In longitudinal studies the same group of people are followed up. This study methodology proves that intelligence does not decline with age. Crystallized intelligence, based on life-long learning, life experiences and increased knowledge even improve during the aging process. In contrast, tests requiring fluid intelligence show some decline when people age. However, individuals vary enormously and so generalisation

should not be made. The amount of variation goes hand in hand with education, life style and how actively a person uses their capacities in everyday life. The studies show that practice can improve both a person's fluid and crystallized intelligence, even in later life. It can be concluded that at least some of the changes in aging do not result from aging itself but from unused abilities.

### 3 Experienced aging

The aging process is very individual and each person has their own perceptions about it. Personality, life history and experiences, individual responses to an aging body and illnesses, and surrounding attitudes from society and from social relationships are interdependent in experienced aging. The age itself is not the key factor to what extent a person feels old. Experienced aging brings up one more dimension as to why we should refrain from generalizing when we talk about seniors.

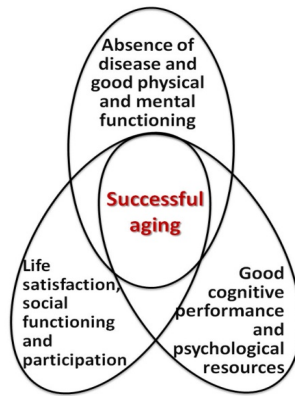
The Finnish researcher Dr. Heikkinen has conducted studies about experienced aging and developed the model that is shown in figure 2.



**Figure 2.**  
The model of experienced aging (Heikkinen RL 2010)

### 4 Successful aging

Seniors are an extremely heterogeneous group of people. There are a wide range of variables affecting the aging process, and how people experience aging. The lives and functional capacity of individuals differ strongly. What is this all about? The following illustration (Figure 3) shows the concept of successful aging.



**Figure 3.**  
The main components of successful aging based on literature.

Professor Bowling and Dr Dieppe from UK have explored how successful aging is defined by theoretical literature and by lay persons (Table 2). The main constituents reveal a wide picture of successful aging where good health, functional capacity and absence of illnesses are only one part of the concept. The list shows the importance of social and psychological aspects.

**Table 2. Main constituents of successful aging (Bowling and Dieppe 2005).**

**Theoretical definitions:**

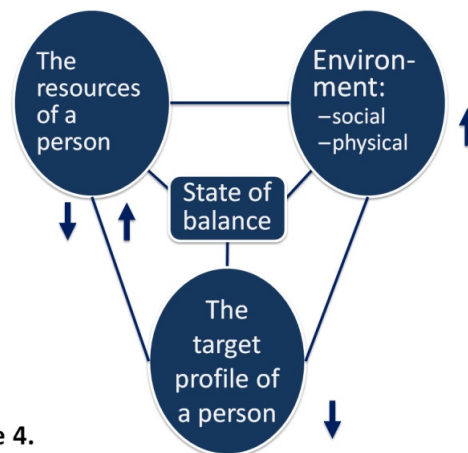
- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Life expectancy</li> <li>• Life satisfaction and wellbeing (includes happiness and contentment)</li> <li>• Mental and psychological health, cognitive function</li> <li>• Personal growth, learning new things</li> <li>• Physical health and functioning, independent functioning</li> <li>• Psychological characteristics and resources, including perceived autonomy, control, independence, adaptability, coping, self esteem, positive outlook, goals, sense of self</li> </ul> | <ul style="list-style-type: none"> <li>• Social, community, leisure activities, integration and participation</li> <li>• Social networks, support, participation, activity</li> </ul> |
|---|---|

**Additional lay definitions:**

- Accomplishments
- Enjoyment of diet
- Financial security
- Neighbourhood
- Physical appearance
- Productivity and contribution to life
- Sense of humour
- Sense of purpose
- Spirituality

The health of an aged person is not just a disease-free life. Professor Heikkinen illustrates health as a dynamic process that is supported by intrapersonal resources (Figure 4). These resources can be supported by different kinds of actions from the environment as well as by

holistic rehabilitation measures. Experienced health of a person is achieved when there is the balance between these components.



**Figure 4.**  
The health of an aged person as a dynamic process  
(Heikkinen E 2010)

## 5 Stressors associated with aging

Aging people are at high risk of facing major life crises, which leads to stress. Stress is not a simple, stimulus-response reaction, but the interaction between an individual and the environment, involving subjective perception and assessment of stressors. It is a highly personalized process. Personal characteristics, life experiences, learned cognitive predispositions make individuals more or less susceptible to the effects of stressors. Resilience and vulnerability to stressors as well as intensity of stress response are greatly dependable on age, gender, intelligence, and numerous characteristics of personality. Some personal factors influence stressors: flexibility, locus of control, self-efficacy, self-esteem, optimism, perceived family support, and willingness to acknowledge feelings about death and dying.

The stressors among aged people can be divided into (1) loneliness and isolation, (2) loss of purpose, and (3) loss of independence. Loneliness and isolation usually result from different kinds of losses such as losses in social relationships, e.g. loss of spouse, and loss of functional capacity. Caregiving for an ill spouse may strongly isolate the life but on the other hand may bring purpose for life. Retirement and/or cessation of caregiving may be followed by feelings of loss of life purpose. Factors involved in the loss of independence include economical changes and the loss of functional capacity.



## 6 References

Baltes PB. The many faces of human ageing: toward a psychological culture of old age. *Psychol Med* 1991; 21: 837-854.

Bowling A, Dieppe P. What is successful ageing and who should define it? *BMJ* 2005; 331: 1548-1551.

Eloniemi-Sulkava U, Suihkonen M, Rahkonen T, Hentinen M, Sulkava R. Emotional reactions and life changes of caregivers of demented patients when home caregiving ends. *Aging Ment Health* 2002; 6: 343-349.

Eloniemi-Sulkava U, Notkola I-L, Hämäläinen K, Rahkonen T, Viramo P, Kivelä S-L, Hentinen M, Sulkava R. Spouse caregivers' perceptions of influence of dementia on marriage. *Int Psychogeriatr* 2002; 14: 47-58.

Griffiths Y, Thinnis A. Psychological aspects of aging. In book: *Occupational therapy with elders: strategies for the COTA*. Eds. Padilla R, Byers-Connon S, Lohman H. Elsevier Publishing Co 2011, 3rd Edition.

Heikkinen E. Vanhenemisen ulottuvuudet ja onnistuvan vanhenemisen edellytykset (The dimensions of aging and the conditions for successful aging). In book: *Gerontologia*. Eds. Heikkinen E, Rantanen T. Kustannus Oy Duodecim, Helsinki, Finland 2010: 402-408.

Heikkinen RL. Patterns of experienced aging with a Finnish cohort. *Int J Aging Human Dev* 1993; 36: 269-277.

Heikkinen RL. Ageing in an autobiographical context. *Ageing Soc* 2000; 20: 467-483.

Heikkinen RL. Kokemuksellinen vanheneminen (Experienced aging). In book: *Gerontologia*. Eds. Heikkinen E, Rantanen T. Kustannus Oy Duodecim, Helsinki, Finland 2010: 213-222.

Kuusinen J. Älykkyys ja vanheminen (Intelligence and aging). In book: *Gerontologia*. Eds. Heikkinen E, Rantanen T. Kustannus Oy Duodecim, Helsinki, Finland 2010: 181-191.

Lecic-Tosevski D, Vukovic O, Stepanovic J. Stress and personality. *Psychiatrike* 2011; 22: 290-297.

Spencer WD, Raz, N. Differential effects of aging on memory for content and context: a meta-analysis. *Psychol Aging* 1995; 10: 527-539.

Suutama T. Muisti ja oppiminen (Memory and learning). In book: *Gerontologia*. Eds. Heikkinen E, Rantanen T. Kustannus Oy Duodecim, Helsinki, Finland 2010: 192-203.

Vaillant GE, Mukamal K. Successful aging. *Am J Psychiatry* 2001; 158: 839-847.

Woodruff-Pak DS, Aging and intelligence: changing perspectives in the twentieth century. *J Aging Stud* 1989; 3: 91-118.

## Change log

<b>Name</b>	<b>Date</b>	<b>Description</b>
Ulla Eloniemi-Sulkava	31/03/2012	First version of the document
Ulla Eloniemi-Sulkava	7/5/2012	Second version of the document
Cecil Issakainen	29/5/2012	Technical version of the document
Cecil Issakainen	31/5/2012	Final version of the document