Predictors of Quality of Life in Older Estonians*

Virve-Ines Laidmäe MA
Researcher
Institute of Social Work, Tallinn University, Estonia
Kalevipoja 15-5, Estonia, Tallinn, 13625

Krista Tammsaar, MA
Specialist of Social Welfare Department,
Tallinn Social Welfare and Health Care Board

Abstract

The aim of the study was to identify elderly people's (65+) subjective assessments about their quality of life and possible socio-demographic and health-related resources in order to be able to influence it. The study is based on a postal survey conducted in 2010 in cooperation between Tallinn University and the Helsinki Arcada University. In Estonia 1500 questionnaires were sent out and 581 were completed and returned. Among the respondents 39% evaluated their quality of life on a 100-point scale as high as 61. The quality of life of the elderly depends to a considerable extent on their positive outlook on life and different health indicators. Women showed higher incidence of bone and connective tissue diseases and stress symptoms. The majority of the respondents complained about sleep disorders (90%). For elderly persons the perception of being worthless and feeling lonely are accompanied by lower assessment of quality of life. The data do not confirm improvement of quality of life in older age (U-turn approach).

Key words: elderly, quality of life, health assessments, self-assessments, sleep disorders.

1. *Introduction*

While analysing the changes that we are facing in the 21st century, researchers emphasise that the principal events will take place in the demographic sphere. Namely, the proportion of elderly people will gradually exceed the number of younger ones, and among the older population there will be an increase of the oldest old. These changes will affect all aspects of human life – the composition of a family, living conditions and social support as well as economic activities, employment and social insurance (Bond et al., 2007). Due to these reasons the quality of life of elderly has emerged as an important research topic for researchers all over the world. Researchers focus quite often on the quality of life that is influenced by health. Raphael et al. (1997) have found subjective health assessments to correlate strongly with the indicator of quality of life (the average age of respondents was 73 years). Browne et al. (1994) concluded that the health state is the second most important aspect in evaluating one's quality of life. Spending free time and social activity was the first. When developing the index of coping with life in older age and successful ageing – AGEWELL – the authors considered the subjective assessments of people to be the starting point. An important part of this generalised measure has been the level of satisfaction with one's health (Johnson, 1995).

Although equating health assessments with quality of life is reasonable, quality of life is, nevertheless, a wider term than health. For that reason authors have focused in addition to health and economic situation (Gabriel & Bowling 2004) on very different aspects of the life of elderly like for example loneliness (Tulva, Kiis & Pihlak, 2008), voluntary work that reduces the stress of elderly and satisfies the need for recognition and the longing to be useful for someone (Franklin et al., 2006), support network (Wilhelmson et al. ,2005), survival strategies of older men and women (Mudege & Ezeh, 2009), activity during free time (Herrera Ponce, 2011), the attitude of society towards elderly (Saks, 2009), etc.

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As there are many aspects that influence the quality of life, the WHO quality of life working group has proposed a shortened model for its assessment, which contains four parameters – these being physical health, psychological conditions, social relations and living environment (WHOQOL Group, 1998). Different approaches are connected through the understanding that quality of life is seen as a person's subjective assessment about his/her physical and social wellbeing, as well as the surrounding cultural, economic, physical and social environment (Camfield & Skevington, 2008).

In Estonia, research in gerontology and geriatrics has no long-standing tradition. In the beginning, social aspects like the pension system, coping strategies and well-being of aged people were the research focus (Tamm, Saks & Pääsuke, 2010). Although comprehensive studies have been carried out regarding the situation of elderly (Saks, Kolk & Soots, 2001, Saks 2009), the questions of quality of life of elderly have become a more and more important research topic. For Estonia an especially important task is optimizing the experience of aging and creating a society for all ages. There are several reasons for that. Firstly, people over 65 years old form at present 17.1 per cent of Estonian population, the number is foreseen to increase by the year 2060 to 30.5 per cent. By time the proportion of over 80-year-olds should increase from 4.1 per cent to 11.1 per cent.

2. Research objective, sample, methodology

Research **objective** was to analyse the subjective assessments of people over 65 about their quality of life and the possible socio-demographic and health-related resources to be able to influence it. **Sample**. The Institute of Social Work of Tallinn University and Helsinki Arcada University of Applied Life carried out a study in 2010 with the objective to receive information about the well-being and quality of life of people aged 65 and older. For that purpose a questionnaire "For whose age is 65+" was developed and the study was carried out in Estonia and Finland. This article uses the data only from the survey carried out in Estonia. The questionnaire was modified on the basis of the Eurofamcare assessment instrument (Eurofamcare: methodology). A pilot study was carried out with the questionnaire involving three experts. As a result of the pilot study, some changes were made to the questionnaire to make the wording of the questions more comprehensible for the respondents. The questionnaires were sent out in two areas – Tallinn and the Lääne-Viru County. A postal survey was used. The data about the respondents (name and home address) was received from the Population Register on the basis of random sampling. Permission to conduct the study was obtained from the Ethics Committee of the Estonian Ministry of the Interior (on 02 July 2010, No 10-9/4304).

When choosing the methodology for the study, we debated whether the elderly could answer the questionnaire and whether their health problems (poor vision) would become an obstacle. But based on previous Estonian population surveys we came to the conclusion that older people are happy that others are interested in their life and opinions, and are (especially women) also more dutiful in carefully filling in the questionnaire (Hansson, 2009). We also thought of the possibility of conducting telephone interviews, but dismissed this idea due to the reason that respondents may have trouble hearing; in addition, a telephone interview requires people to think and react quickly. Older people, however, need more time to think about the answers. All these deliberations encouraged us to use a postal survey. The fact that the elderly answered the questionnaires themselves was apparent from their handwriting and long descriptions of ideas and conditions added to the questionnaire form.

In August 2010, 1,500 questionnaires were sent out to the home addresses of the respondents. The envelope contained the questionnaire and a pre-stamped envelope for returning it. Due to medical or other reasons (blind, not adequate), some respondents (6) were unable to fill the questionnaire and some questionnaires (15) were returned from the post office with a notification that the person no longer lived at that address. Since these questionnaires did not reach the respondents, the total number of questionnaires sent totalled to 1,479. Among the questionnaires sent, 581 were filled and returned, forming 39% of the total sample. The response rate can be considered good, considering that the data was collected via a postal survey (Polit and Beck, 2004).

3. Variables in the study

The respondents were requested to assess their quality of life with lines on a scale of 0–100 points. The scale was later used to develop an aggregate, where the results remaining between 0–40 points were evaluated as low, 41–60 points as average and 61–100 points as high quality of life. The respondents were, similarly to other studies, divided into groups of 5-year intervals according to their age. In order to obtain the health assessments of the respondents, we asked them how they estimated their health (bad ... good).

Marital status was coded: 1 = single, 2 = living in cohabitation or married, 3 = divorced or married, but living separately or widow(er); education: lower level = elementary, basic or unfinished secondary education; middle level = secondary and secondary special education; higher level = higher education; monthly income: low = up to 3999 kroons (255 euros), average = 4000-5999 kroons (256-383 euros), high = 6000 kroons and over (more than 384 euros).

Self-esteem assessments: I have felt useless and worthless recently; I have felt constantly tied and stressed; I have felt I cannot cope with my problems; I have felt unhappy and depressed; I have felt that I can make decisions; I have felt that I am important for others (response choices – 1 = not at all … 4 = much more than usual).

The data were analysed by using frequency tables and Pearson's χ^2 test analysis and the significance probability p corresponding to it. In order to establish the extent to which different indicators or assessments can influence changes in quality of life, the ANOVA analysis was used (Levene's test for the equality of variances (F) and its probability p). The results represent the subjective opinions of the respondents.

4. Research results

4.1. Background information

Since the age structure of Estonian population indicates that women dominate in older age groups, it was ensured that also in the study of 65+ there were 70 per cent of women and 30 per cent of men. The dominance of women is especially evident in the oldest age groups of respondents

Most of the respondents lived in Tallinn (76%) and had secondary or secondary specialised or higher education (79%). In terms of nationality Estonians dominated (65%) and one-fifth were Russians. Since the life-expectancy of men is lower than that of women in Estonia (in 2009 the life-expectancy for women was 80 and for men 69 years), then this was expected to affect also marital status and, indeed, among men 76% of respondents were married and among women much less ($p<0.001$). Due to this 44 per cent of women lived alone ($p<0.001$).

4.2. Quality of life

Table 1. Respondents' quality of life assessments of during the last month by gender (%)

Quality of life	In an entire Sample (n = 482) %	Men (n = 153) %	Women (n = 329) %	N
Low (0–40 points)	22	18	23	105
Average (41–60 points)	41	41	40	190
High (61–100 points)	37	41	37	187

Table 1 shows that the range 41-60 was mentioned the most. Low assessments 0-10 and especially 11-20, were very scarce. Also maximum assessments were given seldom – only 4 per cent of respondents assessed their quality of life with the score 81-90, but with maximum score of 91-100 even 7 per cent. Although there might be doubts whether the elderly can answer this abstract question, then it has to be noted that 16 per cent of respondents left this question unanswered. But since the indicator of quality of life has strong correlations with basic indicators of the study, then we can say that this indicator works well (Cronbach's alpha = 0.61).

In our study, the greatest discrepancies between different levels of life quality were apparent in subjective health assessments ($r=0.45$), self-evaluations (I'm happy; I can cope with life) ($r=0.42$), occurrence of the feeling of loneliness, frequency of contact with friends and relatives, education, income and employment. In case of all these variables the significance probability was $p < 0.001$. This article focuses on the impact of various characteristics of health on the quality of life indicator.

4.3. Health and socio-demographic characteristics

Quality of life is strongly related with subjective health assessments ($p<0.001$).

Table 2. Respondents' health assessments by socio-demographic and quality of life groups (%)

Characteristics	Health assessments	
	Bad or very bad n=122	Good or excellent n=82
Gender		
Men	14	17
Women	24	13
Education		
Low	34	10
High	13	20
Income		
Low	32	6
High	9	28
Age		
65-69	8	20
85+	28	6
Works		
Yes	9	32
No	23	11
Quality of life		
Low	56	4
High	10	72

There were among women considerably more those respondents whose assessment regarding health was *bad* and somewhat less those whose assessment was *good* or *excellent* ($p<0.01$) (table 2). As to age, it became apparent that the older the age-group under study, the less there were respondents who answered *good* about their health ($p<0.001$). The amount of respondents with good or excellent health decreased step-by-step with increasing age – from 20 per cent among 65-69-year-olds up to 6 per cent in the age group of 85 and older. The survey also indicated that respondents with a higher level of education were in better health.

The correlation between employment and health was expected, since good or excellent health gives a person the opportunity to work, while poor health is an obstacle for being employed ($p < 0.001$). Furthermore, the largest share of respondents with good or excellent health could be found among people earning a higher income ($p < 0.001$). Good income makes it possible to take better care of one's health and afford the necessary medicinal products, medical services or procedures that influence health in a positive way. Looking at the impact of family support, the greatest number of respondents with poor health can be seen among people who have been divorced or widowed; at the same time, the proportion of respondents with good health is the biggest among married people.

In terms of the various health issues that the elderly suffer from, cardiovascular problems were the most common (66%), followed by bone and muscular and connective tissue diseases. In the first instance there were no gender differences; however, 36% of men and 50% of women suffered from bone and muscular and connective tissue diseases. According to prevalence, these disorders were followed by respiratory diseases (12%) and depression (9%).

4.4. Worrying and signs of stress

The research data indicated a higher level of stress among women. The question concerning fatigue and stress was answered with "somewhat or a lot more than usual" by 38% of men and 51% of women ($p < 0.004$). The claim "I feel unhappy and depressed" was confirmed by 18% of men and 30% of women ($p < 0.001$). The question "Have you suffered from uneasiness, agitation or anxiety?" received the answer "yes" from 35% respondents among men and 42% among women. The question related to experiencing fear was also answered with "yes" by 2% of the men, but by 13% of the women ($p < 0.001$).

4.5. Quality of life and a positive outlook

Since according to the correlation analysis of quality of life and factors influencing it, next to health on second place in terms of its importance are person's self-esteem assessments, then we analyse this aspect here in greater detail. Data of the survey pointed to the low self-esteem of the elderly. Among women there were more those respondents who had often felt that they did not matter for others (17% of men, 21% of women), or had felt worthless and useless (19% and 27% respectively). The older the person, the more there were answers where people felt that they were not important for others (among 65-69-year-olds 16%, among the 85+ group 26%). There was also the tendency that people felt in an older age more often worthless (in age 65-69 group 21% felt so, but in the 85+ group 33%). To an important extent, the respondents' quality of life is influenced by their positive attitude towards themselves as well as a generally optimistic outlook on life. The study found that people with a high quality of life were able to cope with everyday tasks better, felt that they were important to others, were able to solve problems, understood the meaning and importance of life, felt happy, safe and confident about the path they were following (see Table 3).

Table 3. Respondents' assessment about their quality of life and different self-evaluations (%)

Questions	Quality of life		**N**
Have you lately …	Low	High	
been able to concentrate on your everyday work?	45	88	336
felt that you are important for others?	61	92	382
managed to cope with your problems?	38	86	320
felt lonely?	34	5	70
felt useless and worthless?	52	4	111
felt that life is meaningful and purposeful?	25	74	244
felt happy?	33	88	333

For all variables differences are characterised by p < 0,001

Some studies have shown that contrary to the popular belief that things only get worse after one's middle age, certain people actually become happier. This phenomenon has been called the U-turn or the backwards turn of wellbeing due to a considerable increase of happiness in older age (Blanchflower & Oswald, 2008). The data of the current study (see Table 4) indicated that the highest level of acting capacity and happiness was experienced by respondents aged 65–69. In older age groups the assessments about these aspects were relatively similar: in every age group 2/3 of the respondents were happy, every second did not feel tired or stressed and every third or fourth assessed his/her acting capacity to be good or excellent. Nevertheless, it must be mentioned that assessments about the aforementioned aspects were somewhat lower in older age groups.

Table 4. Respondents' assessments of acting capacity, stress and happiness by age groups (%)

Variables	65–69 years	70–74 years	75–79 years	80–84 years	85+ years	N
Acting capacity (good or excellent)	37	32	25	16	26	146
Have felt tired and stressed (not at all or not more than usually)	64	51	51	50	47	305
Have felt happy (more or the same as usually)	75	71	66	63	64	393

4.6. Prevalence of sleep disorders among the elderly

Sleep disorders in older age have become a serious medical and social problem during the last decade (Veldi, 2003). The data gathered in Table 5 indicates that 60% of the respondents sometimes had difficulty sleeping, while another 30% of the respondents experienced insomnia often or even constantly. There were rather noticeable gender differences in the prevalence of sleep disorders: women claimed they suffered from sleep disorders often or constantly 1.5 times more frequently than men. There were no significant differences between groups according to age.

Table 5. Prevalence of sleep disorders by gender, age, health and quality of life (%).

Variables	Prevalence of sleep disorders Never (n = 49)	Sometimes (n = 351)	Often or constantly (n = 177)
Gender:			
Men	13	62	25
Women	6	60	34
Age:			
65–69	10	65	25
85+	12	55	33
Health state:			
Bad	3	40	58
Good	21	70	9
Quality of life:			
Low	7	41	52
High	13	70	17

It is understandable that sleep disorders influence one's quality of life. People with a high quality of life suffered less from sleep disorders: only every sixth respondent stated frequent or constant issues with sleep, whereas in the group reporting a lower quality of life, every second did. Comparison on the basis of the respondents' state of health yielded a similar result: people with poorer health also suffered from sleep disorders more often ($p < 0.001$). Giving explanations about the reason of their sleep disorders in the form of answers to open-ended questions, people most often stated that worries and difficulties disturbed their sleep (a fifth of male respondents, a third of female respondents). Sleep disorders were also caused by worrying about work and the future of their next-of-kin; lack of money; tensions at home or at work. Every sixth (16%) said that health problems were the cause of their sleep disorder. External factors (e.g. noisy neighbours, noise from traffic), were mentioned less, but "bad" dinner choices (e.g. eating too late at night, drinking coffee before going to bed) were also highlighted.

When analysing the connections between the main reasons of sleep disorders, i.e. worries and life difficulties, and the occurrence of negative self-evaluations, it appeared that sleeplessness, worries and life difficulties were an important cause for stress, which made it hard to concentrate on everyday tasks and cope with life difficulties, making people feel unhappy, depressed and lonely. In conclusion, such a situation affects both the quality of life and the health state of the elderly (see Table 6).

Table 6. Prevalence of sleep disorders due to worries and life difficulties by different self-evaluations (%)

Self-evaluations	Prevalence of sleep disorders due to worries and life difficulties Not at all or not more than usually	Much more than usually	N
I feel …			
constantly tired and stressed	2	97	260
unable to concentrate on everyday activities	16	74	168
I cannot cope with problems of my life	21	91	189
useless and worthless	16	67	135
that I have lost confidence	19	79	163
unhappy and depressed	15	75	147
lonely	12	52	91
my health assessment is bad or very bad	17	64	119
my quality of life is low	28	68	104

For all variables differences are characterised by $p < 0,001$

4.7. ANOVA procedure

In order to explain the accurate influence of different indicators for the quality of life we have used the ANOVA procedure (see table 7).

Table 7. The influence of socio-demographic, self-esteem and sleep disorder factors for quality of life (ANOVA F, p, R^{2*})

Characteristics	F	P	R-squared
Socio-demographic characteristics			
Health	47.386	0.000	0.21
Health + age	53.988	0.000	0.23
Health + marital status	59.334	0.000	0.28
Self-esteem assessments			
I have felt happy	39.89	0.000	0.20
I feel constantly tired and stressed	29.81	0.000	0.16
I have felt useless and worthless	46.09	0.000	0.23
I have felt lonely	20.54	0.000	0.12
I have suffered from insomnia caused by worries and hardships	29.46	0.000	0.16

R-squared* shows to what extent (in %) the change in some variable predicts changes in the main variable, in our case – quality of life.

Out of all socio-demographic characteristics the changes in quality of life were influenced the most by health (to the extent of 21%). The impact of other factors - gender, education, age and income – was below 5 per cent. If we added to the model in addition to health also age factor, the ability to explain increased somewhat (23%). The highest ability to explain was reached when the model contained health + marital status (28%) The result reflects the importance of immediate environment and family atmosphere in the assessment quality of life.

All socio-demographic characteristics played an important role in the changes of quality of life. At the same time an important aspect should be noted – their influence was always connected to health evaluations. It can, therefore, be said that health condition is the most important factor influencing quality of life. As we can see the prevalence of sleep disorders due to worries and life difficulties affects quality of life to a great extent (16%).

It is important to analyse also the impact of people’s self-esteem for quality of life. For example self-esteem assessments like – I feel tired and stressed (16%). I feel lonely (12%). But at the same time it has to be acknowledged that when the strength of impact of socio-demographic characteristics for the changes in quality of life was between 21-28%, then self-esteem evaluations, although also important, had noticeably lower impact (12-23%).

5. Discussion

Upon analysing the representativeness of the sample included in the study, we found that even though the 581 persons who took part in the study make up a mere 0.7% of the general population of the people researched (more than 78,646 persons of over 65 in Tallinn and Lääne-Viru County), they still represent their peers quite well. The age and gender division of our respondents also corresponded well with the same indicators of the elderly inhabitants of the study area as a whole. Most of the questions were answered by 97–98% of the respondents; only question about one's quality of life received considerably less answers (83%). The gender and age structure of the people who did not wish to assess their quality of life matched those of the people who did answer, and as there were also great differences in the main indicator of the study in case of a lower and higher quality of life, then it can be claimed that this characteristic is reliable. No date of birth had been indicated on 5.5% of the questionnaires. At the same time, the number of the people who did not respond is too small to alter the results. Summarising the above, we find that the percentage of non-respondents had no impact on the results of the study.

An increase in the proportion of elderly people in society demands that we find factors influencing the quality of life of the elderly. This article is primarily focussed on the health state, self-evaluations and sleep disorders of the elderly and the causes thereof. Although quality of life in different population groups is important in the organisation of health care, it is especially important for women, since they are more responsible for domestic tasks, they have more social roles and longer life-span (Mudege & Ezeh, 2009). They also have a higher likelihood for long pension age. When younger elderly fight with the challenges of health together with their spouses, then many very old people (mostly women) have to cope with periods of illness alone and while being widowed (Smith, Borchelt, Maier & Jopp, 2002).

The effect of age on health was expected, i.e. the proportion of respondents with good or excellent health gradually diminishes as the respondents get older. The smallest number of respondents with good or excellent health was found in the age group of respondents who were 80 and older. The most widespread health issues among the elderly are cardiovascular diseases, followed by bone and muscular and soft tissue diseases, which are especially frequent among women (mentioned by 50% of female respondents). In the age group 50–70 most women can cope with household tasks and looking after themselves. However, in older age their physical strength can diminish, especially due to osteoarthritis, putting women in the same situation with men (Mudege & Ezeh, 2009). Our study also demonstrated a considerable difference between genders in terms of the prevalence of bone and muscular and soft tissue diseases – every second woman suffers from the aforementioned problems. In addition, our data confirmed the notion that people who are wealthier, have a higher level of education and hold a higher professional position are in better health than people of a lower social status. This applies not only to young or middle-aged people but also to the elderly (Kunst, Leinsalu, Kasmel et al., 2002).

The impact of health condition is very important for the quality of life also because when other socio-demographic factors (age, education, income and work) influence it, then this is also in concurrence with health assessments. Good health guarantees the ability to work and receive income. Higher level of education creates preconditions for obtaining better job and income. And if people are able to work in old age, the preconditions for that are good education and health. Researchers (Jopp, Rott & Oswald, 2008) have stressed that ageing is often accompanied by great losses – health worsens and disability may emerge, loved ones are lost and ability to feel lessens, due to leaving the job previous supportive communication circle is lost, also income and position – this all narrows considerably the sphere in which a person can live according to his wishes. The question arises, therefore, to what extent are negative conditions bearable in order to assess one's life liveable, due to which the subjective quality of life of elderly depends to a large extent on their psychological reserves in dealing with those losses (Saks, 2009). As the study indicated, well-being in an older age means also happiness and optimistic outlook on life. So the statement – I have felt happy – has in the study an important impact for the changes in quality of life (20%).

Studies have also confirmed that women suffer from a higher level of stress (Jang, Kim & Chirigoga, 2011). The data of the current study refer to the greater fatigue and stress of women and to the fact that they feel unhappy and depressed more often and experience more agitation, anxiety and restlessness. In terms of Estonian population the reasons behind the high level of stress reported by elderly women were mainly lower health assessments and loneliness (58% of elderly women and 85% of men are married or live in cohabitation (Laidmäe, 2009)).

Ginn & Arber (2002) have also emphasised that the psychoemotional stressors of the women in this age group can be less related to age per se and more related to changes in their living arrangement, which characterise certain stages of life. For example, divorce or a spouse's death or living alone can in itself cause problems with financial coping and be accompanied by lack of communication. The same reasons also apply in case of our study, as men were more often married and lived alone less. Adding to this a small income and worries, uneasiness and fear of coping in the future, and it is understandable why women experience higher levels of stress.

According to Marlit Veldi more than half of 65-year-olds suffer from sleep disorders (Veldi, 2003). Our data indicates that this proportion could be even greater. 30% of our respondents said they often or constantly had trouble sleeping. However, when we also consider that 60% of the respondents stated they sometimes had sleeping disorders, then it can be seen that the proportion of people with sleep issues is very high. The main reasons for sleeplessness were worries and life difficulties (29%) and health problems (16%). It should be stressed that sleep deprivation due to worries and life difficulties could seriously affect one's health and quality of life, since people suffering from insomnia constantly feel tired and strained, lack the will to live, experience agitation and anxiety, are unable to concentrate on everyday tasks, and feel lonely and unhappy due to depression. Thus, our data wholly confirms Veldi's message that sleeplessness can be an important risk factor for the quality of life.

ANOVA analysis shows that the health characteristic has an especially strong impact for quality of life when marital status was added to the model, which emphasises the role of family atmosphere in the development of quality of life in older age, when people have worries with health and independent coping diminishes.

The way that the younger generation treats the ageing members of society became an important issue in the study. As can be read in the Estonian Human Development Report, people already start feeling old in their middle age. It would seem that around the age of 50 people start to feel that the time of their active self-development is over (Estonian Human Development Report, 2009). The study Integration Monitoring 2008 entails examples of feeling excluded from society, which are strongly connected with age – older people (60–75-year-olds) most often agree with statements measuring exclusion (e.g. do not look to the future with hope; feel like a second-rate citizen in society (Realo, 2009). Nevertheless, the elderly cope better when they are valued, when old age is not seen as shifting into uselessness and non-productivity (Realo, 2009). In that case people feel happy, see that life has a meaning, can solve their problems and enjoy everyday tasks and responsibilities. Unfortunately, 25% respondents in our study felt useless and worthless.

Studies have shown that everything does not have to decline after middle age. Some people may even become happier and feel their satisfaction with life increasing, i.e. experience the U-turn (Blanchflower & Oswald, 2008). But what is said about the possibility of a U-turn in Estonian data? As to satisfaction with life, all age groups include almost similar proportions of people who are completely or mainly satisfied with their life (e.g. 73% of people under 44 and 69% of 55-year-olds) (Laidmäe, 2009). It can therefore be said that after middle age older people are as contented with their lives as the young, although they probably enjoy different things in life. The results of the current paper do not confirm the existence of the U-turn in the life satisfaction of the elderly, since both the quality of life as well as the satisfaction indicators worsened after the age of 70. At the same time it must be mentioned that whenever older people come across difficulties they try not to complain but to find the positive in every situation and lead a normal life. In this case, they apparently also lower their demands and accept failure more easily (Blanchflower & Oswald, 2008).

Thus it can be said that good health is accompanied by a more positive outlook on life, accepting one's ageing, leading an active life and having a better quality of life in older age as well. Similar results were also demonstrated by the survey of Estonian population, according to which, one's state of health can be seen as a certain compound figure – when comparing respondents with better and worse health the first group can be characterised by satisfaction with family life, as the proportion of respondents who were satisfied with the relationship between them and their spouse was considerably higher. The people in this group also had fewer work-related problems and tensions (e.g. pressing and constraining duties, whether the person is valued as an employee, is the work interesting, what are the person's relations with his/her colleagues and employers like). (Laidmäe, 2009).

6. Positive and negative aspects of the research

- This work has first and foremost been necessary for Estonian society. Since there is no overview of the coping problems of the elderly in Estonia then a study providing numerical data about the coping of the elderly is important. At the same time the study offers a starting point to compare the local situation with the lives of the elderly in other countries.
- The connection between quality of life and health is often studied in literature. However, there is less data about the influence of health-related aspects such as sleeplessness or a positive outlook on one's quality of life.
- The novel aspect in our work is that these indicators are viewed in a coherent system, in order to show how changing some factors predicts changes in the quality of life of elderly.
- Although we considered the return rate of 39% to be sufficient for a postal survey, we have to admit that we should have tried more and maybe sent reminders to people or visited their homes ourselves.

7. Conclusion – where are our resources?

In order for people to be able to cope successfully in old age the attitudes and ways of thinking prevalent now must be re-evaluated. The results of the study enable to draw the following conclusions:

- It became clear in the study that subjective health assessments were significant factors in terms of their impact on one's quality of life. These results indicate how important it is to improve the health of the elderly in our society, help them to cope and increase the availability of healthcare and welfare services.
- The prevalence of sleep disorders is strongly connected with both health assessments as well as quality of life indicators. It can therefore be said that the early discovery of sleeplessness would help to reduce several health risks.
- A positive self-image, which is understood as the positive evaluation of one's life before as well as one's current life situation and adjustment to it, influences an aging person's satisfaction with life. The elderly with a hopeful approach to life are ready to act for the benefit of themselves and others.
- The study confirmed that the elderly cope better when they are valued and old age is not described as an unavoidable process of degeneration. Changing these kinds of negative attitudes in society could be an important objective for the media.
- The data of the current study do not confirm an increase of satisfaction with life in older age (U-turn), but refer to a somewhat deteriorating situation instead. At the same time it must be emphasised that after the age of 70 every second person does not feel tired and stressed, every third or fourth assesses his/her capacity to act as good and two respondents out of three are happy.

The subject matter of this article has been limited to the health characteristics and health assessments of the elderly. The study stressed the following factors that played a role in improving one's quality of life (in addition to health): level of education, financial situation and employment, having a partner and not being lonely, relations with children and relatives, possibilities of spending one's leisure time actively. We also believe that these aspects have good potential of serving as the subject matter of future studies.

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