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An evaluation of life satisfaction and health – Quality of life of senior citizens

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Abstract

Introduction and objective. Modern medicine is still searching for the antecedents which will lead to *successful aging*. The article discusses the self-perception of life satisfaction and health of senior citizens. The aim of the study was to determine the relationship between self-evaluation of life satisfaction and health by senior citizens in comparison to different age groups.

Materials and method. The study included 463 persons – 230 men and 233 women. The age of the participants was in the range 16 – 83 years. All participants were asked to fill the Life Satisfaction Questionnaire (*Fragebogen zur Lebenszufriedenheit* – FLZ). The FLZ questionnaire assesses the global life satisfaction of a person and health domain separately.

Results. The results show age-related differences in the evaluation of life satisfaction. Accordingly, there is a significant change in health evaluations in different age groups, but there are no significant gender differences in health self-report data. The senior citizens' assessment of general health, although the lowest among all the age-subgroups, showed significant difference only in relation to the people below 45 years of age. The significant differences in satisfaction from mental health occurred only for the elderly and participants aged 25–34 and 35–44.

Conclusions. Life satisfaction is associated with subjective health evaluations. There are two domains (mental health and performance) that are positively evaluated by more than two-thirds of senior citizens. The observed differences challenge stereotypes and prejudices relating to negative aging process. Senior citizens can improve their control beliefs and develop self-regulation and coping skills.

Key words

aging, coping skills, activities of daily living, life style, advance care planning

INTRODUCTION

The phenomenon of an aging population [1] has many different socio-cultural and economical implications. Some of them are positive, such as the gradual improvement of the social position of senior citizens. However, there are also other implications, e.g. public provision, including anticipated pension and costs of necessary assistance and medical care for the senior citizens that are less desirable [2]. So far, responsibility for the care services for the elderly is shared between the family and the State, although demographic change in family structure results in a 'beanpole structure' in which multiple generations of grandparents and great-grandparents are to be supported and helped, often by a single offspring [3]. This must lead to the greater involvement of State in the care services for the elderly. Meanwhile, the steady growth of the number of senior citizens who are the beneficiaries of the health care sector have already uncovered unsatisfactory practices and limitations in geriatric care [4]. Thus, the idea to develop and deliver positive strategies for growing older seems a reasonable solution to keep senior citizens active and independent [5]. Senior citizens are encouraged to develop skills and habits which enable them to age successfully. This requires the fulfilment of three conditions: 1) preservation of health (including mental, physical, and social well-being); 2) active participation in society; 3) feeling of security.

This study discusses the results of measurement of life satisfaction and self-perceived health of the senior citizens in comparison to different age groups in adulthood. The aim is to challenge the negative approach to aging and to encourage senior citizens to live a healthy lifestyle. The results are crucial for the reflection and development of the programme to keep autonomy and delay dependency in old age in order to promote a quality of life among senior citizens. The implications of the results are discussed and suggestions made for the well-being and self-management of senior citizens.

Health and perception of aging. People express a fear of aging, although there is a lack of a consistent image of old age. However, it is generally accepted that late adulthood is the period of life in which losses start to outweigh gains. The most common problem associated with aging concerns the decline of physiological functions. On the whole, aging is permeated with the loss of health, suffering from age related diseases, slump in physical condition and activity, decrease of physical attractiveness, loneliness, disability, dependence on others, and difficulties in access to adequate healthcare and nursing services.

Although the rate of aging varies among individuals because of genetic, environmental, behavioural factors and lifestyle choices, in general, the body is more susceptible to age-related diseases. According to available medical statistics, aging is affected by cancer, cardiological disorders

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[6], metabolic disorders (obesity; diabetes type 2) [7], joint dysfunctions (hip in particular) [8], visual and auditory impairments, Alzheimer's disease, depression and dementia of different origin [9].

Another problem associated with aging concerns the decrease of physical fitness [10]. Generally, too many senior citizens do not carry out regular physical activity, which leads to loss of muscle strength, sarcopenia, inability to undertake long-term physical effort, and chronic fatigue syndrome (CFS). Thus, senior citizens lose their independence and ability to manage a household and self-service activities. They also start to need assistance, care, and rehabilitative services.

There are many empirical findings indicating the relationship between health and quality of life. Somatic risk, physical illness, and functional impairment (e.g., vision, hearing, mobility, strength) have a negative impact on psychological well-being in old age [11]. However, objective measures of functional health status and measures of disease alone are insufficient determinants, both of general health assessment and well-being [12]. There are many arguments for considering subjective judgments, such as a valid approach to the measurement of subjective self-ratings of health which are consistently found to predict subsequent mortality, as well as – or better than – physical measures [13].

Quality of life and life satisfaction. The concept 'quality of life' is complex and changeable throughout life [14]. It covers the entire range of human experience and reflects all the significant areas of one's life [15]. The quality of life assessments incorporate cognitive judgements and evaluations, and affective states, and being a vague term without conceptual clarity, it is also sometimes misused in clinical research [16].

Quality of life has been long discussed by scientists who have developed many different approaches to its description and understanding. In taking a comprehensive approach to human functioning, it is also possible to understand the quality of life as the difference felt by a patient between: *needs* (at the physiological level), *desires* (at the emotional level),and *dreams* (at the mental and spiritual level) [17]. The humanistic approach focuses more on cognitive components that refer to one's judgements of life and are called life satisfaction.

There are many established methods to make and record the estimates of quality of life. The scaling procedures are most often used which incorporate objective indicators (such as personal wealth, possessions, level of safety, level of freedom) and subjective measures (people's individual assessment of their life circumstances, compared, e.g., with an external reference standard).

The presented study uses the subjective measure, in agreement with the Cella and Tulsky understanding of quality of life that represents "the importance of people's subjective perceptions of their current ability to function, as compared with their own internalised standards of what is possible or ideal" [18].

Older people manifest a very different quality of life, mostly because their bodies, life-styles and environments are diverse. For the purpose of this study, the quality of life measurement is limited to life satisfaction, a measurement that focuses on the well-being – health relationship. Thus, the Life Satisfaction Questionnaire (*Fragebogen zur Lebenszufriedenheit* – FLZ) was selected. According to the authors, it is important to know how satisfied and/or dissatisfied people are with important aspects of their life. Considerable attention is to be paid to how they assess their health domain. It is important to increase the awareness of senior citizens of their health and their health relation to life satisfaction. Therefore, in performing this study, the authors measured the differences in life satisfaction at different stages of adulthood (early, middle and late), and then focussed on the health component of life satisfaction.

Objective. The purpose of the presented study was to measure and discuss how the self-assessment of life satisfaction and health changes at different ages in life. The results should help in the development of adequate knowledge about aging, including better recognition of the functional and individual implications of positive aging.

MATERIALS AND METHOD

The research was conducted using a random sample of 463 persons – 230 men and 233 women. The age of the participants ranged from 16 – 83 years. All the participants were informed about the aim of the study and provided consent prior to participating in the measurement procedure. Next, they were asked to fill the Life Satisfaction Questionnaire (*Fragebogen zur Lebenszufriedenheit* – FLZ), created by Jochen Fahrenberg, Michael Myrtek, Jőrg Schumacher, and Elmar Brahler, translated and standardized by Zeidler [19, 20]. The paper-and-pencil questionnaire includes 10 scales to measure such important life domains as: 1) health; 2) professional life; 3) financial situation; 4) leisure and hobbies; 5) marriage / partnership; 6) relationship with own children; 7) self-esteem; 8) sexuality; 9) social life; and 10) living situation. The FLZ questionnaire assesses the global life satisfaction of a person. The score is achieved by summing-up the data from seven scales; the scales not taken into consideration at that point were: 2) professional life; 5) marriage / partnership; and 6) relationship with own children. These three scales are excluded because often they are not filled-in by young and / or single persons. In addition, the FLZ assesses life satisfaction in each of the 10 aspects of life separately. This allowed the authors to analyse the health domain in details. The questionnaire was used to investigate how the self-assessment of health differs in various age groups. Statistical analyses were performed using STATISTICA version 9.0. The generalized Tukey Test for numerically varying subgroups was employed.

RESULTS

The data obtained were analysed in six age subgroups in order to verify how the perception of health changes with age. In the first step, the results were divided into three subgroups according to the age of respondents, which distinguished early adulthood (23–39 years), middle adulthood (40–59 years) and late adulthood (60+). The first group consisted of 102 persons, average age 30.71; in the second group – 187 participants, average age 51.43; in the third group, 124 participants, average age 66.06. The focus was on two measures: global life satisfaction assessment and one of its component – health assessment. Mean scores for each of the three subgroups was calculated and then verified if the obtained differences were significant (Tab. 1).

Table 1. HSD Test results on global life satisfaction assessment and one of its component – health assessment

	Early adulthood (1)	Middle adulthood (2)	Late adulthood (3)	(1)/ (2)	(2)/ (3)	(3)/ (1)
	Mean score			Test HSD		
Life satisfaction	239.49	222.61	216.36	0.005*	0.398	0.000*
Health	36.06	31.27	28.65	0.000*	0.020*	0.000*

*p<0.05

Analysis revealed that the oldest participants in the research gave the lowest assessment of their life satisfaction; however, the observed difference was significant only in comparison to the youngest age group. Middle-aged adults evaluated their life satisfaction better than the senior citizens, but the difference was not significant. Results for the relevance of differences between the mean scores of health in the three age groups showed a steady tendency to decrease with age. All differences were significant.

In the second step, the health domain was analysed in order to examine how the measured aspects of health vary when contrasting gender and age groups. To measure health, seven items were used, rated on a 7-point scale ranging from 1 – *very dissatisfied* to 7 – *very satisfied*. All were short and easy-to-understand phrases to assess health (Tab. 2). The subjective measures of health were purposely selected instead of physical measurements or laboratory test results in order to gather information about whether the participants sought care or not, and if they could reflect the positive aspects of their health.

Table 2. Items used in the health domain

Number	Item content
1 (general health)	From the state of my general health, I …….
2 (mental health)	From the state of my mental health, I …….
3 (physical health)	From the state of my physical (somatic) health I …….
4 (performance)	From what I can make now …….
5 (immunity)	For this, I am so very resistant to disease, I …….
6 (bodily pain frequency)	When I think of how often I have bodily pain, I am …….
7 (incidence)	When I realize how often I get sick, then I am …….

Futher analysis of the results focused on gender differences in health assessment. For this data, conventional analyses of variances were used. Although there are reports indicating that women often report quality of life more negatively than men [11, 21], the results prove gathered for the presented study showed no significant gender differences in self-reported health data (Tab. 3).

Table 3. Differences between mean scores of health assessment between females and males

Item number	Females		Males		F	P
	Mean	SD	Mean	SD		
1 (general health)	4.74	1.56	4.70	1.49	0.06	0.81
2 (mental health)	4.96	1.33	5.07	1.29	0.86	0.36
3 (physical health)	4.73	1.36	4.73	1.38	0.00	0.97
4 (performance)	5.08	1.24	5.08	1.34	0.00	0.99
5 (immunity)	4.96	1.54	5.07	1.42	0.62	0.43
6 (bodily pain frequency)	3.62	1.65	3.82	1.72	1.67	0.20
7 (incidence)	3.82	1.72	4.18	1.79	4.88*	0.03*

*p<0.05

Women were not found to have a more critical attitude to their health. The only significant difference concerned the lower evaluation by women of their incidence.

Final analysis was conducted on the participants divided into six age categories according to decades: 1) participants under 25 years of age (N=67; 14%); 2) participants aged 25–34 (N=52; 11%); 3) participants aged 35–44 (N=64; 14%); 4) participants aged 45–54 (N=73; 16%); 5) participants aged 55–64 (N=120; 26%); and 6) participants aged 65+ (N=87; 19%).

Analysis of the quantitative data proved differences in health estimation dependent on the age variable. The mean scores of health assessment in the different age-groups are presented in Table 4.

Table 4. Mean scores of health assessment in different age groups

Item number	<25	25–34	35–44	45–54	55–64	65+
	Mean scores					
1 (general health)	5.43	5.44	5.39	4.27	4.50	3.93
2 (mental health)	5.28	5.42	5.48	4.69	4.88	4.70
3 (physical health)	5.45	5.16	5.23	4.29	4.57	4.13
4 (performance)	5.57	5.46	5.52	4.85	4.87	4.63
5 (immunity)	5.51	5.67	5.50	4.74	4.93	4.23
6 (bodily pain frequency)	3.97	4.75	4.11	3.32	3.41	3.39
7 (incidence)	4.50	4.92	4.33	3.57	3.68	3.61

The generalized Tukey test was used for numerically varying subgroups to verify whether the obtained differences were significant, with attention focused on the senior citizens who are more 'at risk for dependency'. This showed some interesting variations in the dimensions of health perceptions (Tab. 5).

Table 5. Distribution of responses in 65+ group (N=87. 100%)

Item number	very dissatisfied	dissatisfied	somewhat dissatisfied	neither satisfied nor dissatisfied	somewhat satisfied	satisfied	very satisfied
1 (general health)	1 (1.2%)	18 (20.7%)	22 (25.3%)	10 (11.5%)	21 (24.1%)	11 (12.6%)	4 (4.6%)
2 (mental health)	0 (0.0%)	6 (6.9%)	20 (22.9%)	5 (5.8%)	26 (29.9%)	23 (26.4%)	7 (8.1%)
3 (physical health)	2 (2.3%)	12 (13.9%)	18 (20.7%)	15 (17.2%)	23 (26.4%)	15 (17.2%)	2 (2.3%)
4 (performance)	1 (1.2%)	9 (10.3%)	8 (9.2%)	14 (16.1%)	32 (36.8%)	17 (19.5%)	6 (6.9%)
5 (immunity)	1 (1.2%)	8 (9.2%)	21 (24.1%)	19 (21.9%)	20 (22.9%)	11 (12.6%)	7 (8.1%)
6 (bodily pain frequency)	8 (9.2%)	17 (19.5%)	29 (33.3%)	12 (13.9%)	11 (12.6%)	7 (8.1%)	3 (3.4%)
7 (incidence)	4 (4.6%)	17 (19.5%)	27 (31.1%)	13 (14.9%)	15 (17.2%)	7 (8.1%)	4 (4.6%)

There are two domains – mental health and performance – that are positively evaluated by more than two-thirds of senior citizens (64.4% and 63.2% respectively). Bodily pain frequency and incidence are two categories assessed negatively by the majority of senior citizens (62% and 55.2%). Analysis of the responses of the other health categories did not reveal any dominant tendency.

In further analysis, the whole sample (N=463) was included. The senior citizens assessment of general health, although the lowest among all the age-subgroups, showed significant difference only in relation to the people below 45 years of age (<25/65+ HSD=0.000; 25–34/65+ HSD=0.000; 35–44/65+ HSD=0.000; p<0,05). The same results were obtained for physical health (<25/65+ HSD=0.000; 25–34/65+ HSD=0;001; 35–44/65+ HSD=0.000; p<0.05) and performance (<25/65+ HSD=0.000; 25–34/65+ HSD=0.009; 35–44/65+ HSD=0.001; p<0.05). The significant differences in satisfaction from mental health occurred only for the senior citizens, and for participants aged 25–34 (HSD=0,045; p<0,05) and the senior citizen citizens and participants aged 35–44 (HSD=0,007; p<0,05). The moderate satisfaction from immunity is shared by the senior citizens and people aged 45–54. The senior citizens assessment. evaluated in comparison to the results obtained in the other age groups. showed significant differences (<25/65+ HSD=0.000; 25–34/65+ HSD=0.000; 35–44/65+ HSD=0.000; 55–64/65+ HSD=0.016 p<0.05). The differences in the assessment of frequency of bodily pain occurred significant only in case of the senior citizens and the participants aged 25–34 (HSD=0.000 p<0.05). The incidence was assessed lower by the senior citizens. but their results were significant different only in comparison to the young people (<25/65+ HSD=0.030; 25–34/65+ HSD=0.001 p<0.05).

DISCUSSION

The presented study adds to the growing body of evidence that suggests that the additional years of senior citizens life can be characterised by a positive quality of life. The study was designed not only to measure life satisfaction, but mostly to focus on its health component. Analysis of the results showed that the senior citizen's assessments of the various aspects of health are moderate and diverse, contrary to prejudices that limit the concept of aging to decline. It is argued that the subjective evaluations of health can be even more important determinants of life satisfaction than objective health parameters. Senior citizens should believe that there are things they can do to make a difference in the course of aging. The aim of this discussion is to encourage senior citizens to monitor and self-assess their health (dependent on the time of day. weather. certain situations or events), to become trained in the activities of daily living (ADLs), and to learn how to detect and deal with the prodromes of some dysfunctions. This approach assumes a possible significant contribution of the senior citizens in the process of increasing the quality of life, and gaining a sense of integrity and control over their aging.

Senior citizens can not only slow the processes of senescence but also develop and implement a new strategy of positive aging into their lives. There are many possible actions to be undertaken for example: supporting development of self-esteem and body image. searching for compensatory strategies and adaption of activities. Moreover senior citizens can improve their control beliefs and develop self-regulation and coping skills.

Senior citizens should also change their approaches and attitudes to own aging. Many studies have revealed that the sense of control is a key factor that determines positive aging and health. The sense of control serves as a buffer for the deleterious effects of aging, is an indicator of an adaptive set of beliefs about personal agency and effectiveness, and can be modified [22]. Thus, a new question arises: whether obtaining an advanced education in midlife and beyond can have an effect on the sense of control in later life, and therefore on the health and aging strategies of senior citizens..

Finally, senior citizens should take more advantages from innovative technology that can effectively prolong their self-reliant life. Moreover, they should learn some new approaches, for example, positive aging self-management which encourages senior citizens to regularly monitor their emotional well-being, quality of sleep quality, and fear of falling, in just the same way as they usually control their blood pressure. They therefore become more aware both of their health. and well-being. Gradually they learn how to look after themselves in order to experience old age positively.

An evaluation of life satisfaction is helpful in providing indirect support for the notion that senior citizens can better adopt to their own aging and perceived age-related changes in health. The findings of this study show the intriguing possibility of integrating the promotion of a healthy lifestyle with the correction of the well-being of senior citizens. More effective strategies should be developed and more research undertaken into how to encourage old people to undertake prevention activities. These should include moderate physical exercise, a healthy diet and appropriate dietary restriction, non-smoking, an active lifestyle, and continuous mental training [23]. Continuous training and education, which challenges stereotypes and prejudices relating to irrevocable health decline in the aging process, are necessary to ensure that the real needs of senior citizens are met, thereby increasing their well-being [24]. However, education and research, although possible means to change practise, are insufficient. The authors believe that public debate is still required to challenge current limitations and barriers that impact on the actions of senior citizens.

CONCLUSIONS

Life satisfaction is associated with subjective health evaluations. There are two domains – mental health and performance – that are positively evaluated by more than two-thirds of senior citizens. The observed differences challenge stereotypes and prejudices relating to negative aging process, and senior citizens can improve their control beliefs and develop self-regulation and coping skills.

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