

HEALTH-RELATED QUALITY OF LIFE AND MENTAL HEALTH IN THE PROCESS OF ACTIVE AND PASSIVE AGEING

Lidija Dajak¹, Miroslav Mastilica², Stjepan Orešković² & Gorka Vuletić³

¹Home for the elderly people Makrimir, Zagreb, Croatia

²University of Zagreb, School of Medicine, Zagreb, Croatia

³University of Osijek, Faculty of humanities and social sciences, Osijek, Croatia

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SUMMARY

Background: To analyse the differences in the self-estimate of life quality depending on the ageing type – passive, active.

Subjects and methods: Life-quality linked to health was measured with an SF-36 survey, which gives multi-dimensional criteria of health and life-quality. SF-36 survey represents a theoretically based and empirically proven operationalization of two overall health concepts, which are body and mental health, and its two general manifestations, functioning, and welfare. 200 examinees in total, aged from 55 to 92, were included in the research. Divided by sex, in the research participated 148 women and 52 men. Depending on the ageing way, the examinees were divided into 2 categories: passive ageing (n=100), active ageing (n=100), and for these groups a detailed result analysis was done. Statistical analysis includes descriptive statistics, Hi-square test, Spearman's correlation coefficient, and Mann-Whitney U test.

Results: In all dimensions of health, examinees from the category Active ageing achieve higher scores, which indicates better health and better functioning. Between the groups, a statistically significant difference was determined, on the following dimensions: Overall health, Pains, Energy and vitality, Social operations, and Limits due to emotional difficulties. With the Hi-square test, it was determined that there are differences between the groups. The biggest difference can be seen in the reply categories related to health deterioration ($\chi^2=10.391$; $df=4$; $p=0.034$). Examinees from the Active ageing group mention significantly less that their health has gotten worse compared to the previous year (26% of the active ones state that their health is somewhat worse, and only 2% that their health is significantly worse, compared to the passive ones where 36% state that their health is worse, and 9% that it's much worse compared to the year before). Tested was the difference between arithmetic middles on the issue of mental health based on the ageing type ($p>0.05$), and the results show that it's not statistically significant.

Conclusion: On all dimensions, examinees from the category Active ageing achieve higher scores, which indicates a better health and better functioning.

Key words: active ageing – mental health – public health – quality of life

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INTRODUCTION

Demographic ageing is one of the biggest medical achievements and social-economic challenges of modern life. It's estimated that by 2020, the number of people older than 65 will increase by 13.6%, and the number of people over 80 by 35.2 %. Along the increase in the number of older people, there is also an increase in the society's social, economic, and health interest to keep the older population healthy and active for as long as possible. On the other side, older people are faced with numerous risks for their physical and mental health.

Over 20% of people older than 60 suffer from some type of mental or neurological disorders. In chronological age from 60 to 69, social exclusion was determined in 11% of elder people, and in chronological age over 80, the percentage is a staggering 20%. This makes the mental health one of the most important challenges of the public health in taking care of elderly. European Commission and World Health Organization think that the only positive reply to the demographic ageing is active ageing. By supporting programs for active and

healthy ageing, older people are sure that, depending on their needs, wishes, and possibilities, their physical, social, and mental potentials for equal participation in social activities will be used. For this cause, it's necessary to set a balanced responsibility of the individual, environment and inter-generation solidarity, to develop the culture of personal responsibility for health and ageing, and the society has to ensure conditions and support in that process by implementing a program for active ageing. The goal of the research was to analyse the differences in the self-assessment of the health quality based on the ageing mode – passive, active.

SUBJECTS AND METHODS

The research was done in two parts. First one was researching the scientific literature. In databases (Medline/PubMed, Google Scholar), expert research papers were searched for the keywords: "demographic ageing", "active and healthy ageing", "mental health", "public health", "social exclusion". The search was limited to articles available in English, published in the last 15 years. Relevant works were discovered and thoroughly

analysed, to create an overview of the studies that examine challenges of demographic ageing based on the ageing mode. Additional efforts were directed into exploring the literature which supports the thesis on mental health as the key factor of healthy ageing.

SF-36 (short form health survey-36), a multipurpose survey for a self-assessment health condition, was used to test the health quality. The SF-36 survey measures the subjective feeling of health through eight different health dimensions: physical functioning, limitations due to physical difficulties, physical pains, the perception of overall health, vitality, social functioning, mental health. Older people (n=200) were divided into two groups, depending on the ageing type – active/passive. Data was collected through surveys and interviews. Statistical analysis of the collected data included descriptive statistics, Hi-square test, Spearman’s coefficient of correlation, and Mann-Whitney U test. 200 people were included in the survey in total, ages from 55 to 92, from the area of City of Zagreb. Sorted by sex, in the survey participated 148 women and 52 men. Examinees in the category Active ageing have statistically significantly lower average age compared to the examinees in the category Passive ageing. Examinees in the category passive ageing are older (Table 1).

Table 1. Descriptive statistics for examinee’s age and the significance of differences per groups

Age	N	M	SD	p
Passive ageing	100	82.34	6.378	0.000
Active ageing	100	74.47	8.315	

A statistically significant difference was determined in the average number of therapy the examinees are taking, compared to the lower number of the therapy in the active ageing group. However, it needs to be taken into account that the examinees in the passive ageing group are generally older (Table 2).

Table 2. Descriptive statistics for the number of therapy taken and the significance of differences per groups

Number of therapies	N	M	SD	p
Passive ageing	81	4.77	2.767	0.005
Active ageing	99	3.68	2.846	

Testing the significance of the difference in the groups, depending on the sex, has shown that there is a statistically significant difference in the number of women in the active ageing group (56.1%) compared to the number of men in the same group (32.7%) ($\chi^2=8.420$; $df=1$; $p=0.004$).

Table 3. Descriptive statistics for health status dimensions and the significance of differences per groups

Health dimensions		M	SD	p
Physical functioning	Passive ageing	57.32	21.17	0.278
	Active ageing	60.82	23.45	
Limitations due to physical difficulties	Passive ageing	44.79	41.66	0.114
	Active ageing	54.34	42.02	
Limitations due to emotional difficulties	Passive ageing	48.96	44.84	<0.000
	Active ageing	72.11	38.79	
Social functioning	Passive ageing	66.24	27.67	0.015
	Active ageing	74.87	20.66	
Mental health	Passive ageing	63.79	20.40	0.077
	Active ageing	68.41	15.53	
Energy/vitality	Passive ageing	48.79	20.00	<0.000
	Active ageing	59.49	15.20	
Pains	Passive ageing	49.79	24.83	0.007
	Active ageing	59.08	22.75	
Overall health	Passive ageing	45.64	16.91	0.000
	Active ageing	55.00	14.41	

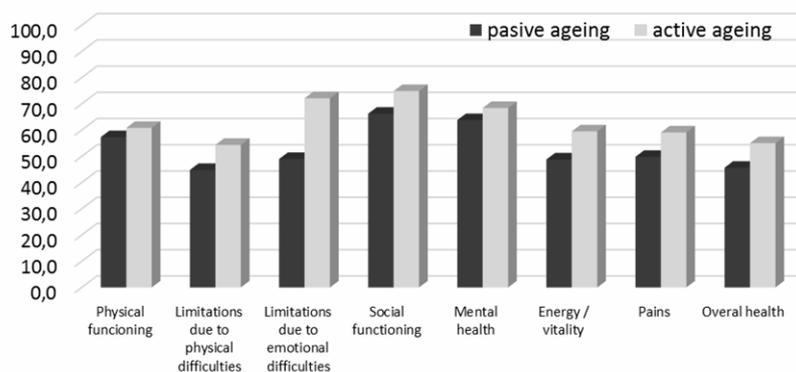


Figure 1. Average values of the results on health dimensions, according to groups for active and passive ageing

RESULTS

On all dimensions of health, examinees from the group Active ageing get higher scores which indicate better health and better functioning (Table 3).

A statistically significant difference was determined between groups on the following dimensions: Overall health, Pains, Energy and vitality, Social functioning, and Limitations due to emotional difficulties. Tested was the difference between arithmetic middles on the issue of mental health based on the ageing type ($p > 0.05$), and the results show that it's not statistically significant (Figure 1).

In the category of changes in their health, the biggest number of examinees, from both groups, states that their health is as it was a year ago. With the Hi-square test, it was determined that there are differences between the groups. The biggest difference can be seen in the categories of replies that the year before (26% of the active ones have said significantly less times that their

health has gotten worse when compared to states that their health is somewhat worse, and only 2% that it's a lot worse, compared deal with health decline ($\chi^2=10.391$; $df=4$; $p=0.034$). Examinees from the Active ageing group to passive ones where 36% said that their health is worse, and 9% that it's a lot worse than the year before) (Table 4).

The biggest number of examinees, from both groups, has stated that their health is the same as a year ago. Using the Hi-square test, it was determined that there are differences between the groups. The biggest difference can be seen in the categories of replies on the state of worsening health ($\chi^2=10.391$; $df=4$; $p=0.034$).

Examinees from the Active ageing group have said significantly less that their health has gotten worse when compared to the year before (26% of the active ones states that their health is somewhat worse, and only 2% that it's a lot worse, compared to passive ones where 36% said that their health is worse, and 9% that it's a lot worse than the year ago.

Table 4. Health in relation to the last year by groups – active and passive ageing

	Passive ageing		Active ageing	
	N	%	N	%
Health compared to the last year				
Much better than the last year	6	6.0%	7	7.0%
Somewhat better than the last year	9	9.0%	6	6.0%
Somewhat worse than the last year	36	36.0%	26	26.0%
A lot worse than the last year	9	9.0%	2	2.0%

Table 5. Coefficients for correlation of age and health variables per groups according to activities

	Age	
	Active ageing	Passive ageing
Number of diagnosis	0.308**	-0.055
Number of therapies	0.257*	-0.034
Physical functioning	-0.148	-0.019
Limitations due to physical difficulties	-0.268**	-0.015
Limitations due to emotional difficulties	-0.147	0.035
Social functioning	-0.151	-0.070
Mental health	-0.090	0.093
Energy / vitality	-0.032	0.061
Pains	-0.074	0.079
Overall health	-0.134	-0.036
Change in health	-0.199*	-0.077

* $p < 0.05$; ** $p < 0.01$

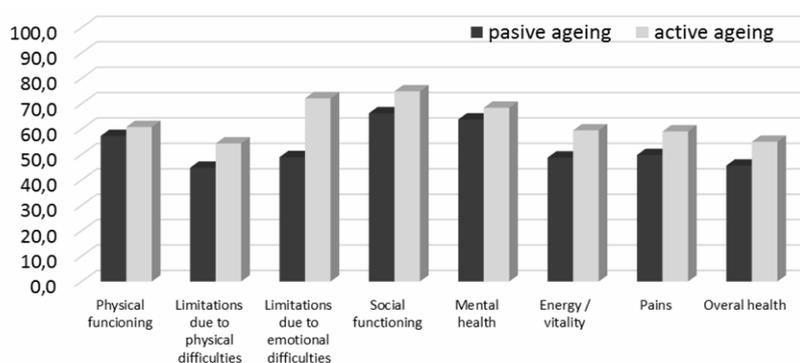


Figure 2. Distribution of replies on health change per groups – active and passive ageing

From the figure 2, it is clear that a significantly bigger number of examinees in the active ageing group maintains the same health (59%) compared to the 40% of examinees in the passive ageing group, and it's visible that more passive than active examinees list that the change was worse. Taking into consideration that the groups were different on the age and results on some health dimensions, an additional analysis was done on the connection between age and health variable, for each group separately. Spearman's correlation coefficient was used.

In the group Passive ageing, no relation was discovered between age and self-assessment of the health, nor age and objective health indicators (number of diagnosis and number of therapies). All correlation coefficients are around zero and are not statistically significant.

As opposed to that, in the Active ageing group, a low but significant positive relation was discovered between age and the number of diagnosis and therapies, which shows that with the age, the number of diagnosis and therapies is also increasing. Furthermore, a low but significantly negative connection was determined between age and results on the dimension Limitations due to physical difficulties.

The listed result shows that a certain number of active examinees with the age increase has fewer limitations in functioning due to physical difficulties. Also, a low but significant negative relation between age and health changes was determined, which indicates that at a certain number of active examinees there is no health worsening in older age (Table 5).

A significant difference for the dimension of health between groups volunteers / non-volunteers in all tested health dimension was registered only in the dimension of social functioning ($p < 0.05$), where volunteers have a much higher score, i.e. better functioning.

DISCUSSION

The number of older people is constantly increasing. It is in our social and economic interest to keep the mentioned population healthy and independent as long as possible. Protection and promotion of health, including the mental health of elderly people, is one of the European strategical goals. We can achieve this only by supporting active and healthy ageing. According to the opinion of the World Health Organization, supporting the active ageing program in the area of health care, work market and employment, education and social politics, will have a positive influence on: the decrease in mortality and functional dependency due to chronic pains in the productive life age; improvement in life quality during ageing; the increase in the number of people who are actively participating in the economic, social, political, and cultural life of the society; the decrease in healthcare and long-term care costs. In the

process of supporting active ageing, it is important for the health systems to focus on promoting health (the process of taking responsibility, control, and managing your own health), prevention of non-contagious chronic diseases, organising effective and financially sustainable system. World Health Organization feels that older people are an unused resource. European strategies recommend using the potential of the older population in a new, creative, innovative, and economically efficient way. A proven way of a free improvement of the local community's potential is the transfer of knowledge that older people have via volunteering. The National Institute for Volunteering Research has confirmed the benefits of volunteering for elderly people with a research done in London, where participation in volunteering in older age is: decreasing inter-generational gap; changing societies opinion on elderly; has a positive effect on mental and physical health of older people; helps in prevention of social isolation, exclusion, and depression; increases self respect, self-confidence, and pleasure with life quality.

CONCLUSION

Active ageing improves the quality of life and health of older people. At the same time, it also enables to use the physical, social, and mental potential of elderly, for an equal participation in social activities, in accordance with their needs, wishes, and possibilities. Highest statistical significance was determined in the dimension of social functioning in favour of active ageing. It is interesting that in the self-assessment of mental health quality, there is no statistical importance between active and passive ageing.

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Contribution of individual authors:

Lidija Dajak - literature searches and analyses.
Miroslav Mastilica - interpretation of data.
Stjepan Orešković - design of the study.
Gorka Vuletić - statistical analyses.

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Correspondence:

Lidija Dajak, master of social work and management in health
Department of Social Work, Home for the elderly people Maksimir
Hegedušićeva 20, 10 000 Zagreb, Croatia
E-mail: lidija.dajak@gmail.com