

# The analysis healthy behavior among elderly people in Juczyński's Inventory of Healthy Behavior

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## Abstract

**Purpose:** The aim of our research was the analysis healthy behavior in people, who continued their education in the third age group at Universities and elderly hospitalized patients.

**Material and methods:** The study group included students in the third age group at Universities and Senior Clubs and patients hospitalized in the Department and Clinic of Geriatrics, there were 87 women and 37 men, in total 124 people. The mean age of the evaluated people group was 67.6 years. The research was carried out by diagnostic poll method with the application of Juczyński's Inventory of Healthy Behavior (IoHB).

**Results:** The studied people group showed a high level of health behavior, obtaining higher scores than standard for older people. This difference was statistically significant for all studied rates. In our study, the standardized rate was in general 6.50, including 6.39 for women and 6.76 for men. Such rate value of health behavior should be considered as average rather than high.

**Conclusions:** The older people in the present report have a high level of healthy behavior compared to the average for adult population.

**Key words:** health behavior, elderly, quality of life.

## Introduction

The second half of the 20th century was a significant period of changes in the demographic structure in Poland and in the world. The main characteristic was a transition from high birth and death rate to a low population growth rate and also low mortality rate. The demographic prognosis predicts further increases especially of the number of people in advanced old age [1].

Ageing is a dynamic process, to which every human is subjected. It is also a physiological stage following biological, psychological and social transformations. In the old age period changes in social areas ensue, new perspectives for further human development also open up in this age. Longer professional, family or social activity is dependent on the state of health [2-5]. Various factors have influence on the lengthening of a human's life, firstly, civilization's development, next, advanced medical achievements, and lastly the improvement in the quality of older people's treatment and care, the general improvement of living conditions, and a greater awareness of health displayed in the taking care of health and preferring pro-health [2,4,6,7]. Life style in old age is conditional on earlier acquired attitudes to one's health and habits related to proper nutrition, physical activity, the ability to cope with stress and the restriction of the usage of stimulants. The positive influence of these behaviors on health and quality of life has already been documented by scientists studying this area of knowledge [8-11]. Although the ageing of organs inevitably takes place, by our own conduct we can have an influence on retaining psychological and physical independence from our surroundings longer, this is so important especially in this age.

Nutritional mistakes and low physical activity resulting have implications on health and are most often confirmed by scientific research as anti-healthy behavior areas [12-15].

The aim of our research was the analysis of the increase of healthy behaviors in people who take up education in the 3rd Age Universities and elderly hospitalized patients.

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## Material and methods

The study group was made up of students in the III Age Universities, Senior Club and patients hospitalized in the Department and Clinic of Geriatrics in Bydgoszcz. The research included 87 women and 37 men, in total 124 people. Sixty people who studied at the 3rd Age University and Senior Club, while 64 people were patients at the Department of Geriatrics. The mean age of the studied people was 67.6. Among the respondents there were 14 people under the age of 60, between age 60 and 74 there were 70 people, between age 75 and 90 – 21 people, 14 people did not give their age. Most respondents lived in cities (80.6%), while 19.4% in the country. There were 51.6% of the people who had technological and elementary education, 34.7% who had a secondary education and 13.7% who had higher education. 78.2% defined their economical status as good, while 21.8% defined it as difficult. The marital status of the study group presented as follows: there were 77 married people while 7 declared an unmarried status and 40 people were widows and widowers. 78.5% co-habitated with families, while 21.5% of the respondents lived alone.

The study was carried out by diagnostic poll method with the application of Juczyński's Inventory of Healthy Behavior. This questionnaire includes 24 statements defining groups of behavior connected with health. While collating the results, the general intensification of pro-health behaviors is counted and separated into four levels of health behavior categories: proper nutrition habits, prophylaxis behavior, health practices and positive psychological attitudes. Statements describing prophylaxis behavior are related to the observance of health recommendations and obtaining information about health and disease. Health practices show everyday habits related to sleep, recreation and physical activity. The area of human psychological functioning. An inventory may be used to examine both healthy and sick adults. The research results deliver knowledge related to the actual behavior of the group examined and may serve as an action program promoting health and prophylaxis [16]. The results were notified in the statistical analysis using Chi-square test and Student's t-test for average.

## Results

The health behavior rate was counted; its outcome restricted to the whole study group came out on average 89.6. Separate outcomes were obtained for women 90.08 and for men 88.54. The mean for all population studied in individual categories of healthy behavior show higher scores than in standardized researches.

A significant difference was observed in the positive psychological attitude category in men, while for women it was in prophylaxis behavior. We can state, with only a 5% risk of error, that health behavior in the people group people with good material status was higher (rate 6.70) than those without. Using information about health from different sources really influenced higher rates, in all cases, general as well as detailed. People using information about health have significantly higher general Health Behavior Rate (HBR=6.76) than other people

**Table 1. Mean outcomes for specific behavior categories in the study group beside the standard outcome**

Behavior categories	PNH	PB	PPA	HP
Research outcome	3.50	3.75	3.86	3.82
Standard outcome	3.22	3.42	3.52	3.32

PNH – Proper nutrition habits; PB – Prophylaxis behavior; PPA – Positive psychological attitude; HP – Health practices

(HBR=5.54) and also a significantly higher rate in all categories except the healthy practices category.

Our results show that the rate for healthy practices significantly increases with age. These findings also show that the healthy practices of people living in cities are significantly higher than those in the country. Statistically, the other rates do not change in any radical way.

Marital status did not have any influence on healthy behavior in the study group. There also was no significant difference between the group of the 3rd Age University students and the hospitalized patients although the rates for the first group were a higher.

## Discussion

Healthy behaviors are the result of an attitude to health, acquired during our whole life, especially important is the feeling of being responsible for one's own health and someone else's [6]. The older people studied showed quite high levels of healthy behaviors compared with the standard for adults (81.82 – general rate) 84.03 for women and 78.50 for men, higher outcomes were obtained [16]. This difference is statistically significant for all mentioned rates. In our studies the standardized rate (according to IoHB: temporary polish norms 1998-1999) generally came to 6.5, 6.39 for women and 6.76 for men. These results should be considered as average, close to high (from 7-10 is high) [16].

The men studied showed greater psychological adaptation characterized with the ability to avoid negative emotions, stress and psychological tension, than the women. Unfavorable psycho-social situations, restricted social roles, limited new life targets and isolation in old age has a direct influence on the degradation of health status [5]. That is why an important aspect of good health is attributed to the psychological aspects of healthy behavior [5,16].

Regular physical activity has great importance in keeping healthy, which is a factor contributing to successful ageing [9].

Systematic physical activity in older people has influence on the extension of the physical fitness and independent living period, so improves quality of life. Regular physical activity results in measurable benefits in the form of reducing costs for health care, improving the ability of older people to work, as well as promoting a positive outlook in older people. With older people who live in a home environment and have an increased physical activity level, the general number of upper respiratory infections decreases. Physical activity also lowers the risk

**Table 2. Mean outcomes for specific health behavior categories depending on gender**

Category	PNH	PB	PPA	HB
Women	3.56±0.142	3.84±0.135	3.77±0.141	3.84±0.139
Men	3.37±0.197	3.54±0.197	4.08±0.127	3.77±0.186

PNH – Proper nutrition habits; PB – Prophylaxis behavior; PPA – Positive psychological attitude; HP – Health practices

**Table 3. The influence of education on health behavior categories in the studied group**

Category	PNH	PB	PPA	HP	General state
People using health education	3.63	3.84	3.95	3.83	6.76
People not using health education	3.02	3.42	3.54	3.79	5.54

PNH – Proper nutrition habits; PB – Prophylaxis behavior; PPA – Positive psychological attitude; HP – Health practices

of cardiovascular system diseases [8,9]. The people studied showed a high level of healthy practices related to their habits of rest, recreation and physical activity. In the study group healthy practices significantly increased with age and most often were related to people living in the city rather than in the countryside.

Improper nutrition connected with a too high or insufficient supply of nutrients lead to metabolism disorders and civilization-related diseases [11,15]. Obesity was more often found than malnutrition, which results in certain health problems. Older people very often eat incorrectly, yet they have special nutritional needs and require help in working out a proper diet, taking into consideration quantitative and qualitative requests as well as health status. Lowering the caloric intake in view of reduced physical activity is invaluable [10,11,15].

From the all-Polish research it follows that one in every three Polish adults is overweight, while one in every eight is obese. In recent years it has been observed that the occurrence of adult women who are overweight has lessened. The rate of overweight women is now 27% of all women vs 33% of all men. At the same time women more often have body weight deficiency (underweight), especially younger women (under 30 years) [17]. Studies of the older population in Poznań showed, however, definitely higher outcome [15]. In our research the rate, related to nourishment of people studied, came to 3.5 and was higher than the standard outcome.

## Conclusions

Older people were characterized with a higher healthy behavior level than the mean for the adult population. The rate of healthy practices in areas of rest, recreation and physical activity characteristically improved with age and was mostly related to people living in cities rather than in the country. Educational training in the area of proper nutrition, disease prophylaxis and improvement of psychological functioning especially in elderly women should be increased. Promoting healthy actions should also be aimed at the older population.

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