Title: Sociodemographic factors and selected health status indicators and the utilization of medical rehabilitation and health resort treatment services by people aged 65 years and over

based on the PolSenior study

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Summary

Introduction

Self-rated health (SRH) is a valid measure used not only for monitoring of general health in the society, but also for estimating health inequalities. In the numerous scientific research involving older populations, SRH was also found to be a predictor of mortality. It can be assumed that due to populations aging, observed also in Poland, the validity of SRH will

increase. Research concerning SRH not only describes the situation, but also helps to plan

actions tailored to the seniors' needs.

In the face of increasing life expectancy, it is extremely important to maintain functional independence to late life years. This is facilitated by medical rehabilitation used not only for the quick recovery of patients, but also as prevention of disability. Rehabilitation is an important element of health resort treatment. The demand for medical rehabilitation services and health resort treatment services will increase in the aging societies; therefore, it seems reasonable to monitor inequalities in access to these health services in order to optimally meet the seniors' health needs.

Aim

The main aim of the dissertation was to assess SRH and its association with all-cause mortality, as well as to evaluate utilization of medical rehabilitation services and health resort treatment services among PolSenior study respondents aged ≥65 years in relation to selected sociodemographic factors.

Material and methods

The dissertation was based on a cycle of three monothematic research papers.

The analysed data were obtained from the nationwide, multidisciplinary project "Medical, psychological and socioeconomic aspects of aging in Poland" - PolSenior, in which 4979 respondents aged ≥65 years took part.

In the dissertation, an association between SRH and the 5-year all-cause mortality was analysed (research paper I). Self-rated health was measured among respondents with preserved

cognitive functions (4049 persons, 47.8% women) using Visual Analog Scale categorised as poor, fair or good health.

The frequency of the use of medical rehabilitation by respondents within the period of 12 months preceding the interview (research article II) and health resort treatment during a proceeding 3-year period (research article III) was also examined. Data were obtained from 4813 persons (48.3% women).

## Results

Over half of respondents (51.7%) reported fair SRH, 40.2% – good SRH, and 8.1% – poor SRH. The factors negatively affecting SRH among both genders were: advanced age, low economic status, worse functional status, visual or hearing impairment, depressive symptoms, low physical activity, multimorbidity, alcohol abstention, and additionally among women: lower level of education, physical work, underweight or class III obesity

The percentages of deaths increased with worsening SRH: from 17.5% in women and 26.6% in men with good health to 36.2% and 55.3% with poor health, respectively. Respondents with fair SRH [women: HR = 1.29 (95% CI: 1.03-1.60), men: HR = 1.29 (1.10-1.52)] or poor SRH [HR = 2.48 (1.83-3.37), HR = 2.62 (2.04-3.36), respectively] had higher hazard ratios (HRs) for mortality compared to those with good SRH. After adjustment for age, this relationship was observed only when comparing subgroups with extreme SRH categories [women: HR = 1.98 (1.46-2.68), men: HR = 2.06 (1.60-2.64)]. Based on the multivariate Cox proportional hazard regression analyses it was found that SRH was an independent risk factor for death in women with poor health in reference to those with good health [HR = 1.70 (95% CI: 1.16-2.50)].

Among respondents 17.3% declared utilization of medical rehabilitation during 12 months preceding the interview. The chances of participating in medical rehabilitation were decreased by advanced age ( $\geq$ 80 years in women and  $\geq$ 90 years in men) and dependence in instrumental activities of daily living. Utilization of medical rehabilitation was promoted by city dwelling, higher education, holding of a formal disability certificate, and chronic pain occurrence.

During three years preceding the study, 10.7% respondents participated in health resort treatment (8.7% – financed from public health funds, 4.5% – financed by respondents). The chances of participating in health resort treatment decreased with age and were the lowest among respondents aged  $\geq 85$  years. Utilization of health resort treatment was promoted by dwelling in cities > 50,000 residents, secondary education, independence in instrumental activities of daily living, formal disability certificate.

## **Conclusions**

- 1. SRH is conditioned by a wide range of factors (sociodemographic, depending on health status and life-style), related or not related to gender. Among SRH factors in both women and men are age, self-assessed economic status, functional status, vision and hearing, depressive symptoms and chronic diseases occurrence, alcohol consumption and physical activity. Determinants of SRH exclusively in women are education level, type of work before retirement and body mass index.
- 2. SRH is independent risk factor for death in women, but not in men.
- 3. The analysis of utilization of medical rehabilitation and health resort treatment shows inequalities in access to health services among older adults related to age, education, place of residence, functional status, chronic pain occurrence and formal disability.
- 4. The analysis of utilization of medical rehabilitation and health resort treatment by older adults reveals administrative problems of the health care system in Poland. Therefore, there is a need to introduce changes in the level of accessibility, financing, infrastructure and human resources in order to better adapt the system to the needs of current and future seniors.
- Complexity of SRH and its association with objective health indicators should be considered while planning scientific research concerning SRH and health promotion programs.
- 6. The results of the PolSenior study show that preparation for old age should be intensified and addressed particularly to women, rural dwellers, low educated people, as well as those who are at risk of loss of functional performance.