

MORTALITY AND QUALITY OF LIFE

Nasselenie Review, Volume 40, Number 1, 2022, 31-54
ISSN 0205-0617 (Print); ISSN 2367-9174 (Online)
<http://nasselenie-review.org>; E-mail: nasselenie_review@abv.bg

HEALTHY LIFE YEARS IN BULGARIA BY SEX AND SPECIFIC AGES IN THE PERIOD 2011–2016¹

Evelin YORDANOVA

*National Statistical Institute
Health Care and Justice Statistics Department*

BULGARIA, Sofia 1038, 2, P. Volov str.

ejordanova@nsi.bg

Abstract: *The results of the analysis of selected indicators for healthy life years by sex and for specific ages in Bulgaria in the period 2011-2016 are presented. Insofar as the essence of the applied method for calculating the indicators of health expectancy presupposes a complex analysis of the individual components (life expectancy and the subjective dimension of health), first of all the results of the descriptive analysis of the distributions of persons by self-perceived health and the existence of limitation, sex and age are presented. The differences in the self-perceived health, resp. the presence of limitations predetermine the differences in the values of the integrated indicator. The changes of the two indicators, calculated using both questions, are analysed sequentially. The problem of comparability of indicators calculated based on different surveys data is also discussed. A comparative analysis of healthy life years in Bulgaria in 2014 by sex and age, calculated using data from EU-SILC and EHIS is done.*

Keywords: Healthy life years; self-perceived health; Sullivan Method; European Health Interview Survey; Survey of Income and Living Conditions.

The article can be cited as follows:

Yordanova, E. (2022). Healthy Life Years in Bulgaria by Sex and Specific Ages in the Period 2011–2016. *Nasselenie Review*, Volume 40, Number 1, 31-54. ISSN 0205-0617 (Print); ISSN 2367-9174 (Online).

The article was published in Bulgarian in *Nasselenie Review*, Volume 39, Number 1, 2021, pp. 33-61.

© E. Yordanova, 2022

¹ Part of a thesis entitled “Factors for Healthy Life Years in Bulgaria” defended before the Scientific Jury at IPHS – BAS on 06.02.2020.

Submitted – January 2022

Revised – April 2022

Published – June 2022

The author has read and approved the final manuscript.

INTRODUCTION

The official statistical data for the last years show that the average life expectancy has been constantly rising. The average value for EU Member States shows it has increased by more than six years in recent decades, from 74.2 years in 1990 to 81.0 years in 2016, with the existing inequalities still varying from country to country and within individual countries. The population of Western European countries, which has a higher life expectancy, continues to live on average more than eight years longer if compared to that in the countries of Central and Eastern Europe. There are still large inequalities in both health and life expectancy between people with higher levels of education and income and those showing lower levels. (OECD/EU, 2016: 11).

The continuing ageing of the population is the reason why more and more attention is being paid to the spread of chronic diseases and physical disabilities among the population. Increasing the life expectancy of a person suffering a chronic disease would be a challenge for their life quality. A substantial part of such diseases is progressive and therefore the restrictions triggered by them would tend to accumulate, as the time passes. Moreover, while they come as a key reason why medical services are used, the treatment of such ailments is too expensive in most cases, both for the health care system and for any individual. People's health deterioration would cause a significant economic influence, with this leading to both the necessity of restructuring the expenses on health care within the system and to an alteration to the consumption and production of both goods and services. This is why the answer to the question whether people live longer in good health or add years of life, however in poor health, is so important.

The **objective** of this article is to analyse the healthy life years among both males and females by specific ages in Bulgaria over the period 2011–2016. The results of a comparative analysis of the indicator for Bulgaria in 2014 by sex and age, calculated using data from two sample surveys, are presented.

The multifaceted nature of the concept of health and the wide variety of indicators used to analyse good health require the introduction of some **restrictive conditions** in the present study. The article will analyse two integral indicators²:

- o “Healthy life years”, with good health being defined depending on the presence or absence of limitations. The question that was used is known in the sources as GALI³.

- o “Healthy life years based on self-assessment of health” when using a question with a five-point answer scale: very good, good, satisfactory, poor and very poor..

² The two terms ‘indicator’ and ‘index’ are used as synonyms in this article.

³ The Global Activity Limitation Instrument – The question used is “In the last 6 months or more, have you been limited in your normal activities in your personal life or work due to a health problem?” Can you say that you have been: (a) Yes, very limited; (b) Yes, limited, yet not so much; (c) No, I have not been limited”.

The conceptual difference in the two questions, as well as the many factors that determine the self-assessment of individuals in terms of their health would predetermine the significant differences in the values of the two indicators.

The **main thesis** we support in the present study is that in the period 2011–2016, healthy life years at the birth among both males and females in Bulgaria decreased. In addition, we believe that the choice of research, a source of information regarding the subjective component in the indicator, is essential, and this should be taken into account by researchers. An analysis of the structural differences in the distribution of respondents by answers to two identical questions in several sample surveys would help in terms of expectations regarding the values of the indicators that can be calculated, so that the most correct decision could be made as to which data to use.

The scientific sources and the statistical practice in health research make it visible that a wide variety of indices are designed and used either in a system or individually. However, somewhere in the middle of the last century, researchers made the case for measuring health by applying a single indicator that would be based on the information available on mortality, but should also reflect the health characteristics of life. While this concept was first suggested by Sanders in 1964, it was further developed searching for an appropriate measure by D. Sullivan. In 1971 Sullivan came to a suggestion on a specific method for the evaluation of life span as a function of different statuses of physical capacity (Sullivan, 1971: 347).

The first application of Sullivan's method in Bulgaria was in the 1990s: it was M. Mutafova who used it to calculate integral indicators for the evaluation of health as life quality (Mutafova et al., 1996: 25–28; Mutafova, 2007 [in Bulgarian]: 67; Davidov, 2011 [in Bulgarian]: 30). Mutafova, in cooperation with H. Maleshkov calculated the “Healthy Life Years” indicator using the data retrieved from the research on the health status of the population conducted by NSI in 1996 and 2001. Studies of healthy life years are becoming increasingly popular in our country and their studies include other researchers such as B. Davidov, M. Mourgova and others (Mourgova, 2016: 126-131).

The “*Healthy Life Years*” (HLY) indicator is a quantitative analyser that takes into account the combined impact of mortality and self-assessment of individuals in either presence or absence of limitations. It measures the number of remaining years that a person of a specific age is expected to live in good health, and good health can be defined as the absence of functional limitations. This is the reason why the indicator is also popular as “Disability Free Life Expectancy / in capacity”. It is Sullivan's method that is applied to calculate this indicator. While the source of information on mortality is the mortality tables calculated by the National Statistical Institute (NSI), the information on the subjective component is based on the distribution of persons aged in good or poor health, respectively without or with limitations, which is information obtained from sample surveys among households.

Sullivan's method is recommended by the WHO and used by Eurostat to disseminate comparable statistical information. In order to ensure comparability of data and to avoid discrepancies between data already published or announced by the countries and the data published by Eurostat, the indicator is calculated according to a *uniform methodology* and is disseminated by Eurostat broken down into three ages: at birth, at 50 and at 65, separately for males and females.