SOCIO - ECONOMIC ASPECTS OF DEMENTIA IN CONTEXT OF THE SLOVAK REPUBLIC

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Abstract: Various types of dementia are currently included among the diseases that cause concern in society. The aim of the study is to provide an insight into the situation in the field of social care for seniors with dementia in Slovakia in the context of current global trends. We will use secondary data analysis (SDA- Secondary data analysis) of the institutions examining these data for these findings. Our findings point to the fact that there will be a lack of financial resources in Slovakia, and there will be a shortage of qualified nursing staff needed to provide health and social care services. In 2021, the number of seniors over 65 in the Slovak population exceeded 17%, which increases the number of elderly people with an unsatisfied need in the field of social services due to dependency.

Keywords: social work, social services, population, dementia, socio-economic aspects, Slovakia.

1 Introduction

The current global demographic trend is characterized by two facts. The first is the unprecedented increase in the global population and the second is its aging. The current population of the Earth exceeds 8,044,383,550[1] people. Despite the permanent increase in the global population in economically developed countries, the trend of low birth rates persists for a long time, which, in conjunction with the increasing average life expectancy, is changing the shape of the so-called age pyramid. This trend also applies to EU countries. Changes in the structure of the population, which is characterized by a significantly older age, have already been seen in several EU countries. As stated by the European Commission at this year's June meeting, the increase in life expectancy is the result of social and economic progress, progress in medicine, the availability of health care and the overall improvement of the standard of living. The EC called on member states to increase their efforts aimed at the reconstruction of society towards building a "long-term society". The Long-term society must be oriented towards strengthening the position of older citizens in society, supporting their well-being, i.e. supporting the mental and physical well-being of seniors. At the same time, EC pointed to several risks of a long-lived society. A concomitant phenomenon of a long-lived society is a decline in the birth rate, which in the future means a decline in the productive work force. The expected work force shortage will put pressure on the public budgets of individual EU states and threaten the competitiveness of the EU as a whole (EC, 2023). A decrease in the working-age population will cause a decrease in income from personal taxes and contributions to social security and health care.

This trend can be fully manifested in the next decade, when the so-called baby boomers, i.e. people who were born between the mid-1940s and the mid-1960s. The arrival of a large number of individuals into retirement will not only create a disproportionate pressure on public budgets for social security resources, but will also bring other problems secondarily. Among the most serious of them will be the lack of manpower, primarily in the field of health, but especially social services. The aging of the population can be the cause of increasing expenditures on health and long-term care, as well as on pensions. Qualified estimates assume that in 2040 it could represent almost 27% of GDP (EC, 2023, Alzheimer's Association, 2020). WHO even admits that the percentage of GDP may be even slightly higher, given that the aging of the population is accompanied by a higher incidence of diseases requiring treatment and follow-up care. Various types of dementia are currently included among the diseases that cause concern in society.

2 Methodology

The aim of the study is to provide an insight into the situation in the field of social care for seniors with dementia in Slovakia in the context of current global trends. We used secondary data analysis (SDA), which Castle (2003) characterizes as research in which researchers use data that was originally collected for another study. Secondary data came from the databases of the World Health Organization (WHO), Eurostat, Digital Europa Thesaurus, European Commission, CSWD, Alzheimer's Association, Alzheimer's Study Group (ASG), Statistical Office of the Slovak Republic, Ministry of Labour, Social Affairs and Family of the Slovak Republic, National Health Information Center SK. SDA has several variations. In our case, we used data collected from multiple sources to answer our own research questions (Hinds, Vogel, and Clarke-Steffen 1997, Szabo and Strang 1997). We were wondering if Slovakia is ready for the rapidly increasing number of seniors with dementia? We also wanted to find out what the most serious risks the Slovak company will face.

3 Are we facing a dementia pandemic?

On December 9, 2020, the WHO officially included Alzheimer's disease and other forms of dementia among the 10 leading causes of death worldwide for the first time (WHO, 2020). Dementia is a disease that has accompanied humans for millennia. Even at the beginning of the 20th century, this disease was perceived as one of the accompanying signs of aging (Alzheimer's Association, 2023). What has changed that dementia, and especially Alzheimer's disease as one of its forms, is causing concern in the global world? The combination of the aging of the population with the increase in the incidence of dementia and the cost of their treatment, and especially the personnel and economic demands of ensuring subsequent, long-term care, is causing concern (Alzheimer's Association, 2023, Alzheimer's Association, 2020).

Dementia is an acquired disorder of memory and other cognitive functions, as a result of which the affected individual initially experiences a deterioration in social functioning and, in the final phase, even a complete loss of social functionality. In addition to the gradual loss of memory, dementia is associated with a learning disorder, a disorder of orientation in time and space, a gradual decline in abstract thinking, logical reasoning, disorders in the field of visual-spatial perception, decision-making, and communication disorders. Along with problems with memory, language and the ability to make decisions, dementia can also be accompanied by other problems such as: sudden mood changes, increased irritability, depression, anxiety, or aggression. Some people with dementia cannot control their emotions and their personality can change.

The severity of dementia ranges from the mildest stage, when it is just beginning to affect a person's functioning, to the most severe stage, when a person is already completely dependent on others for basic life activities. It is characteristic of dementia that changes come gradually, while the dynamics of these changes cannot be clearly forecast (Dixon et al., 2022, Nitrini et al., 2020). From the point of view of social work, this means that a client who shows some of the symptoms of dementia will need long-term care in the foreseeable future. From a medical point of view, clients with dementia largely belong to people with so-called multimorbidities (Devi, et al., 2022, Georges, et al., 2008). As reported by Spiers et al. (2023) clients with multimorbidities are characterized by repeated hospitalization,

[1] It is necessary to look at fact, that this number is changing constantly, because it is estimated that "new human being" is born every second.

which increases the demands on overall health and social care, reduces the quality of life and increases the risk of death. If such individuals live at home, there are frequent problems with the coordination of primary, community, secondary and tertiary care, which causes difficulties not only for clients, but also for their families and professionals who are involved in providing the necessary care (Damarell et al., 2020). It is precisely the complications associated with providing the necessary care, which is also economically demanding with the classical approach, that the search for more optimal variants began. The classic approach in social services is based on assigning an individual to existing generally designed services. Welfare states financially support institutions and organizations that provide specific social services to certain client groups (Beresford, 2007). Against this approach stands the concept of personalized care, which was developed in Great Britain and was strongly influenced by liberal economic-social concepts.

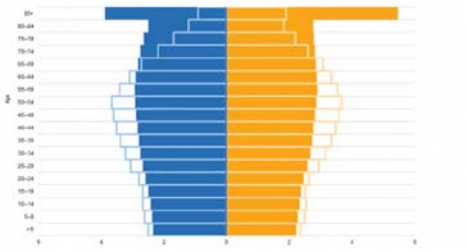
The basis of this approach can be found in the fight of persons with disabilities to be independent life (Lymbery, 2012). Personalization has brought a new perspective on care and support services. The philosophy of personalization emphasizes the uniqueness of each person and respect for their human rights, including the right to decide on the form and type of assistance necessary for their independent functioning. In this way, the center of attention is not the institution providing care, but the person with his strengths, preferences and aspirations. Personalized social care prefers providing financial contributions directly to individual's dependent on care, who subsequently finance social services themselves (Beresford, 2007). Personalization is a political paradigm whose goal is to achieve better social care and at the same time reduce fiscal pressures on the government by offering the citizen the possibility of choosing from a wider range of social services and a higher degree of control over his own life (Carey, Crammond, Malbon, 2019). Proponents of personalization emphasize that this approach focuses on identifying the subjective needs and desires of individuals, but also of entire communities, and subsequently ensuring a sufficient amount of valid information necessary for autonomous decision-making. The basic principles of personalized social care are thus autonomy, respect, freedom, choice, control over one's own life. The goal of personalized care is to enable clients to access the so-called general services such as health care, housing, active leisure time, transport, etc.

Personalized care means that people have choice and control over the way their care is planned and delivered. It is based on "what matters to them" and their individual strengths and needs. This care prefers providing care in the client's natural environment. If this is not possible, then he prefers a community form of care to a residential one (Lymbery, 2012) Personalized care represents a new relationship between people, professionals and the health and social care system. Experts focused on the care of clients with dementia are convinced that personalized care enables the fulfillment of the basic ethical principles of social work and significantly contributes to the quality of life of clients with dementia.

4 Is Slovakia ready to manage care for clients with dementia?

In 2019, within Eurostat, a forecast of aging in the EU for the years 2019-2100 was developed, reflecting a process referred to as the aging of the population from below, which is graphically captured in the so-called population pyramid.

Figure 1 Population pyramid of aging, EU 27, 2019 and 2100



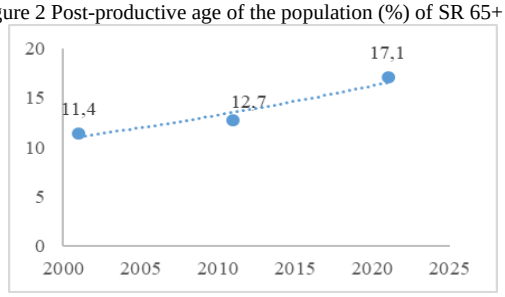
Source: Eurostat (2021).

The graph clearly shows the trend of a shrinking productive part of the EU population, which can contribute to the health care and social security systems in the years to come. However, within the EU countries, not only will there be a lack of funds, but there will be a lack of qualified personnel needed to provide health and social care services. In several member states, this problem has already fully manifested itself.

If in 2019 people in the age category 80 plus made up 5.8% of the total number of EU residents, it is expected that this category will increase two and a half times by the year 2100. In the year 2100, the percentage of the population aged 80 plus should reach 14.6% (EC, 2023).

The situation in Slovakia is worse compared to the EU average. The current average life expectancy of Slovaks is 77 years. By 2040, the average Slovak should live to be eighty years old. The Slovak population has aged significantly in 20 years. According to the 2001 Census of Inhabitants, Homes and Apartments (Statistical Office of the Slovak Republic, 2021), 11.4 percent of the population in post-productive age (65+) in Slovakia. In 2011, the number increased to 12.7 percent, and in 2021, seniors over 65 in the Slovak population will exceed 17 percent.

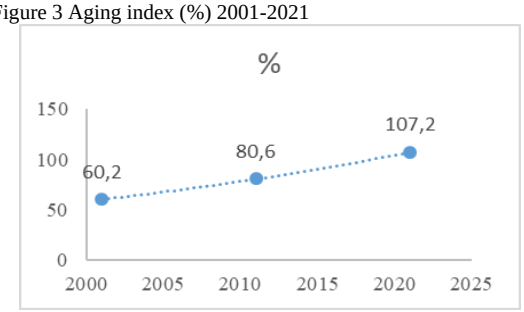
Figure 2 Post-productive age of the population (%) of SR 65+



Source: own processing.

Slovakia is among the fastest aging EU countries, as evidenced by the aging index. The aging index expresses the ratio of persons in post-productive age to persons in pre-productive age. It can be seen from the data of the Statistical Office of the Slovak Republic, that the aging index increased exponentially during the last three censuses. If in 2001 the aging index was 60.2, in 2011 it was already 82.6 and in 2021 it exceeded 107.

Figure 3 Aging index (%) 2001-2021



Source: own processing.

In addition to the aging of the Slovak population, it is also necessary to take into account the general state of health of the Slovak population. The following table shows the estimate of the

prevalence rate of dementia among residents 60 plus per 100,000 from 2019.

Table 1 Estimates of dementia prevalence rate per 100 000 among older adults (≥60 years) in the EU in 2019

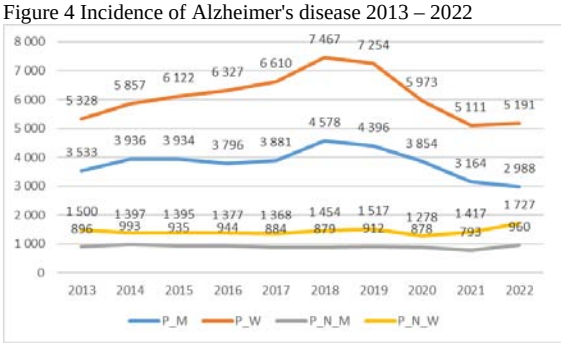
Countries	Age standardised	60-64 years	65-69 years	70-74 years	75-79 years	>80 years
Belgium	633	678	1 354	2 919	6 242	18 555
Bulgaria	741	760	1 635	3 653	7 449	19 141
Czechia	773	813	1 728	3 826	7 822	21 750
Denmark	594	642	1 297	2 783	5 867	17 123
Germany	674	674	1 399	3 105	6 712	18 644
Estonia	754	773	1 662	3 671	7 570	20 859
Ireland	627	623	1 321	2 937	6 268	17 950
Greece	626	675	1 364	2 952	6 273	17 545
Spain	631	704	1 440	3 113	6 475	17 936
France	640	686	1 398	3 034	6 427	19 163
Croatia	775	798	1 739	3 897	7 852	20 174
Italy	742	757	1 543	3 449	7 556	21 643
Cyprus	634	675	1 355	2 926	6 259	15 859
Latvia	725	733	1 571	3 464	7 192	20 041
Lithuania	732	774	1 608	3 502	7 271	19 939
Luxembourg	559	650	1 257	2 610	5 430	16 071
Hungary	767	774	1 690	3 810	7 820	21 415
Malta	628	638	1 325	2 919	6 253	18 109
Netherlands	678	680	1 441	3 253	7 042	19 255
Austria	630	661	1 348	2 937	6 262	18 508
Poland	771	805	1 720	3 767	7 733	21 702
Portugal	642	696	1 387	2 980	6 331	18 151
Romania	750	799	1 675	3 680	7 522	19 894
Slovenia	788	848	1 782	3 923	7 977	22 474
Slovakia	**762**	**767**	**1 682**	**3 800**	**7 770**	**20 957**
Finland	624	641	1 318	2 883	6 176	18 520
Sweden	571	631	1 218	2 538	5 399	17 298

Source: Digital Europa Thesaurus (DET) (2021).

From the point of view of the aging index as well as the economic burden index, in 2060 Slovakia will be ranked among the EU28 countries with the highest prevalence of senior citizens and the highest burden on the productive component of the population. It is necessary to respond to this with public policies oriented towards the support of all age categories and the use of people's potential throughout the life cycle as a basis for building sustainable societies.

Long-term care and access to it in the Slovak Republic is characterized by different financing of its health and social components (compulsory public health insurance vs. resources from the state budget, budgets of higher territorial units and budgets of municipalities within the framework of social assistance to the dependent), a lack of qualified nursing staff, or a high number of elderly persons with an unsatisfied need in the field of social services conditioned by dependency. According to data from the Ministry of Labour, Social Affairs and Family of the Slovak Republic in 2019, there were almost 10.8 thousand seniors waiting for residential social services. This number is increasing year by year. If the Slovak Republic wanted to satisfy 11,000 applicants, we would need to build and equip 275 facilities for seniors in Slovakia. In parallel, SR will also have to build community services for seniors and look for support options for informal caregivers. We can assume the occurrence of some type of dementia in some of these seniors. Similar to other countries, the current state of residents who have been diagnosed with some form of dementia does not correspond to the real situation in the Slovak Republic. WHO (2020) assumes that about a third of the number of people actually affected by dementia is actually diagnosed. The following graph shows the incidence of Alzheimer's disease in the years 2013 to 2022.

Figure 4 Incidence of Alzheimer's disease 2013 – 2022



Source: own processing.

However, the quality of life in old age is a completely different value. It depends on volatile variables such as health, social ties and above all, financial security. SR has long been struggling with the finances necessary to cover the costs necessary to ensure the quality of senior's life in general and especially seniors with some form of dementia and their families.

5 Economic aspects accompanying dementia

The exact financial requirements for providing comprehensive care for people with dementia cannot be quantified. For a long time, WHO has been trying to establish at least a qualified estimate of the total costs, namely in the health sector, in the area of social care services and in the household. In 2020, based on a retrospective analysis, the WHO published a forecast, in which it also stated that the worldwide number of diagnosed people suffering from some form of dementia will double every 20 years. The forecast of the development of dementia in the global area for the years 2030 and 2050 was also based on this fact.

In 2020, according to WHO (2020), 55 million people with dementia were confirmed worldwide. In 2030, the WHO expects that 78 million people will be diagnosed with dementia. The forecast for 2050 is 139 million people suffering from some form of dementia (WHO, 2020, EC, 2023). According to WHO findings (2020), 10 million new diagnosed cases are added annually, which means that a newly diagnosed person is added every 3.2 seconds.

In 2019, the annual global societal cost of dementia was estimated at US$1313.4 billion for the 55.2 million people with dementia, equivalent to US$23,796 per person with dementia. Of the total, $213.2 billion (16%) was direct health costs, $448.7 billion (34%) direct social sector costs (including long-term care), and $651.4 billion (50%) informal care costs (WHO, 2020, EC, 2021, CSWD, 2023).

Similar conclusions were reached by Mattap et al. (2022) who examined the economic impacts of dementia on low- and middle-income countries. According to their findings, up to 58% of dementia costs are indirect costs related to care provided in the home environment. Annual per capita costs ranged from $590.78 (in the early stage) to $25,510.66 in clients with severe dementia (Mattap et al., 2022).

The economic costs of providing care for people with dementia are increasing worldwide. Currently, even countries with traditionally strong intergenerational family ties are no longer able to provide care in familia, i.e. within the family. When it is necessary to deal with care in the home environment, they often employ unqualified nannies with low education, which reduces and sometimes even threatens the quality of life of the cared-for family member. There is no single way of calculating the costs of dementia care. These need to be evaluated in each country using harmonized methods for planning financial means to meet the needs of people living with dementia and their carers as well as the costs of providing health and social care.

Experts point to the fact that health and long-term care costs for people with dementia have increased by more than 300% in the US over the past period (Hill, et al. 2002). This trend of rising

costs was confirmed by Boustani et al. (2007) Frytak et al. (2008), but also for the Netherlands (Elo, Kyngäs, 2008) Kaplan and Berkman (2011) talk about a global problem.

6 Discussion

It turns out that the incidence of dementia is related to overall living conditions. Up to 60% of all individuals with dementia live in low- and middle-income countries. It is expected that in 2030 it will be up to 71%. Most people with dementia currently live in China, India, South Asia and the Western Pacific. The estimate of undetected (that is, diagnostically unconfirmed dementias) in economically developed countries varies between 20-50%. In economically less developed countries, more than 70% of people actually suffering from dementia remain undiagnosed. In India, up to 90% are undiagnosed and therefore untreated. It is estimated that up to 3/4 of people who actually have dementia have not been diagnosed globally (WHO, 2017, EC, 2023). These estimates are confirmed by several authors whose research focuses on mapping the incidence of dementia. According to them, the actual number of people with dementia is unknown because many people, especially in the early stages, are not diagnosed (Prince et al., 2015; Van Den Dungen et al., 2012).

A low level of education is another known risk factor for dementia. It is usually associated with low socioeconomic status and reduced access to health care from prenatal to advanced age. In addition, low educational attainment is also associated with low cognitive reserve (Stern et al. 2018, Joubert et al., 2008) , which may lead to an earlier manifestation of dementia symptoms. It is important to note that all of the above factors are modifiable and therefore cognitive impairment and dementia related to these aspects are preventable. In 2017, Livingston et al. (2017) suggested that nine potentially modifiable risk factors (lower childhood education, midlife hearing loss, hypertension and obesity, later smoking, depression, physical inactivity, social isolation and diabetes) account for 35% of global dementia cases. New research suggests that a person's lifestyle and environment also contribute to the risk and progression of Alzheimer's disease. Among the confirmed factors involved in the development of dementia is also a polluted environment, especially air, and lifestyle, especially lack of exercise. In recent years, the influence of changing climatic conditions has also been monitored as a potential source contributing to the development of already diagnosed dementia.

Despite the indisputable medical progress, the current known biomedical interventions can only provide symptomatic relief to a limited extent and cannot prevent the further progression of the disease. This fact shifts care from exclusively medical facilities to home, community or residential social care. At the same time, informal caregivers are expected to be able to provide their relatives suffering from dementia with the necessary psychosocial support and help in managing activities related to daily life (Kaplan, Berkman, 2011). Since almost 70% of the necessary care for people with dementia is carried out in the home environment, in several countries the financial costs necessary to ensure this care are monitored (AA, 2009, ASG, 2008). Mattap et al. (2022) in their study warn of the risks associated with insufficient data collection at the national level of individual states, which do not allow for high-quality analyzes necessary for the subsequent planning of funds for the further development of care for people with dementia. Slovak Republic is included in the states that lack qualitative statistics in the field of social services and informal care, which, moreover, does not even have integrated health and social care. We understand these two facts as serious risks for the further provision of social care for persons with dementia at a sufficiently high quality level. Hospice care is associated with residential care (McClendon et al., 2006). Social work as a profession is ready to meet the needs of people with dementia and their families. In the near future, social workers should play a key role in providing, securing and organizing care for seniors with dementia. Their undergraduate training provides them with enough skills to provide psychosocial support, counseling, or social therapy (Berkman et al., 2005). A problem associated with residential social care is the low number of social workers with geriatric specialization (Kaplan, Berkman, 2011, Boustani et al., 2007). However, in the conditions of Slovakia, after 1990, the geriatric nurses who alternated the positions of geriatric social workers before 1990 were gradually abolished. The situation is currently aggravated by the fact that in the coming years Slovakia will face a serious shortage of professional personnel in connection with the departure of employees in the social services sector to retirement. The demanding nature of the work combined with the low remuneration also contributes to the low attractiveness of this profession in Slovakia. Kaplan and Berkman (2011) drew attention to a similar situation abroad. If individual states are unable to bridge the aforementioned risks, social work as a profession will have to become more involved at the macro level in order to advocate for the cost-effectiveness of comprehensive care for seniors with dementia and their families (Berkman et al., 2005, Bures et al., 2002).

7 Conclusion

As the senior population grows, so will the number of people suffering from dementia, with Alzheimer's disease expected to be the most common type. As a result, the demand not only for specialist doctors will grow, but the pressure to ensure long-term social care in the home or community environment may increase disproportionately. We are entitled to expect that the demand for residential forms of care for clients with a reduced or minimal degree of independence will also grow rapidly. For this group of clients, it will be especially necessary to have enough qualified personnel to form an interdisciplinary team. Thus, completing the development of integrated social and health care and solving problems with adequate financial evaluation of the staff in order to stabilize them is a key question for the future for Slovakia. Sufficient funds must also be generated to cover operating costs for day care centers and specialized services. High-quality analyzes and forecasts are essential for effective planning and ensuring the necessary care. In the Slovak Republic, however, the collection of data necessary for subsequent analytical processing is insufficient. Data on the number of cared-for individuals in the home environment and the economic costs of this care, including allowances for informal caregivers, are neither comprehensive nor structured by individual items in such a way that it is possible to estimate the future need for financial resources to cover this segment.

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Primary Paper Section: A

Secondary Paper Section: AE, AO