

ACTIVE AGING AMONG THE ELDERLY AND ITS ECONOMIC AND SOCIAL CONSEQUENCES IN BULGARIATanya Vazova^{1,*} , Radostin Vazov² , Vilislav Radev³ ¹ Department of Social Activities, Paisii Hilendarski University of Plovdiv, Plovdiv, Bulgaria² Faculty of Economics and Business Administration, Sofia University St. Kliment Ohridski, Sofia, Bulgaria³ Department of Primary School Pedagogy, Paisii Hilendarski University of Plovdiv, Plovdiv, BulgariaCorresponding author email: tanyavazova00@gmail.com**Article Info**

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Abstract

This study investigates the multidimensional factors contributing to active ageing among older adults in Bulgaria and examines its broader implications for the country's social and economic development. Moving beyond traditional notions of ageing as a period of dependency and withdrawal, active ageing is framed here as a dynamic process that empowers older individuals to remain healthy, socially engaged, and economically productive. The novelty of this research lies in its integrative approach, combining sociological, economic, and technological perspectives to assess how ageing can be redefined as an opportunity rather than a burden. By evaluating key determinants—such as physical and mental health, intergenerational relationships, social integration, economic security, lifelong learning, and digital inclusion—the study provides a holistic understanding of what enables active participation in society later in life. Particular emphasis is placed on Bulgaria's unique demographic context, marked by accelerated population ageing, a declining working-age population, and high rates of youth outmigration. These challenges intensify the need for effective policies and community-based interventions that promote independence, dignity, and lifelong contribution. The analysis highlights that active ageing is not only shaped by personal capacity but also by the accessibility of public services, the inclusiveness of social networks, and the digital readiness of the elderly population. Furthermore, the study underscores how societal attitudes toward older people influence their opportunities for social inclusion and economic engagement. By identifying enablers and barriers, this research offers actionable insights for policymakers aiming to strengthen Bulgaria's resilience in the face of demographic change through inclusive, age-positive development strategies.

Keywords Digital Technologies, Economic Activity, Financial Independence, Pension System, Physical Health.



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INTRODUCTION

Active ageing is a key concept in modern social policy and demography, playing a critical role in addressing the challenges associated with the accelerated ageing of populations worldwide. According to the World Health Organization (WHO) (2024), the proportion of people aged 60 and older is steadily increasing, and by the middle of the XXI century, they will constitute a significant share of the population in most countries. In light of these demographic shifts, promoting active ageing is not only a social imperative but also an essential strategy for maintaining economic stability and improving the quality of life for older individuals.

Bulgaria faces some of the most acute demographic challenges in the European Union, including a rapidly ageing population, declining birth rates, and sustained youth emigration. As of 2023, individuals aged 65 and older constitute over 21% of the population, with projections indicating a rise to more than 30% by 2070 (Population projections at..., 2025). These trends place growing pressure on the country's labour market, pension system, and healthcare infrastructure. In this context, the promotion of active ageing is not merely a policy preference but a socio-economic necessity. This study investigates the implementation of active ageing principles in Bulgaria, assessing how employment, social inclusion, digital engagement, and lifelong learning contribute to the well-being and economic participation of older people. By focusing on the Bulgarian case, the research provides insights into how tailored strategies can help mitigate the broader consequences of demographic decline in similarly affected regions.

The relevance of studying active ageing lies in its profound impact on various socio-economic processes, such as labour market participation, healthcare systems, and pension provision. Active ageing allows older individuals to remain engaged in the workforce, contributing to economic productivity and reducing the financial burden on pension systems. Maintaining an active lifestyle improves the health of older people, which in turn reduces the strain on healthcare systems by lowering the incidence of chronic diseases and the need for long-term care (Trybulski et al., 2022). By supporting older individuals in remaining economically independent and socially active, active ageing helps to sustain the viability of social welfare systems, ensuring that they can adapt to the challenges posed by an ageing population. Engaging older people in work, volunteering, education, and other forms of social activity helps to reduce the costs of social services, mitigate the risks of social isolation, and enhance intergenerational relationships. However, demographic changes also present new challenges: population ageing increases pressure on healthcare and pension systems, necessitating a reassessment of traditional approaches to supporting older adults (Tazhbenova et al., 2019; Anugradia et al., 2025; Beltran, 2025; Ikhsan et al., 2025; Kimatova et al., 2025).

The term active ageing encompasses not only physical health but also the social, economic, and cultural engagement of older people. The core principles of this concept include maintaining physical activity, fostering opportunities for lifelong learning, sustaining social connections, and encouraging participation in community life. Active ageing not only enhances the quality of life for older individuals but also serves as a vital factor in strengthening social capital (Pürhani et al., 2022; Antwi et al., 2025; Jalmasco et al., 2025; Kheang et al., 2025).

The main goal of active ageing is to create favorable conditions for the harmonious inclusion of older people in social and economic life. Achieving this goal requires an interdisciplinary approach that combines insights from sociology, economics, medicine, psychology, and politics. Researchers explore various aspects of active ageing, including the impact of an active ageing on life expectancy, the effectiveness of policies aimed at supporting older people, and the economic benefits of prolonging their participation in the workforce. Thus, research on active ageing represents a significant step towards building an inclusive society that addresses the needs of all generations.

Many authors have highlighted the importance of active ageing for social development and economic stability. For example, a study by Muhammad et al. (2021) demonstrated that the participation of older people in public life such as engaging in local community groups, volunteering, and attending cultural or educational events significantly reduces levels of depression and social isolation. They argued that such forms of civic and social engagement not only improve the psychological well-being of older individuals but also contribute to lower healthcare costs by promoting better physical health outcomes. A study by Sepúlveda-Loyola et al. (2020) examined the impact of social activity on the social integration of older people. They observed that participation in social programmes can alleviate feelings of loneliness among older individuals and encourage them to

maintain their health and develop new skills. Cristea et al. (2020) emphasised the economic benefits of active ageing, particularly the contributions of older people to economic development through volunteering and part-time employment. Lövdén et al. (2020) underscored the importance of developing educational programmes for older people. The authors noted that education, even in later life, not only helps preserve cognitive functions but also motivates older individuals to participate more actively in community life.

Pitheckoff (2017) analyzed the demographic and socioeconomic trends of population aging in Bulgaria, in particular, the impact of these changes on the living standards of older people and the social support system in the country. The study found that Bulgaria faces a number of serious challenges due to the ever-increasing number of people over 65. According to the study, the growth of the aging population has put a significant burden on the pension and healthcare systems, requiring reform of social security policy. The importance of implementing inclusive strategies aimed at increasing the social participation of older people, as well as creating conditions for their economic activity through flexible employment and education, was noted.

According to Thomas et al. (2019), physical activity programmes for older people not only enhance their physical condition but also have a significant social impact, fostering their integration into social networks. E. Thomas et al. argued that such programmes strengthen intergenerational ties and improve overall social interaction. The study by Van Hoof et al. (2021) found that active ageing in urban environments helps older people remain socially active and engaged in economic processes. The work of Estes (2020) provided insights into the economic consequences of active ageing, noting that active retirees who continue to work or volunteer can substantially reduce the financial burden on social programmes by decreasing the need for state funding of social security. Abdi et al. (2019) emphasised the importance of supporting older people during their working years and highlighted the role of public policies in encouraging the employment of retirees. Similarly, Derhun et al. (2022) argued that active ageing requires cultural changes in the perception of older people. They noted that in societies dominated by youth-centric cultures, older people often feel excluded, making it essential to foster more inclusive social models that consider their needs and potential. Finally, Figueiredo and Paiva (2019) explored how active ageing can contribute to local economic development through entrepreneurial activities by retirees. They stressed the importance of supporting older people in starting small businesses and participating in economic initiatives.

Although the concept of active ageing has received considerable attention, certain topics remain underexplored in the scientific literature. For instance, insufficient research has been conducted on how socio-cultural characteristics influence the level of active ageing. Additionally, there has been limited focus on assessing the long-term economic effects of involving older people in participatory and other forms of non-material activities.

The aim of this study was to identify ways to optimise active ageing in the context of social, economic, and technological changes, while taking cultural characteristics and contemporary challenges into account. The specific objectives of the study were to analyse the impact of socio-cultural factors on active ageing in Bulgaria and to evaluate the economic and social consequences of actively involving older people in non-material activities.

RESEARCH METHOD

To analyse active ageing in Bulgaria, the study adopted a comprehensive approach, examining demographic, social, economic, and cultural factors that influence the quality of life of older people. The research drew upon statistical data related to Bulgaria's demographic situation (National Statistical Institute, 2024), including data from the National Statistical Institute (NSI) (2023; 2024; 2024), Eurostat (Population projections at..., 2025), and Macrotrends (2025). These sources provided information on the age structure of the population, as well as mortality and fertility rates, enabling an assessment of population ageing trends. Additionally, national strategies and policies on active ageing were analysed, with particular focus on the National Strategy for Active Living of Older People in Bulgaria for the period 2019-2030 (2019).

The researchers analyzed secondary data and used statistical tables and graphs to evaluate demographic trends. National strategies and programmes supporting active ageing were also reviewed. A comparative analysis method was employed to identify differences in social, economic, and health indicators between working and non-working pensioners. This approach also allowed for the evaluation of the impact of digital technologies on the social activity and professional participation of older people.

To analyse the use of digital technologies among older people, a study was conducted to evaluate their level of digital literacy and the impact of technology on their social activity and independence. The research examined statistical data on internet access, the use of social networks, and online platforms for education and employment. The study was conducted in Bulgaria from February to April 2024 and included 238 participants. The survey was conducted offline through personal interviews, ensuring a higher level of engagement and accuracy in responses. The data was analysed using SPSS software, which facilitated statistical evaluation and the creation of various reports. A 5-point scale was employed to assess respondents' perceptions of various aspects of active ageing, where 1 represented "completely dissatisfied" and 5 represented "completely satisfied".

For the purposes of the study, participants were divided into two groups: 1) 120 individuals aged over 65, including both retirees and those in employment; 2) 118 individuals aged over 65 who were not employed. Participants were selected through a random sample of retirees aged 65 and above. The survey was conducted by two interviewers: one asked the questions, creating a friendly and open atmosphere to encourage participants to share their experiences, while the other took notes. Interviewers were instructed to observe participants' facial expressions and gestures and to ask follow-up questions to achieve the study's objectives.

The main questions during the interviews included: "Can you share your experience of being active in old age?", "What do you do to stay active?", "What do you think motivates you to be more active?", "What needs do older people have to stay active?". Additionally, participants were asked about their expectations from themselves, their families, society, and healthcare professionals in the context of active ageing.

The study results enabled the researchers to formulate recommendations for improving active ageing policies in Bulgaria. All participants took part on a voluntary basis, with a clear understanding of the study's purpose and conditions. The surveys were conducted anonymously to ensure the confidentiality of participants' personal data.

RESULTS AND DISCUSSION

Active ageing offers a new perspective on ageing, contrasting with the traditional view of old age as a period of decline. It emphasizes that old age can be a fulfilling stage of life, where individuals remain active, socially engaged, and economically valuable. The WHO defines active ageing as optimizing opportunities for health, participation, and security to improve the quality of life for older people. This concept includes physical, social, and economic dimensions, promoting long-term independence and productivity. Physical and mental health are essential, with regular activity, a balanced diet, chronic disease prevention, and healthcare improving life expectancy and quality of life (Eckstrom et al., 2020; Krylovskiy, 2024). Social inclusion through community participation and maintaining relationships prevents isolation and fosters a sense of purpose (Campisi et al., 2019). Maintaining employment or pursuing new economic opportunities, such as entrepreneurship or part-time work, not only enhances the financial independence of older people but also ensures their continued contribution to economic development. It is particularly important to create conditions for flexible employment that accommodate age-related characteristics. Equally significant is lifelong learning, which helps to preserve cognitive functions and adapt to social and technological changes (Messina et al., 2023; Jalmasco et al., 2025; Mabeza, 2025). Education and the acquisition of new knowledge promote the social adaptation of older people, enabling them to remain active participants in society.

Security and inclusion are essential components of active ageing. Providing physical, economic, and social security creates an environment where older people can realize their potential. Inclusive infrastructure, access to social services, and combating age-based discrimination are key for implementing active ageing (Rouzet et al., 2019; Jarnawi et al., 2025; Obenza et al., 2025). Intergenerational interaction strengthens ties between generations, with older people sharing knowledge, contributing to social capital, and fostering harmony. Social factors, such as integration, available services, and intergenerational relationships, affect older people's ability to participate in society. In societies with strong social networks, older individuals have more opportunities to remain socially active, while isolation can reduce quality of life. Economic factors like financial stability and access to pensions allow older people to engage in activities and maintain independence (Pyrog & Shevchenko, 2015; Paz et al., 2018; Mabeza, 2025; Putri et al., 2025). Economic instability or insufficient pensions may limit their participation in social life. Cultural factors influence societal

attitudes toward ageing. In cultures that value wisdom and experience, older people are more engaged in family and community life. In contrast, societies that prioritize youth may marginalize older individuals, limiting their activities. Overcoming barriers such as isolation, inequality, and stereotypes is essential for promoting active ageing.

Digital technologies play a crucial role in supporting active ageing by opening up new opportunities for social interaction, access to services, learning, and economic activity. In the context of rapid digitalisation, these technologies are becoming essential tools that enable older people to remain engaged with the modern world and overcome the barriers traditionally associated with ageing (Wang et al., 2019; Nou et al., 2025; Rubio et al., 2025). One key aspect of digital technology is its use in maintaining social connections. Social networks, instant messaging, and video conferencing platforms allow older individuals to stay in touch with family and friends, even over long distances. This is particularly important for those living in isolated areas or with limited mobility. Studies have shown that regular use of digital platforms for communication helps to reduce feelings of loneliness and isolation among older people.

Digital technologies also create valuable opportunities for education and self-development. Online courses, video tutorials, and mobile learning applications enable older individuals to acquire new knowledge and skills in a convenient format. This not only enhances cognitive activity but also helps them adapt to the modern labour market or discover new hobbies. Furthermore, such educational initiatives help bridge the digital divide between generations, which is a critical step towards building an inclusive society (Barbosa Neves et al., 2019; Rachmatika & Salighehdar, 2024; Salim et al., 2025; Siddique et al., 2025; Yulianti & Awingan, 2025). Technology is also vital in improving access to medical and social services. For instance, telemedicine enables older people to consult healthcare professionals without the need to visit clinics, which is particularly beneficial for those with limited mobility. Health monitoring applications allow users to track their condition, receive reminders to take medication, and even transmit data automatically to their doctors (Martínez-Alcalá et al., 2021; Konkayev et al., 2024; Somantri, 2024; Shagembe et al., 2025). Finally, digital platforms play an important role in involving older people in economic activities. Freelance platforms, online marketplaces, and digital services provide opportunities to earn an income while working from home. These activities may include professional work, the sale of handmade goods, or offering various services. For many older individuals, such opportunities foster financial independence and enable the realisation of creative potential.

However, the effective use of digital technologies by older people requires addressing several challenges. These include low levels of digital literacy, apprehension towards new technologies, and limited access to appropriate equipment. Educational programmes and government initiatives aimed at equipping older individuals with the skills to use digital tools effectively play a critical role in overcoming these barriers. Active ageing in Bulgaria is a pressing issue, as the country faces significant demographic challenges, including a rapidly ageing population, low birth rates, and the out-migration of younger people. In this context, there is an increasing need to create conditions that support the activity of older individuals, ensuring their social inclusion and economic contribution to society (Pitheckoff, 2017; Dogra et al., 2022; Siddique et al., 2025; Syahrul et al., 2025). Table 1 presents projected data on the age structure in Bulgaria.

Table 1. Age structure of the population of Bulgaria, 2023-2070

Year	Age groups as a percentage of the total population studied			Population 65+ as a percentage of population aged 15-64	Average life expectancy in years	
	0-14	15-64	65+		Men	Women
2023	14.8	63.6	21.6	33.9	71.1	78.2
2030	13.7	63.1	23.2	36.8	73.4	80.1
2040	13.1	60.4	26.5	43.9	76	82.3
2050	13.6	56.2	30.2	53.8	78.5	84.2
2060	13.3	54.3	32.4	59.6	80.7	86
2070	13.3	55.9	30.8	55.1	82.8	87.7

Source: compiled by the authors based on Eurostat (Population projections at..., 2025)

The Table 1 shows that Bulgaria’s population is experiencing a significant demographic shift. The percentage of people aged 65 and older, relative to the working-age population (15-64), is projected

to increase steadily, reaching 55.1% by 2070. This marks a notable rise in the proportion of the elderly population, highlighting the pressing need for policies to support their active participation in society and the economy. At the same time, the proportions of children (0-14) and working-age adults (15-64) are expected to decrease. By 2070, the share of children will be 13.3%, and working-age adults will slightly increase to 55.9%. This reflects the challenges of a shrinking labor force due to low birth rates and youth emigration. Furthermore, life expectancy is projected to increase for both men and women, with women living significantly longer than men. By 2070, the life expectancy for men will reach 82.8 years, while for women, it will rise to 87.7 years, suggesting that active ageing policies will be critical in ensuring older individuals remain healthy and productive as they live longer. These demographic trends call for urgent policy measures in healthcare, pension reform, and employment opportunities for older individuals to maintain economic stability and social inclusion.

The trends presented in the table underscore the significant challenge posed by population ageing in Bulgaria. The decline in the working-age population and the corresponding increase in the elderly population have profound implications for the economy, the pension system, and healthcare. In this context, the rising life expectancy necessitates the active implementation of policies to promote quality active ageing, particularly in areas such as social inclusion, healthcare services, and lifelong learning.

Bulgaria’s demographic situation is characterised by a long-term population decline and ageing, coupled with an imbalance in territorial distribution. These negative trends are driven by low fertility rates, high mortality rates, and significant external migration. Together, these factors contribute to a substantial population decrease and deterioration in the demographic, social, and healthcare structure of the country. Figure 1 illustrates the mortality rate (per 1,000 people), providing a clear depiction of the challenges in this area.

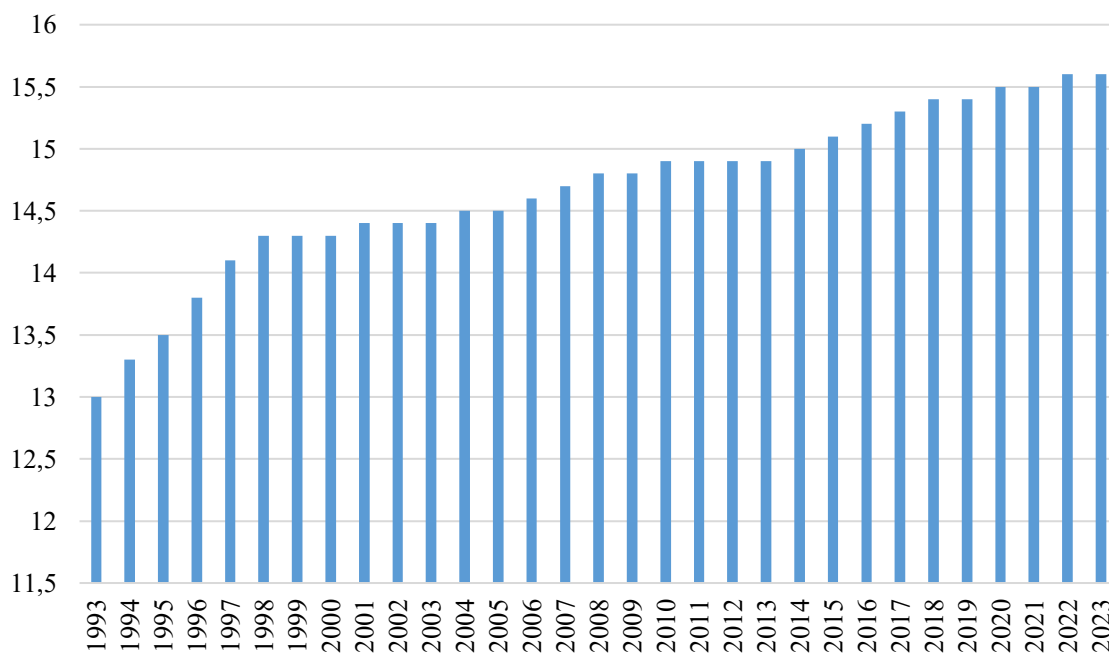


Figure 1. Mortality rate in Bulgaria, 1993-2023
 Source: compiled by the authors based on (Macrotrends, 2025)

There is a noticeable upward trajectory in the mortality rate, which indicates increasing public health challenges over this period. The rise in mortality rates can be attributed to several factors, including the country's aging population, higher rates of chronic diseases, and limited access to healthcare in some regions. This trend underscores the urgency of implementing robust health policies aimed at addressing preventable deaths and improving healthcare access. Additionally, the data highlights the demographic strain caused by these rising mortality rates, exacerbating the challenges of an ageing population and emphasizing the need for policies focused on improving healthcare and reducing mortality through preventative measures.

The increase in mortality rates in Bulgaria highlights significant demographic challenges, particularly the ageing of the population. Addressing these issues requires the implementation of effective strategies aimed at improving public health and reducing mortality. A key focus should be on investing in preventive medicine, which can help mitigate the risks of serious illnesses and ensure better access to healthcare services (Lisiecka, 2024; Neumann-Podczaska et al., 2019). Additionally, policies designed to reduce youth emigration and support families can positively influence the country’s demographic situation. Such measures can encourage more young people to remain in Bulgaria, contribute to the labour force, and sustain economic activity, potentially halting or at least slowing negative demographic trends. Figure 2 presents the distribution of the population by age groups – young, working-age, and older working-age – which provides a clear illustration of demographic trends. This data is critical for assessing the need to adapt Bulgaria’s social and economic structures to an ageing population.

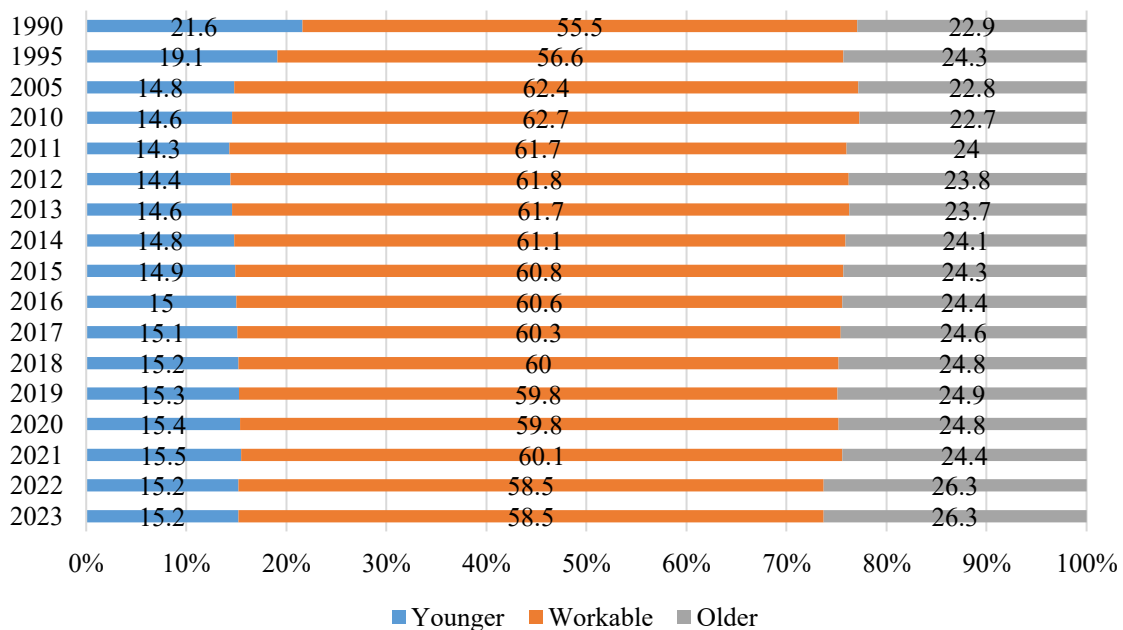


Figure 2. Population younger (under 16), older (over 65) and of working age (16-65), %
 Source: compiled by the authors based on (National Statistical Institute, 2024)

The data reveals a declining share of young people and a growing elderly population, which reflects the country's low birth rates and high emigration. The working-age population is also shrinking, placing increasing pressure on the labor force, social security, and healthcare systems. These trends highlight the need for policies to support the ageing population and adapt Bulgaria's economic and social structures.

Demographic changes in Bulgaria reveal an ageing population, resulting in a declining proportion of young people and the working-age population. This trend poses significant challenges for the pension system, healthcare services, and labour market. To address these issues, it is crucial to implement measures that stimulate the birth rate by supporting families, attract young people by improving economic opportunities, and promote policies that support active ageing. Such initiatives can help reduce the demographic burden and enable the economy to adapt to these changing conditions. Figure 3 illustrates the age dependency ratio.

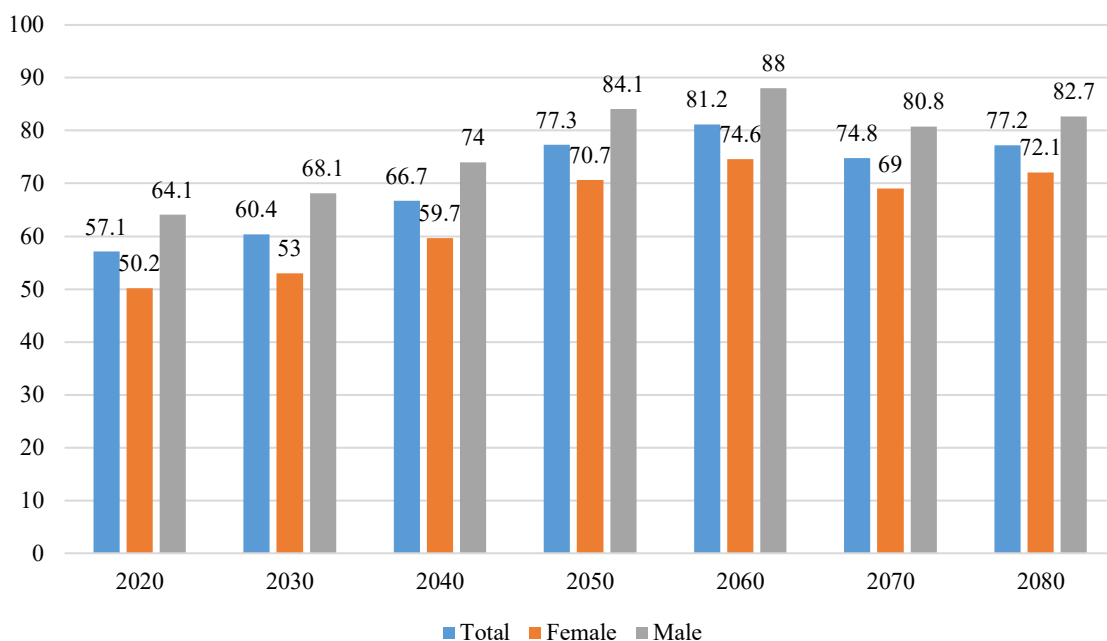


Figure 3. Age dependency ratio by gender for 2020-2080
 Source: created by the author based on (National Statistical Institute, 2023)

The data shows a rising dependency ratio, reflecting an increasing burden on the working-age population as the number of elderly people grows. This trend underscores the challenges of supporting an ageing population through pension systems, healthcare, and social services. The figures highlight the urgent need for policies that address the needs of the elderly, promote active ageing, and create economic opportunities for younger generations to reduce the pressure on social systems. The increase in the age dependency ratio indicates that the working-age population is required to support a growing number of older people. This trend poses additional financial and social challenges, particularly in the areas of pensions, social protection, and healthcare. Creating favourable conditions for active ageing is essential to reducing the overall burden on these systems.

Demographic changes in Bulgaria present serious challenges, including the increasing share of people over 60 years of age, rising mortality rates, evolving migration patterns, and a declining working-age population. These factors place significant pressure on the country’s economy and social systems. Addressing these challenges requires the promotion of active ageings among older people through targeted programs and policies. Key measures include ensuring the social and professional integration of older people, creating employment opportunities tailored to their needs, and providing retraining and educational opportunities. Simultaneously, it is crucial to develop innovative social programs aimed at improving the health and social status of older individuals.

The National Strategy for Active Ageing in Bulgaria for the period 2019-2030 defines four main priorities, each supported by specific measures monitored through biennial plans and reports. The first priority concerns the promotion of active ageing of older people through employment, which involves facilitating access to the labour market, creating conditions for vocational training, improving working conditions, providing specialised services for older workers, and adapting social and pension security to the ageing population. The second priority focuses on social participation, which includes supporting integration through participation in various social and cultural activities, stimulating volunteering, supporting lifelong learning, and assisting those who provide care for older people. The third priority focuses on ensuring independent living, which includes measures in the field of healthcare, disease prevention, improving housing conditions, accessibility of transport, and providing goods and services that meet the needs of older people. The fourth priority aims to create an enabling environment for active ageing at the national and regional levels, which includes strengthening organisations that coordinate policies for older people, updating policies, combating discrimination, and improving the monitoring and coordination system.

A study conducted in Bulgaria with 238 respondents revealed significant differences in the lifestyles of working and non-working pensioners. According to the survey, 84% of respondents rated

their health as generally good, but among non-working pensioners, 78% reported poor health. This highlights the impact of lifestyle, socio-economic, and cultural factors on overall health.

Working pensioners tend to lead more active ageings: 72% follow a special diet, investing financial resources into it, whereas among non-working pensioners, 93% do not adhere to any diet. While following a balanced diet improves health and reduces the risk of chronic diseases, it can be financially burdensome, particularly for those without additional income. Not following a diet may offer short-term economic savings but can lead to serious health complications in the long term. Additionally, 70% of working pensioners reported being physically active, compared to 84% of non-working pensioners who do not engage in physical activity. Regular physical activity improves mental health, alleviates stress and depression, supports cognitive function, and fosters social integration. Conversely, a lack of physical activity contributes to higher medical costs due to the treatment of diseases associated with a sedentary lifestyle (Kashikova et al., 2024).

In the social sphere, 88% of working pensioners actively participate in clubs or social circles, and 78% frequently attend cultural events. By contrast, among non-working pensioners, 72% rarely engage in social activities, and 96% almost never attend cultural events. Social activity not only improves psycho-emotional well-being but also enriches life experiences, supports creative abilities, and enhances cognitive functions (Efremov, 2025). Furthermore, participation in such activities stimulates the local economy and reduces costs for social programs aimed at combating elderly isolation.

Among working pensioners, 78% have completed qualification or retraining courses, and 46% have improved their computer skills. For non-working pensioners, these figures are significantly lower, at only 12% and 9%, respectively. Educational initiatives enable working pensioners to remain competitive in the labour market, support their professional activities, and foster personal development. Regarding the use of information and communication technologies (ICT), 92% of working pensioners use ICT for communication, 62% for information searches, and 85% use social networks. Among non-working pensioners, the figures differ: while 88% use ICT for communication, only 47% use it for information searches, and 63% engage with social networks.

Thus, the results indicate that working pensioners lead a more active ageing, which positively impacts their physical, mental, and social well-being. This highlights the importance of creating conditions to support the continued labour activity of older people and their integration into socio-economic life. The Internet serves as a powerful tool for older individuals, enabling them to continue learning, communicating, and maintaining an active ageing. Promoting digital literacy within this demographic is crucial for their well-being and successful integration into modern society. Figure 4 illustrates the number of people using the Internet.

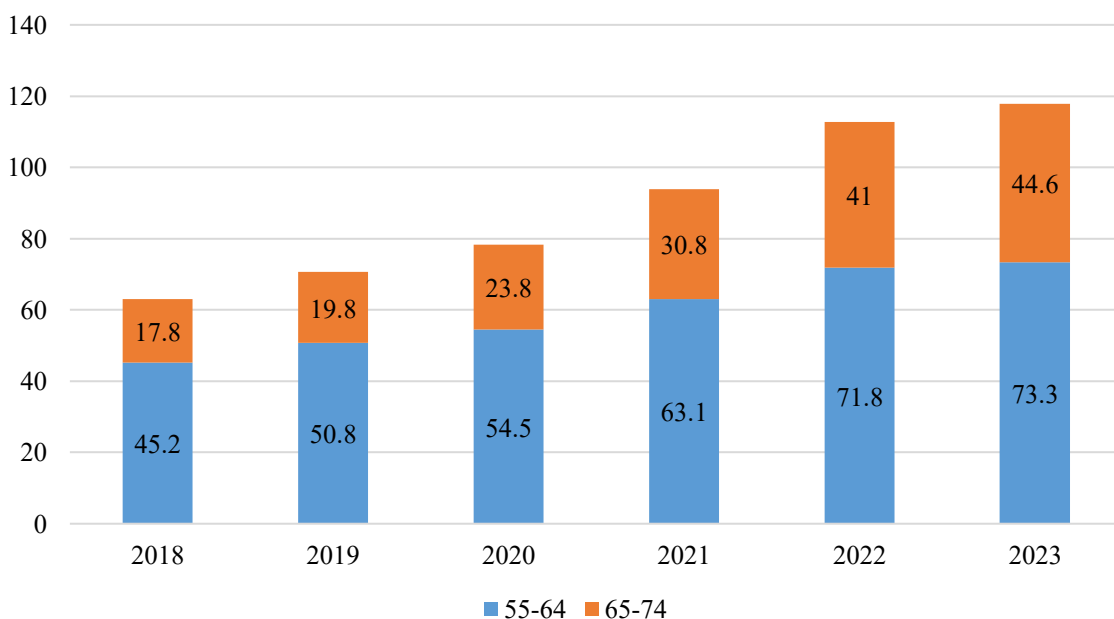


Figure 4. People regularly using the Internet, %
Source: compiled by the authors based on NSI data (2024)

Figure 4 illustrates the increasing percentage of people aged 55-64 and 65-74 using the Internet regularly. The data shows a notable rise in Internet usage across both age groups, indicating significant progress in the digital integration of older people. Despite this increase, some differences remain between the two age groups. The growing use of the Internet suggests a rising interest among pensioners in online communication, accessing information, and using various digital services. This shift highlights the importance of promoting digital literacy to further support the well-being and integration of older individuals into modern society. During this period, Bulgaria implemented several initiatives aimed at engaging older people in the workforce, particularly through training programmes designed to help them acquire new skills. These efforts align with the priorities outlined in the National Strategy for Active Ageing (2019-2030). Figure 5 presents the share of older people living below the poverty line.

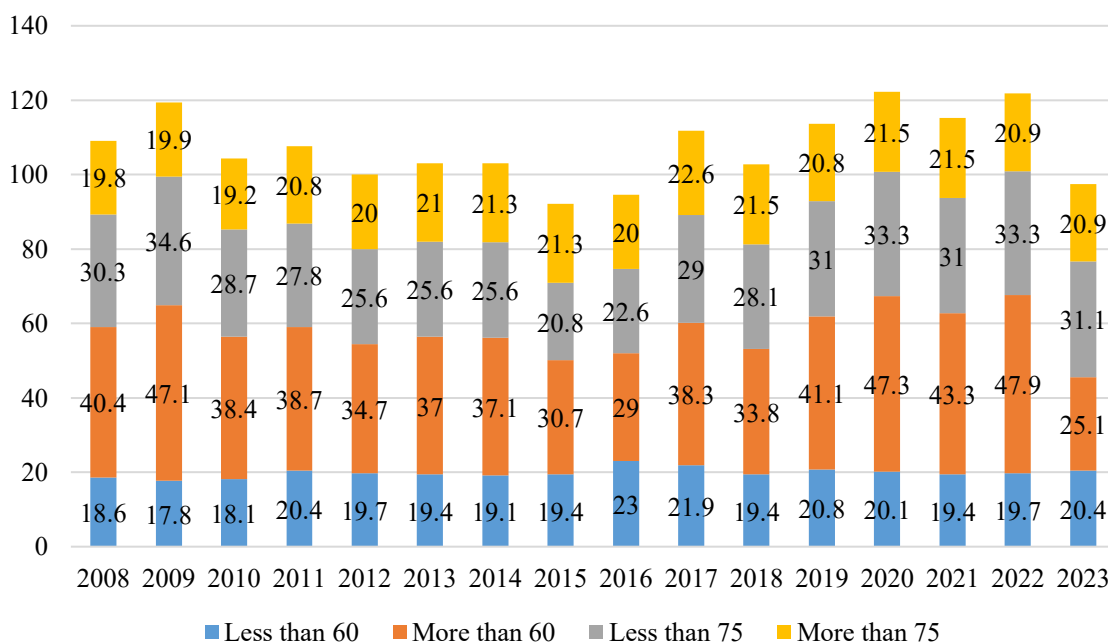


Figure 5. Relative share of poverty rate among the elderly, % of the total population
 Source: compiled by the authors based on (National Statistical Institute, 2024)

Figure 5 illustrates the proportion of older individuals living below the poverty line in Bulgaria. The data shows that the poverty rate among people over 60 fluctuates between 30% and 47%, with the highest rates observed among those aged 75 and older, where poverty often exceeds 20%. The poverty rate for those over 75 remained relatively stable between 2008 and 2023, hovering around 20-22%. However, the overall poverty rate for people over 60 significantly increased between 2019 and 2022, reaching 48%. The slight decrease in the poverty rate observed in 2023 can be linked to recent economic changes in Bulgaria, though the overall situation remains challenging for many elderly individuals. This highlights the need for targeted economic policies to support the financial security of older people.

To effectively address the economic consequences of active ageing in Bulgaria, a comprehensive strategy is needed. Such a strategy must consider demographic changes, economic challenges, and the untapped potential of the older population. Given the increasing share of elderly individuals in the population, it is crucial to reduce the burden on social systems while enhancing the economic activity of this demographic segment.

First and foremost, it is essential to create conditions that support the long-term employment of older people. To achieve this, flexible working arrangements should be introduced, such as teleworking, part-time employment, or reduced working hours, allowing older workers to remain active without facing excessive workloads. Equally important is the organisation of retraining and advanced training courses to help older workers adapt to changes in the labour market. Special emphasis should be placed on developing digital skills, which have become indispensable in today’s technological world.

Additionally, employers should adapt workplaces to meet the needs of older workers by ensuring ergonomic working conditions.

Another critical area is the improvement of the social protection system. Pension reform should account for rising living costs, encourage savings in private pension funds, and create conditions for the voluntary postponement of retirement. Furthermore, targeted assistance should be provided to those most in need, particularly in the form of subsidies for housing, medical services, or energy resources. Maintaining the health of older people is a key factor in reducing social and economic costs. Investments in preventive medicine, early diagnosis programmes, and chronic disease prevention will significantly improve the quality of life for older citizens (Dostanova et al., 2024; Yermukhanova et al., 2022). Developing a long-term care system, including home care, day centres, and hospices, will ease the burden on families while providing appropriate support for older individuals. Additionally, promoting physical activity through organised sports programmes and the creation of accessible infrastructure will help older people maintain both physical and mental health.

Social integration and cultural engagement are equally important for the emotional well-being of older people. Participation in social clubs, volunteer initiatives, and cultural events helps to sustain an active social life. The state can play a key role in supporting such activities by funding relevant programmes and providing subsidies. Access to theatre performances, museums, and concerts should also be ensured for older individuals, including those with low incomes. Developing digital skills among older people is another crucial step towards their social and economic integration. Offering courses on the basics of computer and Internet use will provide older citizens with new opportunities for communication, access to public services, and self-education. To address digital inequality, the government must ensure reliable Internet access in all regions of the country, including remote areas.

Supporting intergenerational interaction is essential for reducing social isolation and fostering mutual understanding between younger and older generations. Joint educational programmes and social initiatives that bring together representatives of different age groups can enhance understanding and promote social cohesion. Furthermore, information campaigns should aim to cultivate a positive attitude towards ageing, highlighting the value of older people's experience and contributions. Another significant economic aspect is the development of the "silver economy" – service sector tailored to the needs of older individuals. Investments in areas such as healthcare, tourism, education, and other fields relevant to the older generation can stimulate economic growth. Additionally, supporting entrepreneurship among older people through initiatives like microcredits or business incubators will enable them to remain actively engaged in the economy.

The implementation of these measures will not only improve the quality of life for older people but also contribute to economic stability and alleviate pressure on Bulgaria's social systems. Adopting a comprehensive approach to addressing the challenges of ageing can transform this issue into an opportunity for the sustainable development of society. The results of the study underscore the significance of the concept of active ageing as a strategic approach to adaptation in the context of demographic change, particularly in Bulgaria. The country faces pressing challenges arising from an ageing population, a shrinking working-age demographic, and youth migration. These trends place additional strain on economic stability, social systems, and public health, necessitating comprehensive solutions.

Bulgaria, like many other EU countries, is facing demographic challenges, including an aging population and declining birth rates. However, when comparing Bulgaria to countries such as Italy and Greece, which have similar demographic structures, there are some differences in the way they approach social protection. For example, in Italy, the pension system is more stable due to numerous reforms that reduce the burden on the budget. In Greece, despite economic difficulties, initiatives have also been developed to support active aging, in particular through flexible employment conditions for pensioners. Bulgaria, on the other hand, still faces serious challenges in the areas of pension reform and healthcare, where sufficiently effective mechanisms to support the older generation have not yet been developed, largely due to its less developed economy compared to other EU countries. Therefore, Bulgaria should be guided by the experience of these countries in developing active ageing strategies and improving the social protection system.

A central aspect of active ageing is the maintenance of physical health (Tyshchenko et al., 2019). Research indicates that older people who remain physically active experience a higher quality of life and a reduced risk of chronic diseases. For instance, regular physical activity and access to quality healthcare positively influence both the physical condition and emotional well-being of older

individuals (Sakaguchi et al., 2024). However, limited access to healthcare services, often due to financial or geographical constraints, remains a significant issue. This highlights the need for specialised government programmes to ensure healthcare accessibility for the older generation. A study by Zhang et al. (2021) demonstrates that physical activity has a positive impact on the psycho-emotional state of older people, particularly in reducing levels of depression and anxiety. Dovgal et al. (2024), Figueira et al.'s (2023) research confirms that regular physical exercise improves mental health. These findings align with the current study, which also emphasises the importance of physical activity for older individuals. However, the current study extends beyond the domain of physical activity, placing additional focus on the social and economic participation of older people. It was found that social interaction, involvement in community initiatives, and participation in economic activities also play a critical role in enhancing the quality of life for older people.

Social isolation is one of the most significant challenges faced by older people, particularly those unable to work or who have lost contact with their social environment. Research demonstrates that active participation in community life, volunteering, or hobby clubs significantly enhances the psycho-emotional well-being of older individuals. However, many older people remain excluded from these activities due to a lack of information, financial difficulties, or physical limitations. This highlights the necessity of developing accessible social integration programmes that include support for transport mobility, the establishment of leisure centres, and access to cultural events. Liu et al. (2019) examined the impact of social integration on the quality of life of older people in both urban and rural areas. Their study revealed that access to social networks and community participation significantly reduces social isolation among the older population. However, authors also found that access to these networks is more limited in rural areas, increasing the risk of social isolation. These findings underscore the importance of social integration, aligning with the current study's conclusions on the value of active social participation for maintaining the emotional well-being of older adults. Nevertheless, the current study extends this perspective by focusing on broader social platforms, including digital technologies, which enable older people to maintain connections even during periods of physical isolation.

The economic activity of older people plays a crucial role in their self-fulfilment and financial independence. Notably, those who remain active in the workforce are more likely to experience better physical and mental health outcomes. The current study found that part-time employment, entrepreneurship, or even volunteer work creates opportunities for older people to remain engaged in the economic life of the country. However, low levels of digital skills and age discrimination in the labour market continue to pose significant barriers. Therefore, there is a pressing need to promote vocational retraining and training programmes tailored to the requirements of the modern labour market. Chen (2020) investigated the economic activity of older people and its impact on well-being. This research revealed that older individuals engaged in part-time employment or volunteer activities report higher levels of quality of life and life satisfaction. Similarly, Zaninotto et al. (2020) highlighted the serious challenges associated with age discrimination in the labour market and the lack of incentives for employers to hire older workers. The findings of these authors are fully consistent with the conclusions of the current study regarding the economic participation of older people, particularly the importance of part-time employment in supporting active ageing. However, the current study goes further by addressing the need to adapt the labour market to the specific needs of the older generation through initiatives such as retraining and digital literacy programmes.

One of the key aspects of the economic and social integration of older people in the XXI century is their access to digital technologies. Digitalisation presents vast opportunities for learning, employment, communication, and access to services (Rexhepi & Murtezaj, 2024). However, the current study highlights a significant digital divide among older people. A lack of basic computer and Internet skills acts as a barrier not only to employment but also to social interaction. To bridge this gap, specialised training programmes should be developed for older people, focusing on both fundamental and advanced skills in using digital tools. Khodakivska et al. (2021), Oh et al. (2021) explored the role of digital literacy in supporting active ageing, noting that the absence of basic digital skills among older individuals significantly restricts their ability to achieve social and economic integration. Blažič and Blažič (2020) emphasised the importance of specialised programmes aimed at teaching older people the fundamentals of digital technologies. Such programmes can provide access to online resources and foster social adaptation. The findings of these authors align closely with the conclusions of the current study, particularly regarding the critical importance of digital literacy for active ageing. However, the current research provides a more detailed examination of the impact of digital technologies on the

economic activity of older people, whereas the authors placed greater emphasis on the social dimensions of digital integration.

Walsh et al. (2020) examined the demographic and social factors influencing ageing in rural areas. The authors noted that support for active ageing in such regions is significantly lower due to limited access to health and social services, as well as underdeveloped infrastructure for older people. Authors findings highlight differences from the current study, as they emphasise the advantages of urban settings for active ageing, such as greater access to resources and opportunities for social integration. However, the challenges faced by rural areas, as identified by K. Walsh et al., represent an important area for further research.

The issue of intergenerational interaction deserves special attention. The transfer of experience, knowledge, and values from older people to younger generations not only fosters social harmony but also enhances the self-esteem of older individuals, reinforcing their sense of significance in society. Achieving this requires the creation of platforms that facilitate such interaction, including school programmes where older individuals can act as mentors and community initiatives that bring together different generations. Zhong et al. (2020) investigated the role of intergenerational interaction within the context of active ageing. This study found that older people who engage in educating younger generations or assume mentoring roles experience a heightened sense of significance and reduced levels of isolation. These findings largely align with the current study's conclusions regarding the importance of intergenerational interaction in supporting active ageing. However, the current study places additional emphasis on digital platforms as a means to facilitate intergenerational interaction.

Wu and Sheng (2019) examined the role of cultural and creative activities in supporting active ageing among older adults. His research found that participation in cultural programmes, such as art, music, or theatre, has a positive impact on cognitive health and emotional well-being in older individuals. While authors findings align partly with the current study's emphasis on the importance of social integration, his focus on cultural activity is not the central focus of this study.

The findings confirm the importance of adopting a comprehensive approach to active ageing that incorporates physical, social, economic, and cultural dimensions. Active ageing is not merely a strategy for enhancing the quality of life for older adults; it is also a critical tool for ensuring the sustainable development of society in the context of demographic change. This approach aligns with the growing importance of concepts such as "productive ageing" and "citizenship throughout life," which emphasize the ongoing contributions of older individuals to society. In particular, the concept of productive ageing, which focuses on enabling older adults to remain economically and socially engaged, offers a valuable framework for addressing the challenges of an ageing population in Europe. By fostering opportunities for continued work, volunteering, and lifelong learning, productive ageing not only benefits older individuals but also strengthens social cohesion and economic resilience. The notion of citizenship throughout life, which advocates for the inclusion of older people in all aspects of civic life, is becoming increasingly significant in the European discourse on population ageing. The findings of this study underscore the need for policies that not only provide support but also empower older individuals to continue playing an active, valued role in society. As European countries face unprecedented demographic shifts, the integration of active ageing principles into national policies will be essential for ensuring that older generations are seen not as burdens but as integral, contributing members of society. This study offers a unique perspective on active ageing in Bulgaria, focusing on the socio-economic, cultural, and technological factors that impact older people's quality of life. It examines the challenges posed by an ageing population, low birth rates, and youth emigration, highlighting the role of digital technologies in enhancing social participation and economic independence. The research provides valuable insights into Bulgaria's active ageing strategies, contributing to the development of targeted social policies for the elderly.

CONCLUSION

This study analyzes the concept of active ageing and its impact on the quality of life of older people in Bulgaria, considering socio-economic and cultural factors. Active ageing was examined as a strategy to improve health, social participation, and security for the elderly, focusing on physical and mental health, social inclusion, and economic activity. The analysis revealed significant demographic challenges in Bulgaria, with the elderly population expected to rise from 21.6% in 2023 to 30.8% by 2070. This trend will place pressure on the pension system, healthcare, and the labour market. A survey of working and non-working pensioners showed that working pensioners had higher levels of physical

activity, social engagement, and digital technology use, positively impacting their health and social well-being. Non-working pensioners exhibited lower activity levels, increasing the risk of social isolation and poor health. Digital technologies were highlighted as crucial for social integration, healthcare access, and education, though low digital literacy among older people calls for specialized training programs. The National Strategy for Active Ageing in Bulgaria (2019-2030) aligns with European policies on employment, social participation, and independent living, aiming to create a supportive environment for older people. The study emphasizes the importance of developing comprehensive strategies for economic, social, medical, and cultural support for the elderly. Limitations of the study include its reliance on surveys of Bulgarian pensioners, which restricts the ability to generalize findings to other countries. Future research should focus on comparative analyses of active ageing policies in different cultural contexts and the long-term impact of digital technologies on the social inclusion of older people.

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AUTHOR CONTRIBUTIONS

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CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

The authors declare that no artificial intelligence (AI) tools were used in the generation, analysis, or writing of this manuscript. All aspects of the research, including data collection, interpretation, and manuscript preparation, were carried out entirely by the authors without the assistance of AI-based technologies.

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