Reappraising the Intellectual Debate on Ageing in a Digital Environment

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Abstract. Ageing is expected to raise significant challenges to the European community in the coming decades. These challenges are connected not only with the problems related to the labor market employment, the provision of healthcare, and the welfare programming for older people, but also with the quality of their social life, and in particular, with their communication activities. In this regard, the article presents a brief overview of the population ageing tendencies and the deficits in the institutional attention towards age discrimination. It also presents the analysis of a survey, conducted by the authors of the article, among senior citizens (61 of age and older, N = 30), which aims to answer the basic research question: how the digital communication technologies impact some aspects in their everyday life, namely: healthcare, professional life and communication. Also, the article seeks to find whether the Bulgarian media perform their basic task to inform the publics for the activities related to the improvement of the life of the older people over 61 years of age.

Although many detailed expert studies and public discussions have focused on the problem of overcoming prejudices and negative stereotypes related to the working capacity, health status and communication habits of older people in Bulgaria, there is a telling need to reappraise the intellectual debate on ageing in digital environment and the degree of capacity of elderly people to take part in, and contribute to social developments.

Developed in the framework of the COST Actions IS 1402, CA 16211, and CA 16226 of the European Commission, the article concentrates on the need to boost the debates on finding solutions for the better well-being of the older persons in Bulgaria – a country with disturbing tendencies of population ageing.

Keywords: Ageing population · Digital technologies · Healthcare · Professional realization · Communication

1 Introduction

The structure of the article includes a brief overview of the population ageing tendencies, the deficits of institutional attention towards age discrimination, and the research efforts on the topic of three COST Actions IS 1402, CA 16211, and CA 16226 of the European Commission. It also presents the analysis of a survey, conducted by the authors of the article on the summer of 2018, among senior citizens (61 of age and older, N = 30), which aims to answer the basic research question: how the digital communication technologies impact some aspects in their everyday life, namely:

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healthcare, professional life and communication (see also [1, 2]). In parallel, a research was carried out on the information reported in the first half of 2018 in Bulgarian media related to the subject of the well-being of the elderly people over 61 years and the societal attempts to improve their living environment.

In 2015, humankind commemorated two significant anniversaries – the tenth year since May 17 was first celebrated as *World Information Society Day* and 25 years since October 1 was named *International Day of Older Persons.* The rise of the proportion of retired and older people over the next few decades is considered to be one of the greatest challenges to the economic and social system of the EU [3]. Perhaps this is why 2012 was proclaimed, unprecedented for the second time (the first was 1993), to be the *European Year for Active Ageing and Solidarity between Generations*. The aim of these and other initiatives is to enhance public awareness of the many-sided contribution of older people to society, and to promote measures that create better opportunities for their active life [4].

The population trends display the growing percentage of the aged population. In global terms, the expectations are that, after the year 2050, the number of people over 60 years of age will exceed the number of those under 60. Although it is expected that the overall population of the European Union will grow to 532 millions by 2060, the population in nearly half of the member states (Bulgaria, Croatia, Germany, Greece, Estonia, Hungary, Latvia, Poland, Portugal, Rumania, Slovakia, Slovenia, and Spain) will decrease. The forecasts show also that the ratio between persons of working age and those in retirement age will decrease from 4:1 to 2:1, if retirement age remains stable [3]. According to World Bank data Bulgaria ranks among the countries with highest tendency of population ageing with 20.8% (Japan has the highest percentage – 27.5%, followed by Italy – 23.02, Portugal – 21.50, Germany – 21.45, and Finland 21.23) [5].

Despite these forecasts, the amount of attention devoted to older people is still not proportionate to the challenges they face in the modern world. For instance, in the United Nations *Universal Declaration of Human Rights (UDHR),* adopted in 1948, in the *International Covenant on Economic, Social and Cultural Rights* (1966) as well as in the *International Covenant on Civil and Political Rights* (1966), which lay the basis of the *International Bill of Human Rights* (adopted in 1976), age discrimination is not explicitly referred to.

The active efforts to promote the adoption of a special *Convention on the Rights of Older Persons* by the UN have not been successful so far. Although many UN and EU institutional documents related to technology, business models and the editorial responsibility of the media have been adopted, the multi-faceted attitude at older people as objects of coverage and as subjects of the communication process have still not been treated effectively.

The Active Ageing Index (AAI), jointly developed in 2012 by the United Nations Economic Commission for Europe and the European Commission is a key monitoring tool for policy makers to enable them to devise evidence-informed strategies in dealing with the challenges of population ageing and its impacts on society. The Index is built on four domains: employment; participation in society; independent healthy and secure living; capacity and enabling environment for active ageing. Among the six factors of the fourth domain are use of ICT, social contacts and educational attainment. Two

Nordic countries, namely Sweden and Denmark, come at the top of the overall ranking across EU Member States. In contrast, the majority of the Central and Eastern European countries, as well as Greece, is at the bottom of the ranking and needs further improvements [6].

It is perfectly obvious that the rights of the ageing population cannot be thoroughly defined and protected without taking into consideration the modern information and communication environment. The trend is that older adults will be not only passive users of the traditional media (press, radio, and television); they may also become prosumers, i.e. active participants and creators of content in online space.

Providing high speed access to advanced public services and diverse multimedia content for work, training and entertainment has become the mainstay of the knowledge based society. Contemporary broadband connections have a great impact on improving life quality, as well as on intensifying social cohesion, especially for older adults. Therefore, intensive improvement of ICT skills and digital literacy are critical to the effectiveness of any media strategy and to the further advancement of 'user-centered' to 'user-driven' developments for achieving the universality of the digital services. This will help to overcome the negatives of the digital divide, i.e. the economic, educational, and social inequalities between those who have computers and online access and those who do not [7].

2 Recent COST Actions of the European Commission on Population Ageing

The European Commission has identified active and healthy ageing as a major societal challenge common to all European countries. It created a special platform for European Innovation Partnership on Active and Healthy ageing [8]. This platform serves as a communication and information hub for all actors involved in active and healthy ageing throughout Europe. It provides a space to encourage partner engagements, to promote news and events, to meet and exchange ideas with peers, and to look for potential partners on innovative projects.

Three COST Actions of the European Commission for cooperation in science and technology dealt lately relevantly and timely with different aspects of the population ageing:

Ageism (i.e., the complex and often negative social construction of old age) as highly prevalent in contemporary European societies, which has negative consequences at the individual, familial, and societal levels was a subject of comprehensive analysis by the COST Action IS 1402: *Ageism - A Multi-National, Interdisciplinary Perspective* (2014–2018). The goal of this Action was to challenge the negative practices of ageism and to allow older people to realize their full potential. This has been done in four strands: healthcare system, judicial/legal system; media; work force [9].

COST Action CA 16226: *Indoor Living Space Improvement: Smart Habitat for the Elderly (Sheld-On)* (2017–2021) addresses Article 25 of the EU Charter of Fundamental Rights, which recognises and respects the rights of the elderly to lead a life of dignity and independence and to participate in social and cultural life. It is also in tune with the EU Employment Equality Directive (2000/78/EC)5, which besides prohibiting

age discrimination in employment and occupation, encourages reducing the impact of physical and cognitive barriers at the workplace for staying active and productive for longer time. The aim of this Action is to establish a multidisciplinary network to support the development of solutions that allow the elderly to live safely, comfortably, and healthily at home through integrating design, ICT, ergonomics and health knowledge into furniture and building design [10].

Drawn on a transnational, interdisciplinary cooperative network, COST Action CA 16211: *Reappraising Intellectual Debates on Civic Rights and Democracy in Europe* (2017–2021) contributes to bridge the gap that separates politics and policy actions from humanities and social science research focused on the intricate relations between civic rights and the practices of democracy in Europe. This COST Action aims at recasting the interface between intellectual debates, public debates, politics, and policy action with the contributions of more argumentatively- and historically-oriented social science accounts and better institutionally-, politically- and legally-informed humanities research, which also includes a variety of aspects of population ageing [11].

The demographic shifts may have a dramatic impact on consumers' expectations from media and communication industries, as well for their ICT literacy and skills while navigating the digital world. Thus, the habits of the millennials (the generation born between 1981 and 1997) differ from those of the senior citizens. The demand for technology services that offer convenience, memorable experiences and instant access to content anywhere and anytime by the younger population is often juxtaposed to the preferences of the older people for health and wellness, entertainment and education services designed especially for them. Contemporary media ecosystem, developed in the digital environment, requires not only e-reading and e-writing practices but also e-producing talents and e-disseminating skills [12].

3 Qualitative Survey on the Shortcomings of the Well-Being of the 61 and Older Population in Bulgaria

In order to find out what are the shortcomings regarding the well-being of the 61 of age and older population in Bulgaria a survey of ten questions was carried out in the summer of 2018 among 30 respondents of the age between 61 years and 93 years. Respondents were selected on the principle of being over the age of 61 (the lowest most common retirement age in the country) without having an upper age limit. Object of the study were the elderly people of 61 years and older in the context of the contemporary reality in Bulgaria. Subject of the study was the way these people live and/or work and in particular, whether they use specific technologies that facilitate their everyday life. The purpose of the undertaken survey was to answer the basic research question: how the digital communication technologies impact some aspects in their everyday life, namely: healthcare, professional life and communication.

Geographically the respondents were divided equally into three groups: residents of the capital city – Sofia, residents of a smaller place – town of Varna and residents of the home for elderly people *Rezidentsia Karamel* located in the village of Dobrevtsi, Yablanitsa Municipality. Altogether N = 30 - 10 respondents form Sofia, 10 - from Varna and 10 - from the village of Dobrevtsi answered the questionnaires.

The health and socio-economic division of respondents led to a greater aggregation of results, as there were more serious differences in the respondents' lifestyle than in the place of residence indicator. Even the age gap and the education level were not as important as the general health and financial stability.

An interesting result that can be summed up by the participants' in the survey answers is that the majority (75% of the respondents with health problems - those with health problems constitute 37% of the total number of the respondents), also face financial difficulties, which aggravate their general condition. It is a problem for them that every month they have to buy a lot of medicines and only a minimum percentage of their cost is borne by the National Health Insurance Fund. They need alleviations in this aspect but almost do not receive any such. These people use simpler medical devices (or none at all), like ordinary blood pressure monitors, for example. They are compelled to use dysfunctional hearing aids that often damage their hearing abilities.

In fact this group of respondents needs a cardinal solution to their health problems – carrying out extensive medical examinations followed by surgical or medicinal approach to curing them. The lack of resources to adequately care for their health makes them physically and mentally unfit to work and this condemns them to poor financial standing and inability to keep themselves in good shape and be of benefit to the society and to their relatives – the so-called doomed circle is constructed, out of which there is no way out.

Most of these respondents (63% – Fig. 2) do not have a computer with internet or a smartphone. They cannot handle these technologies and they do not understand how these technologies could facilitate their everyday life. These people are not aware of the innovative technologies that would be useful in their everyday life and would make their being easier and more valuable. However, even if they were technologically informed, they could not afford financially any technological acquisition. Part of this group uses television mostly as entertainment and therefore prefers to watch more movies, music and shows and less - news. They do not use the functions of some digital TV sets, namely to return the broadcasts and news back in time, so they watch only what is being offered to them at the particular moment.

The results from the answers point also to the contrary conclusion – adults of 61 years and older who are still mobile and working (70%), are more likely to use computers, smart phones, tablets, and Internet for both professional and personal needs. They are informed about what is happening around them namely through technologies. The more active in respect of intellectual terms the respondents are, the higher is the percentage of their use of communication technologies (internet applications, social networks, cloud space, smartphone applications, etc.). Accordingly, the higher is also the percentage of a certain kind of "addiction", which they have developed towards technologies. Nearly 60% of the active people of 61 years and older claims that they cannot live without the technologies they use on a daily basis. They are better informed and more aware of how to find sources for certain technological innovations that would be useful to them in everyday life.

The results of the answers to the questionnaire show that the social and health status of the people residing in the nursing home for the elderly in the village of Dobrevtsi, Yablanitsa Municipality is the worst one. Besides having almost no funds, deprived of a normal environment where to communicate with relatives and family members, they

often cease to be interested in what is happening around them. The most popular type of technology these people use (90%) is the TV. What is characteristic for them is that they do not even choose what to watch – predominantly they watch movies and news. They do not have a device to play programs back and watch only what is being offered at the moment. 100% of the respondents from the nursing home for elderly people are retired and do not perform any activities. They are former teachers, accountants, engineers, electricians, etc., and over 50% of them suffer from dementia. Apart from the survey, the healthcare staff shared the opinion that these people are not interested in anything but watching TV programs and use only telephone with buttons. They can hardly set up the channels of a TV set themselves and cannot handle other technologies at all. Their disease has advanced to such an extent that they often forget the water to flow and lights to be switched on.

When asked for what do they use communication over the Internet more often, 63% of the respondents answered that they never use the Internet because they do not have a computer or do not know how to handle it. 6% claimed that they do not use the Internet themselves, but with the help of relatives and friends they use social networks (Facebook) or applications such as Skype and Veiber to communicate with their relatives living abroad. 13% answered that they use the communication possibilities that the Internet offers for personal needs (conversations with relatives who are far away) and for professional needs (sending business emails, using social networks at work, etc.). Likewise – 13% said that the time they spend on the Internet is dedicated to issues related to their professional activity. For the remaining 11% the Internet usage is for personal purposes only (Fig. 1).

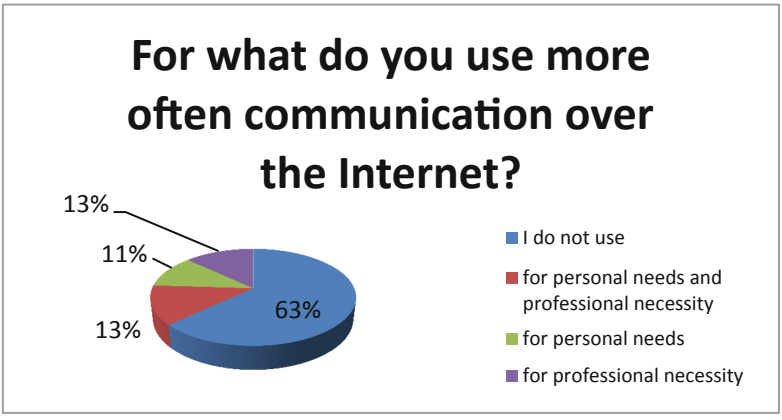

Fig. 1. Most often reasons for communication over the Internet

63% of the respondents do not use the Internet to inform themselves, for the simple reason that they do not have a computer and internet connection. 7% use it rarely, 10% – once a day, and only one fifth, i.e. – 20% – several times a day. Those, communicating on the Internet, need to be informed in most cases about a medicine, a hearing aid or some innovative technology in the field, as well as about cultural events. Some of

them ask their relatives or friends with Internet connections to do that instead. Those with vision problems also use the help of their relatives to receive information on issues related to their work, as well as to specific news and current affairs (Fig. 2).

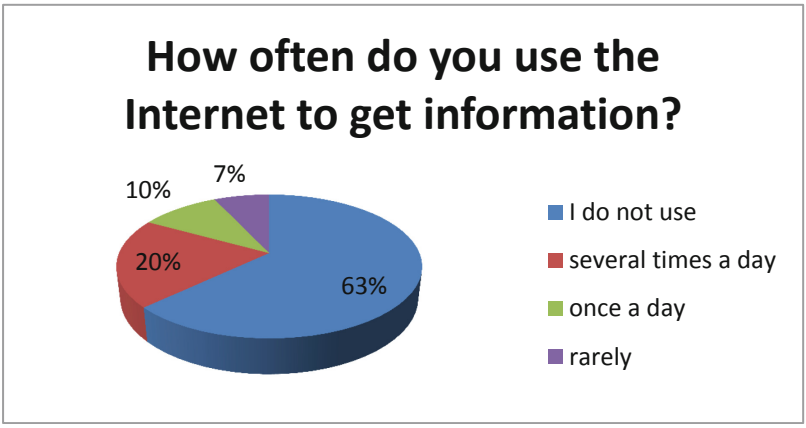

Fig. 2. Most often usage of the Internet for acquiring information

Answering the question of what information they are looking for over the Internet, 56% of the respondents noted that they are not using the Internet at all. Many of them added that they still find the information they need in newspapers and television. 24% of the respondents claimed that they are basically looking for news over the Internet. 6% answered that they are interested in curiosities. Equally, for 3% of the respondents Internet is important for: information related to their work; watching films; reading e-books; and getting references from the world wide web. At least – 2% answer that they check the Internet for the weather forecast (Fig. 3).

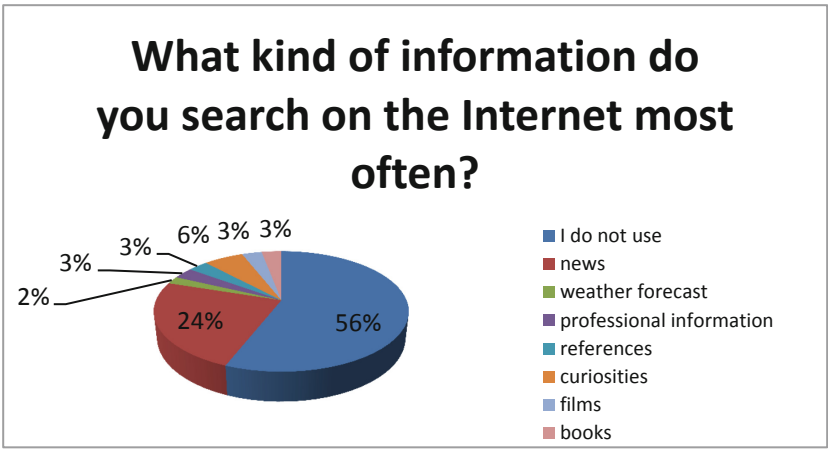

Fig. 3. Information most often searched over the Internet

Half of the respondents answered that they do not use Internet for communication purposes. 17% claimed that they use the net once a day to send and check e-mail messages, to use different social media applications or to access social networks. The most dedicated 7% of the respondents use the Internet for communication purposes several times a day. Also 7% use the network for these purposes once a week. However, 17% of the respondents answered that they rarely use the Internet for communication purposes, and 2% – that they are entering the Internet once a month to communicate (Fig. 4). This means that the regularity of Internet usage among the participants in the survey is not a common habit.

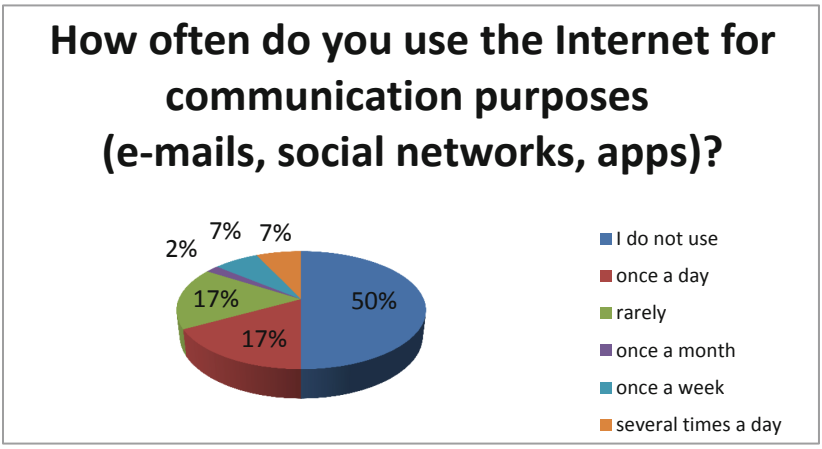

Fig. 4. Regularity of Internet usage

When asked about what health benefits are the respondents applying in terms of improvement of their health conditions, the largest percentage of them answered that they use the ordinary blood pressure monitor (75%), followed by 13% who use an electronic blood pressure monitor, 6% - a blood glucose meter, 3% wear a hearing aid and another 3% possess an electronic bracelet that shows different parameters of the human body such as pulse rate, blood pressure, worked out kilocalories, traveled paces, etc. Less than half of the respondents appreciate the importance of using these devices and believe they improve their quality of life (Fig. 5).

Those 60% of the active people of 61 years and older who claimed that they cannot live without the technologies on a daily basis are better informed and more aware of how to find sources for certain technological innovations that would be useful to them in everyday life. This part of the respondents is in a better financial condition due to the fact that they work. On a healthy basis, they use electronic blood pressure monitors, blood glucose monitors, electronic bracelets, showing a number of parameters of the person's physical condition such as pulse, strides passed, spent kilocalories, etc. In this way they maintain their health status at a better level. However, this part of the respondents believes that they do not have benefits and privileges and that these

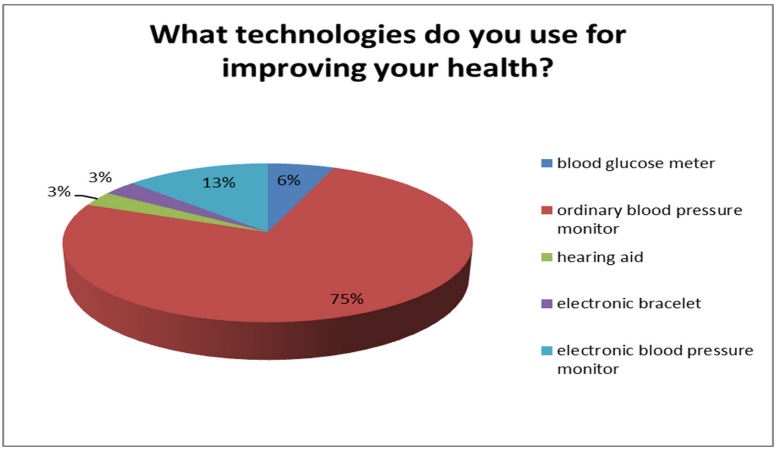

Fig. 5. Technologies used for health improvement

technologies at their disposal are obtained with hard work and funds of their own. Representatives of this group of respondents are categorical in their opinion that they have to fight individually for a better way of life.

Merit deserves the fact that 100% of the respondents answered that they have neither received any social or other kind of benefits, nor are they familiar with programs offering any alleviations for elderly or sick people. In fact, there are a number of initiatives and projects in different municipalities related to helping elderly people. An Action Plan (2018–2021) for the implementation of the National Strategy for Long-Term Care has been approved. It is published on the website of the Ministry of Labor and Social Policy [13]. It aims to develop long-term care for elderly people and to improve their quality of life in line with the National Strategy for Long-Term Care adopted in the beginning of 2014 [14].

The National Strategy envisages establishment of accessible and quality services in the community and at home that will ensure the possibility of social inclusion of people with disabilities and elderly people and, at the same time, and thus, will have a preventive role regarding the institutionalization of these people. Strong emphasis in the Strategy is placed on the de-institutionalization of the care for the disabled people and elderly people, on the development of the services including technological services in the domestic environment and on the support of families with increased responsibility for the care of family members in need of special care.

Among the priorities of the Strategy is also the promotion of synergy between social and health services, including the development of innovative cross-sectoral services, as well as the implementation of an integrated approach. Also, among the main priorities of the Strategy is the creation of a more efficient mechanism for financing the long-term care and the achievement of sustainable growth of the financial resources for services in the community and in the domestic environment.

However, there a mismatch between good intentions and real actions are observed, among them - the failure to pass a special law for the elderly in the Parliament. The

good practices of some municipalities and non-governmental organizations that are successfully implemented (mostly through European programs and projects) are targeted at specific small segments of society and are extremely insufficient to cover all the needy Bulgarian population of 61 years and older.

Media also do not give a sufficiently broad coverage of these initiatives, which is why information about them is hardly reaching the end recipients – people with special needs. Few are the mass media that reflect the topic about elderly people and the various initiatives to improve their lifestyle. Thus, for example, in a publication dated 02.05.2018 entitled "Special Law for the Elderly: Yes, but No", it is stated that the idea of the socialists to adopt a special law for the elderly people has failed. The rejected texts provided for the creation of a special fund to the Social Minister that will be filled out each year by the state treasury in order to finance various activities for the elderly people. Another idea of the socialists, according to the media, was to have a "foster care" service for elderly people who have no relatives or when these do not want or cannot take care for them – similarly to the foster families for children. One of the authorities' obligations, according to the failed draft law, was, for example, for every 25 000 people to build and operate "resident-type social services" for at least 100 people. Municipalities should have the imperative obligation to open and maintain "clubs for elderly people" – one in each settlement with over 100 people 61 years or older and one in every 15 000 people of population [15].

An article in the newspaper "24 chasa" (24 h) dated 02.03.2018 entitled "Experts: The Elderly Labor Force is the Fuel of the Bulgarian Economy", reflects the holding of a forum on the topic "For an Active and Fulfilling Life of the Elderly People in Bulgaria" with lecturers Assoc. Prof. Dr. Georgi Bardarov from the Sofia University "St. Kliment Ohridski" and Ivan Neikov – Director of the Balkan Institute of Labor and Social Policy. The article draws attention to the demographic crisis and to the fact that Bulgaria is among the ten countries in the world with the highest share of ageing population. In this regard the author of the article draws attention to the competences, professionalism and experience that the working people of 61 years and older possess. The idea of the article is to encourage elderly people to continue to work for the benefit of the society and for their own benefit [16].

In another article of 13.10.2017 entitled "Creating a Virtual Assistant (Coach) for Elderly" it is stated that a high-tech modular system would help lonely elderly people to live actively and independently in their home, despite the severity of their years and illnesses. The article refers to Yordan Dimitrov from the Balkan Institute for Labor and Social Policy (BILSP), who has presented an innovative project for creating a virtual assistant in support of the active ageing. The SAAM (Supporting Active Ageing through Multimodal Coaching) project is funded with nearly € 4 million from the EU Framework program for research and innovation "Horizon 2020". Its ultimate goal is to maximize the active and independent life of people 61 years and older in their own homes while maintaining good physical, emotional and mental well-being, as well as the social contacts of its users for as long as possible [17]. The article explains that the virtual assistant will help elderly people to feel well in their usual environment by collecting data about their health and emotional status by using sensors, smart measuring devices, video and audio receivers. The system will also monitor the vital functions and taking of medication, will detect and alert for negative changes in the

mood and behavior of its users. The future autonomous modular system has had the idea of collecting information through unobtrusive sensors suitable for permanent wear or installation in the house (at home). The idea has been to make discreet monitoring of the living environment and the personal activity under a privacy guarantee. Direct communication with end-users is foreseen by developing clear user interfaces – visual and audio, adapted to the needs and habits of the elderly people. The purpose of the system is to analyze the collected personal information and to make independent decisions, to remind or encourage its users for certain actions in the interests of their physical and mental health (e.g. to take their medication, to cook, to call a friend or to go for a walk). For this purpose special strategies and technologies should be developed to influence by persuasion.

4 Conclusions and Limitations

The process of digitization is among the main milestones tracing the dimensions of humankind's transformations in the 21st century. Today these transformations are catalyzed by the intense development of the communication technologies. As positive as their impact might be on progress in all areas of life, it is no less true that they pose challenges for the social stratification of society. The trend of population ageing determines the need for urgent prevention of elderly people's social exclusion from the modern digital environment.

Although a National Strategy for Long-Term Care and an Action plan for its implementation have been adopted in Bulgaria the results of the conducted survey showed that the digital communication technologies do not facilitate sufficiently the everyday life of the participating older adults. Almost two thirds of the respondents do not or use very rarely computers and Internet. The rest one third uses Internet for personal and professional needs. 24% of the respondents are basically looking for news over the Internet. A small amount of the interviewees are interested in curiosities, followed by information related to their work; watching films; reading e-books; getting references from the world wide web, and checking the weather forecast. The answers displayed a scarce usage of digital technologies for healthcare. While two thirds of the respondents use ordinary blood pressure monitor, less than one fifth use electronic devices for their health needs. Also, there was not enough evidence that the improvement of the life of the older people over 61 years of age through digital technologies is an important point of interest to the Bulgarian media. Thus, answering the research question of how the digital communication technologies impact some aspects in the everyday life of the senior citizens it may be concluded that their impact is not sufficient.

Based on the results of the conducted survey and the analyzed Bulgarian media, reflecting the topic, it can be concluded that many of the ideas, disseminated in the public domain, related to improving the living environment of the elderly remain unrealized. Thus, none of the respondents has received any form of assistance or information about the existence of an approved Action Plan for the period 2018–2021 for implementation of the national long-term care strategy of the Republic of Bulgaria. A comprehensive awareness campaign to inform citizens about the existing

opportunities for better living conditions and to urge them to be more active in their search for such opportunities could be a productive communication step.

The number of media, which reflect issues related to the lifestyle, professional engagement and communication of people over the age of 61 and older, is too small. Besides, the media present reality too fragmentarily and inconsistently without the necessary commitment and responsibility [18]. More real action is needed to enable modern Bulgarian senior citizens for receiving adequate technological support to improve their living, professional and social status. Thus, through various technological means of treatment, professional realization and communication, the elderly in contemporary society could have a more meaningful, active and fulfilling life.

The demographic trends determine the need for urgent prevention of the digital generation divide, i.e. of the vulnerability and the social exclusion of older people from the ICT world. In order to deal with the challenges to population ageing, it is important to find solutions that allow the elderly to live safely, comfortably, and healthily at home by integrating design, ICT, ergonomics and health knowledge.

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