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Romanian and German Seniors in Quest of Online Health-Related Information: An Exploratory Comparative Study

Abstract

In the last years a shift in the practice of medical communication has occurred and it leads to a displacement from a paternalistic model of patient-provider information toward a model implying an embeddedness of the medical and human values in the medical interaction and in the decision-taking process of the informed patient. Researches show that older adults respond differently to online communication than younger adults. In this context, seniors face new challenges as regards health-related information and medical communication. The present study deals comparatively with the health-related internet use by the seniors in two European countries: Romania and Germany. Using a qualitative methodology, which involved the in-depth semi-structured interviewing of twenty persons aged 65 years or over who used the internet including for health-related search, we tried to find out which are the similarities and differences between the two samples as concerns health-related online informing and medical communication. Our research has revealed a number of interesting results and inferences. Thus, while between the two samples there are similarities as regards using the internet as a starting point for general information related to health and making informed medical decisions, there exist also a series of differences as regards various aspects, such as the health-related internet use itself – the interest and the ways of searching, the accessed content and websites, the trust in the reliability of the online information, the online feedback and activism etc., as well as the openness to discuss with the physicians about the information gained by the internet consumption.

Keywords: seniors, online communication, health-related information, Romania, Germany.

Introduction

At the level of the European Union, the ageing of the European population is one of the greatest societal and economic challenges of the 21st century affecting all countries and most policy areas (European Commission, 2015). As the existing data show, in a few years, more than 20% of Europeans will be aged 65 or over, and this proportion is expected to reach 28% in 2050 (Eurostat, 2015).

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Related to medicine and health, it is generally accepted today that the internet provides a large source of health-related information for patients. Much more, as the internet becomes a growing source of health information, evaluating the quality of the web-based health information is of a paramount importance (Powell & Clarke, 2002). Starting from the fact that older adults respond differently to online communication than younger adults, some researchers argue that seniors face new challenges in the case of the present displacement in the study and practice of medical communication (McMillan & Macias, 2008). This displacement is a movement from a paternalistic model of patient-provider information toward enclosing the medical and human values in the process of decision taking of informed patient in medical interaction.

As the official documents of the European Commission show (European Commission, 2015), effective communication with older adults about new policies and ICT-based solutions is a key factor in turning the expenditures into secure investments. The existing literature points out the fact that seniors (e.g. older adults) respond differently to mediated communication than younger adults (McMillan & Macias, 2008). First, older adults use media differently than younger adults: The digital divide still pertains and older adults perform fewer activities online and have lower levels of digital literacies, including e-Health literacy (Campbell, 2009; McMillan & Macias, 2008). Much more, older adults differ in their responses to content and form characteristics of mediated communication and associate internet use with different benefits (McMellon & Schiffman, 2002; Shapira, Barak & Gal, 2007; Gatto & Tak, 2008; Mellor, Firth & Moore, 2008; Karavidas, Lim & Katsikas, 2005).

The present article comparatively investigates how Romanian and German seniors use the internet for information and which are the characteristics of health-related internet usage for the Romanian and German elderly. Our central research question was: which are the main characteristics, respectively similarities and differences, of the health-related internet use for Romanian and German older adults?

The Seniors as a Specific Age and Social Group in Romania and Germany and Their Internet Usage

In Romania, the population was growing older at a rapid pace in the last decades, as the statistics showed (Institutul Național de Statistică, 2015). According to the data of the United Nations, in 2015, 15,5% of the Romanian population were children under 14 years, 60,1% were people aged between 15 and 59 years and 24,4% were people over 60 years. From these 4,1% were seniors over 80 years. But, as the forecast shows (United Nations, 2015) in 2050, only 14,3% of the Romanian population will be children under 14 years, 49,3% will be people between 15 and 59 years, 27,5% will be people between 60 and 80 years, and almost 9% Romanians will be over 80 years old.

Likewise, in compliance with the data and prospects of the world population (United Nations, 2015), in 2015, 12,9% of the German population were children under 14 years, 59,5% were people aged between 15 and 59 years and 27,6% were people over 60 years. From these 5,7% were seniors over 80 years. As the forecast shows, in 2050 the proportion of the young population will considerably decrease: 12.4% of the German population will be children under 14 years and only 48,3% will be people between 15 and 59 years. The percentage of population over 60 years will increase to 39.3%, from which not less than 14.4% will be people over 80 years old.

According to the data of the German Federal Office of Statistics (Statistisches Bundesamt, 2018), the population in Germany was also growing older in the last decades, although not at the declining rate as in Romania. Still, the German population can be characterized as an aged population on a higher degree as compared with Romania. Thus, in 2015 almost 28% of the German population was over 60 years old, while this percentage is foreseen as growing in 2050 to almost 40%. Comparatively, in Romania the correspondent percentages were 24,4 respectively 36,4. Nevertheless, we have to mention here the quite different life expectancy at birth in the two countries: while in Germany the life expectancy at birth was 80,6 years between 2010-2015 and would be 81,5 years between 2015-2020, in Romania the life expectancy at birth was 74,5 years between 2010-2015 and would be 75,1 years between 2015-2020 (United Nations, 2015). Thus, in comparing the statistical data regarding the population ageing in the two countries we have to take into account the difference of the life expectancy: the proportion of the seniors is indeed higher in Germany, but here people live on average six years longer than in Romania.

In the last years, the Romanians' access to the internet has increased at a constant pace. Thus, in 2016, 69,7% of Romanians aged 16-74 years used the internet (Institutul Național de Statistică, 2016). Despite this rapid development of population's access to the online communication, the share of the seniors that use the internet at least once a week is very small, only 13% in Romania – as compared with an average of 45% for the EU member states (Eurostat, 2017).

Comparatively, according with the same source (Eurostat, 2017), the share of the elderly (65 years old and over) who use the internet at least once a week is in Germany much higher as in Romania: 56% of German people 65 years old or over use the internet at least once a week. However, from the whole number of the internet users of the German population, this percentage is the smallest. Thus, in 2015 (Frees & Koch, 2015), 79,5% of the Germans used at least occasionally the internet, more precisely: 100% of the youth with the age between 14-19 years, 97,7% of the people 20-29 years old, 94,2% of the people 30-39 years old, 91,9 of the people 40-49 years old, 83,2% of the people with the age between 50-59 years and 50,4% of the people over 60 years used at least occasionally the internet.

The Health Systems in Germany and Romania – General Assessments

Germany has the world's oldest national social health insurance system (Carrin & James, 2005) and has had, traditionally, one of the most restriction-free and consumer-oriented health-care system in Europe (Health Consumer Powerhouse, 2016). The patients are allowed to seek almost any type of care they wish wherever and whenever they want it. The health insurance is, since 2009, mandatory for all citizens and permanent residents of Germany (The Commonwealth Fund, 2013) and is provided in present by a statutory health insurance system, with 134 competing, non-profit, nongovernmental health insurance funds, which are called "sickness funds". There exists as well a voluntary substitutive private health insurance, for which usually opt the high-income citizens. Coverage is universal for all legal residents. About 86% of the population receives the primary coverage through statutory health insurance, while 11% through substitutive private health insurance. The remainder (e.g., soldiers, police officers) are covered under special programs. The undocumented immigrants receive coverage by social security in case of acute illness and pain, as well as in case of pregnancy and childbirth (ibid.).

The most important role in public health activities is played by municipalities, which own about half of the hospital beds. About 33% of the hospital beds are non-profit private, while the rest of 17% are for-profit private. The federal government and the local governments have virtually no role in the direct delivery of health care, this being delegated to the self-governing associations of the sickness funds and the provider associations (ibid.).

As the rest of the former communist states from Eastern Europe, before 1989 Romania had adopted a *Semashko* model of the health system (Doboș, 2008), and the financing and management of this system were completely under the state's control. Romania's post-communist evolution in the field of health had involved several attempts of decentralisation of the management of the national health system, for a better administration of hospitals and for a better use of financing of the system. The Romanian Health System is organized at present on two levels, national level and regional (county) one, with the territorial division of the country. The Ministry of Health that has the role to set the objectives and directions of work in this system, and the County Public Health Directorates are responsible for putting in practice the health-related decisions at the central level. However, the health system remained highly centralized, with the Health Ministry having more functions than coordination and supervision. Even though there has been a whole process of decentralization, there are interferences on the implementation of certain programs at regional / local level, a phenomenon perpetuated since 1999, when the model of organizing the system, the *Semashko* model, was changed (Vlădescu, Scîntee, Olsavszky, Hernández-Quevedo & Sagan, 2016). In financial terms, there is a tradition of under-financing the health system, and in 2013 only 5,3% of GDP was redirected to the system, while the European average was around 10,1%. More specifically, about 767 euro (PPS) per capita was spent in the health system, while in the European Union the average was 2988 euros (PPS), but it is appreciated that these 767 euro is a tripling of the sum of the average at the level of 2003 (European Commission, 2016). The successive strategies that were adopted in Romania for reforming the health system included the dismantling of the old system that provided only a tiny fraction of the country's GDP was allocated to health. Because of the low salaries and the poor equipment of the hospitals, the Romanian doctors were not motivated and appeal for most of the time at bribe (Vlădescu, Rădulescu & Cace, 2005). All this led also to the increase of inequalities between social classes and different regions (ibid.). Between 1992 and 2000 in Romania there were initiated a series of programs and reforms that were meant to change the form of payment of fees for health (ibid.).

Theoretical framework

In recent decades it was assessed that the internet can make it easier for patients to find medical information (Smith, 2014), which can lead to increased patient empowerment and greater involvement in decision-making processes (Xie, Wang, Feldman & Zhou, 2014; Kelly, Jenkinson, & Ziebland, 2013). In addition, use of online medical information may result in positive effects on patient-doctor relationships and ultimately, improve patients' health (Andreassen, Trondsen, Kummervold, Gammon & Hjortdahl, 2006; Iverson, Howard & Penney, 2008). More unique possibilities enabled by the internet include: the ability to ask a private medical question, ways to capture medical information (Demiris, Thompson, Reeder,

Wilamowska & Zaslavsky, 2013), methods to seek international expert advice, and ability to research medical conditions – mostly without making an appointment or exposing one’s identity (Anderson, Rainey & Eysenbach, 2003).

The existing literature points out the fact that seniors generally use IT less than other segments of the population and this difference alongside the age axis is called the “gray divide” (Van Deursen & Helsper, 2015; Van Deursen & Van Dijk, 2014).

The “grey divide” also influences seniors’ online behaviour. According to McMillan and Macias (2008), seniors use internet to send emails to friends and family (e.g. “to socialise”), to read (the internet is an invaluable resource which replace the library), to recognize that the information are erroneous and to worry about the quality of online information, and to prepare for the visit to the doctor or to fill in the gaps left by doctors.

The research findings show that motivation, confidence and self-efficacy influence digital technology usage among older adults (Czaja, Fisk, Rogers, Charness, Nair, & Sharit, 2006; Ng, 2008; Hernández-Encuentra, Pousada, & Gómez-Zúñiga, 2009; Russell, 2011; Tsai, Shillair, Cotton, Winstead & Yost, 2015).

The benefits related to seniors’ online activities identified by McConatha, Schnell, Volkwein, Rile and Leach (2003) were: an increased level of life satisfaction; better mental functioning; activities of daily living and reduced levels of depression. The experience to be a part of the online world (Shapira, Barak & Gal, 2007), the empowerment of feelings (McMellon & Schiffman, 2002), the development of a positive effect on self-esteem (Gatto & Tak, 2008), the opportunity to increase the amount of contacts with others (Mellor, Firth & Moore, 2008), and the opportunity to sustain social networks (Karavidas, Lim & Katsikas, 2005) were also listed in the existing literature as benefits of the internet use by the seniors.

On the other hand, Lambert and Loiselle (2007) listed several barriers of the online activities for seniors: limited access to the internet due to old computers or slower and cheaper connection to the internet; limited access to the new technologies and fewer technological skills; difficulties in using some functions of the computer due to illness (e.g. the link between arthritis and the use of computer mouse) and difficulties to read online information on the computer. Also, older people found seeking online information challenging, frustrating and confusing due to the large amount of information available (Eriksson-Backa, Ek, Niemelä & Huotari, 2012; Levy, Janke & Langa, 2015). Lack of knowledge of the internet has also been found as a barrier for seniors (Levy, Janke & Langa, 2015) and education and training programs were identified as helpful to overcome those barriers (Chung, Gassert & Kim, 2011).

In the last decades, the internet was assessed as especially beneficial for older adults seeking health information, the main argument for that being the fact that they are more likely than other age groups of populations to be complex patients with aging-related health declines and other preventable morbid conditions (Chaudhuri, Le, White, Thompson & Demiris, 2013). According to Heart and Kalderon (2013) the preparation for adoption of health related technology has not been adequate among elder adults and many of them do not believe these technologies will improve their quality of life.

A meta-analysis of the research on the internet health-related usage by seniors made by McMillan and Macias (2008) showed that the internet is an invaluable resource for older adults’ health because it is a two-edged sword when seniors look for specific information and, also, it is a resource of high quality online information.

Among the factors which influence the use of the internet by seniors, Campbell (2009) and Macias and McMillan (2008) pointed out the high socio-economic status, the high edu-

cational level, and being so-called “young old” (65-70 years) (as opposed to “old old” – e.g. over 85 years). All those factors would lead to an increase of the internet use among this age group. Other factor related to seniors’ use of internet for health is health literacy: the older people with high health literacy are more likely to seek online health information in contrast to those who possess lower health literacy levels (Levy, Janke & Langa, 2015). The same study stressed that socioeconomic status was a determining factor for using the internet to seek health information as information seeking was significantly higher among those older people with higher incomes (Levy, Janke & Langa, 2015).

Another set of important factors that influence the relation seniors have with health-related internet use is their trust in online medical information. Being able to trust in the information and consider the information as credible was a key factor influencing the use of the online health information. The study by Tian and Robinson (2008) among cancer patients found that people over 65 years old are more cautious than younger cancer patients in using online health information. Despite the fact that there are few studies which have explored how older people evaluate the credibility of online health information, Robertson-Lang, Major and Hemming (2011) study showed that older people have concerns about the trustworthiness of online health information.

Despite the fact the more and more medical and health-related information is available online, Wicks (2004) noticed that for answers related to their health, seniors tend to look primarily to interpersonal sources (GPs/ General Practitioners, family, pharmacists, friends). Thus, the existing researches indicates that older patients rely more heavily on their health-care providers for information than non-elderly populations (Chaudhuri et al., 2013; Fox & Duggan, 2013) while they are reluctant to rely solely or heavily on the internet for health information. Moreover, as earlier studies found out (Bremhaar, Visser & Kleijnen, 1990), older patients are more likely to let their physicians to make decisions regarding their medication or treatment, and some of them even assume that some aspects of their life (e.g. health) are controlled by powerful others (e.g. doctors) (Caress, 1997).

On the other hand, as the results of the National Health Survey showed (Choi, 2011), the frequency of visits to the family physician or general practitioner was associated with seniors’ higher rates of access to online health information. Furthermore, as Fiksdal, Kumbamu, Jadhav, Cocos, Nelsen, Pathak and McCormick (2014) pointed out, in the healthcare one could record an increase in the internet use for communication between patients and providers, and this frequently took place often through personal health records.

The research questions

Starting from the already mentioned general objective of our study, i.e. to comparatively investigate the health-related internet usage by Romanian and German older adults, in order to structure or analysis we formulated two specific research questions as follows:

RQ1: How do the Romanian and German seniors use the internet for health-related information and decisions? There can be identified, as Campbell and Nolfi (2005) stated, a usage of the internet by the seniors as a starting point for general information related to health, but when it comes to make informed decisions about health care, they still adhere to physician-centred care model?

RQ2: Is there a relationship between gaining online health-related information and the willingness to ask questions to the physicians? In this regard, there can be confirmed, also in the case of Romanian and German seniors as patients, the assumption of Frederikson and Bull (1995), according to which the more patients learn from the internet about their conditions or illnesses, the more likely they will ask questions derived from the internet consumption to their doctors?

Methodology

This paper presents a part of the findings of an exploratory comparative research project, which used a qualitative methodology.

As the main method of research there was used the in-depth semi-structured interview. The guide of interview included thirty-one questions on the topics of health-related internet uses. It was translated to Romanian and German languages and all the interviews were recorded and then transcribed. The set of data included in the analysis was collected in face-to-face interactions, which took place between January and June 2017. Participants were drawn to the study using “purposeful sampling” (Patton, 1990), which emphasises sampling for information-rich cases.

The interviews had the form of free, open discussions, i.e., depending on the course of conversation, further explanations and questions than those in the interview guide were possible. In the context of our investigation, “exploratory” meant that our aim was to become familiar with the studied phenomenon and to gain new insights into it. In this way, the problem can be better clarified later on and hypotheses can be developed for further researches.

The interviews were made within the respondents’ households during face-to-face discussions with the authors of the paper. In general an interview lasted around an hour in Romania and between forty-five minutes and an hour in Germany. The discussions were conducted in the native languages of the respondents – i.e. Romanian and German languages – and they were tape-recorded. After the transcripts of the interviews were made, the authors translated them into English.

Our sample of seniors consisted of twenty persons (ten women and ten men), aged 65 years or over, who used the internet not only to obtain daily information and to socialise with their friends, but also to search for health-related information, which was our main interest and, therefore, a precondition to be selected as a interviewee in the study. The snowball sample technique was used (Atkinson, & Flint, 2001), the personal contacts being used as the basis of selection the respondents.

The sample was made of two distinct sub-samples: on one hand, the sample of seniors from Germany comprising eight respondents, and, on the other hand, the sample of Romanian seniors, comprising twelve persons. The interviewed persons were residents in Bucharest (Romania), respectively in Bielefeld and Lingen (Germany).

Table 1. Samples structures for Romania and Germany

	Romania		Germany	
	Female	Male	Female	Male
Age	65-70 years old 71-75 years old	65-70 years old 71-75 years old	65-70 years old 76-80 years old	65-70 years old 71-75 years old 76-80 years old
Gender	8 persons	4 persons	2 persons	6 persons
Occupation before retirement	Professor Technician Professor Technician Doctor Economist (Accountant) Economist Professor	Engineer Technician Lawyer Professor	Accountant State's civil servant (employee in state's administration with a special status – in German: <i>Beamte</i>)	Manager / Administrative director of a hospital State's civil servant (employee in state's administration with a special status – in German: <i>Beamte</i>) Technician Engineer Engineer Technician / IT-Specialist
Education	University High-school	University High-school	<i>Ausbildung</i> (specific vocational education in Germany) <i>Ausbildung</i>	<i>Ausbildung</i> <i>Ausbildung</i> <i>Ausbildung</i> University University <i>Ausbildung</i>
Residence	Bucharest	Bucharest	Bielefeld Lingen	Bielefeld Lingen

The research did not aim to be representative and its main purpose was only to explore the ways in which Romanian and German seniors use online information related to health. For this reason we did not plan to obtain similar or even comparable samples for both countries, even the result was quite this one. The fact that, in the end, the two national samples were comparable as socio-demographic structures was not planned in advance and it was solely the result of the research process.

We have analysed our interviews using the qualitative content analysis (Miles, Huberman & Saldaña, 2014; Graneheim & Lundman, 2004). After they were made in respondents' native (i.e. Romanian and German) languages, the interviews were transcribed, translated into English language and the analysis was made alongside the common questions used in the interview's guide. The qualitative content analysis implied operations of theoretical categorization and codification, contextualization, decodification of significance, conceptualization, discovery of regularities, explanations and causal connections, formulation and verification of the conclusions and preservation of theoretical coherence (Miles, Huberman & Saldaña, 2014).

Due to the fact that the project was not financed from external sources and was made on a voluntary basis, we did not obtain an ethical agreement of our institutions, but we have obtained the informed consent of each person we included in the sample and who was interviewed.

Analysis of the results

The set of data collected from the interviewed persons from Romania showed that the general way in which they are searching for health information is a relatively simple one. The Romanian seniors are searching by using search engines (Google) and they avoid specialized sites or medical blogs and websites.

S2 (Romania): Generally I googled so, when I'm looking for health information I googled, I'm looking for them [...] I've just found them by chance or some medical information just appears to me. They appear on social networks as ads, others appear to me as ads on different sites. Google also has a system; if you have just entered a word, somewhere it will start to give you information all the time about similar sites or similar information on which word you have previously searched for.

S3 (Romania): Google is the perfect help for finding any types of information. Well ...I used to search for things and words on Google, I really like surfing the internet and gathering information from different domains.

According to our Romanian respondents, the main reason behind this type of online search is the fact that it is easiest, it has more accessible character and that it does not require special abilities:

S5 (Romania): I do not have an explanation ... that's ok, it's more convenient, more usual.

S9 (Romania): It is more convenient and I feel comfortable.

Unlike the Romanian subjects, most of the interviewees from Germany do not use Google to search for health-related information. Some of them, as the first two below quoted subjects, directly access specific medical websites or databases, having already the knowledge of these websites, while others, as the third quoted interviewee, avoid using Google in favour of other search engines:

S6 (Germany): Although I have a good health status, I'm interested in medical information. I usually read scientific articles from *The Lancet*, *Spektrum*, or other scientific medical magazines or websites [...] On the internet I am only reading, I read a lot of articles, but I don't watch medical videos. I watch though sometimes television medical programs.

S8 (Germany): When I need some information related to health from the internet I am searching medical databases or I am looking on health portals and using specific medical online resources. I do not use search engines, since I know where to search, and for this I am using websites like *net-doktor.de*.

S2 (Germany): I do not use Google for searching any type of information, including the health-related one, absolutely not, I do not want Google to know what I am searching. I use another search engine, *ixQuick*, they are a Dutch search engine and do not track. I am also frequently using the Tor browser for anonymity.

Few German respondents however use Google to search for health-related information. As we can see in the following quote, these interviewees assessed, as the Romanian ones, that this is the easiest way to promptly obtain the desired information or information sources:

S4 (Germany): I use mostly Google, because it is easy and quick, and then I click on the first two or three result websites and that is it. In general, if the information on these websites seems logical to me, then I am satisfied and end the session. I don't go on other websites, since the amount of information on the internet confuses.

For Romanian seniors the search for health information is related to treatment of diseases, medicaments and illnesses' symptoms. Only few of them want to know other things in addition, such as information about hospitals or the medical system, and doctors in general.

S3 (Romania): I'm especially looking for references to drugs and diseases, but drugs especially interest me. Well, let me see, I know what I'm saying, I'm more of a naturist, but I do not know whether they're good or not.

S7 (Romania): I'm looking for illnesses, and drugs, not hospitals ... not always for me. Well, the reason is the need to know more on those topics.

S9 (Romania): I'm looking for references to drugs, references to doctors and the effects that certain treatments have on different people. I do this because it is the thing that interests me and I think it helps me for the deeper understanding of the various diseases.

In comparison, the search on the internet of the German interviewed seniors shows a wide range of medical and health-related interests: not just illnesses, symptoms, advices, treatments and effects of treatments, but also information about doctors, hospitals and clinics, nutrition and a healthy lifestyle etc. As we can note in the quotes below, some of the respondents have a general interest in looking for health-related information, without having personal or family medical reasons, others – more – look for such information only when they themselves or those near them have a medical problem.

S1 (Germany): I usually read on the internet about nutrition, sports, healthy lifestyle. I had several small medical issues and these I researched, but very rare. I visited only medical websites, no blogs or forums. If I had a more serious problem, I would most certainly do that, but since I do not have, thank God, at the moment, I don't [...] If I would have a serious disease, I would most certainly look for a specialist regarding this, that's for sure.

S8 (Germany): I am looking for all kinds of medical information, like medicaments, specific doctors, specific treatment, information about clinics, explanations of some symptoms and their meaning and so on. However, I do not look for unrelated information; I need to have a cause for my search. For example, if people in my family or myself have certain symptoms of an illness or something, I research for related information to that specific issue.

S3 (Germany): I am researching what I specifically need. I did this sometimes for treatments, for example regarding specific sports injuries treatments, but there has to be a reason for doing so, surfing without reason I do not do.

However, one of the German interviewees declared that he at most searches on the internet regarding explanations about medical designations and expressions, or when looking for a doctor. For other information, such as treatments, medicaments, diseases, meaning of symptoms etc., he doesn't trust the information on the internet:

S2 (Germany): I usually do not research health information on the internet, because for me the internet is not the media for doing that. I am sometimes looking for specific medical expressions, terms or denotations, because I want to know the meaning, so if I hear an expression I research this. [...] Many years ago, I looked on the internet for a dentist, I wanted a second opinion, he was good, but we don't attend there anymore, because it is 30 km away, and in the meantime we found a good one here. [...] For medical advices or treatments, or information regarding drugs, I do not use the internet. For me the internet is too anonymous for this type of information and offers too much and heterogeneous information, so I really don't want to know.

When it comes to use the health information found on the internet, half of the Romanian sample included in our analysis did not want to talk to their doctor about this type of infor-

mation. They invoked as main reasons for avoiding this discussion the high status that doctors have in their eyes and the feeling that such subjects cannot be discussed in a doctor-patient meeting:

S2 (Romania): I have never talked to my doctor about the information found on the internet. It was just a piece of information that I used strictly personally.

S5 (Romania): No, no, I cannot afford to talk to my doctor, because it is not well to do that, it is not civilized.

By comparison, German seniors are more open to discuss with physicians about information found on the Internet. Only two of the German interviewees have told us that they never talk to the doctor about such information, but not because “this is excluded to be done”, “it would not be civilized” or because of the doctor’s superior status, but simply because the two – doctors and the internet – are, in their opinion, totally different fields.

S4 (Germany): No, I do not discuss with the doctors any information from the internet. [...] I totally separate these things, doctors are one thing, the internet is the other thing, separated.

The rest of the German respondents told us that they sometimes discuss with their physicians the information they found on the internet, they – as well as their doctors – have no problem to do so. Some of the interviewed German seniors even printed information from the internet and took it to the doctor to show it and discuss about it. According to the data obtained from our interviewees, most of the German doctors take the time to discuss such information and are willing to hear and consider opinions and information found by the patients on the internet.

S7 (Germany): Yes, I discuss sometimes. For example, some time ago I had for a while bellyache, and since all my analyses and the results of investigations were good (blood tests, endoscopy, colonoscopy and so on), I did not receive any diagnostic. Then I found on the internet some information about possible explanations for these pains, as they would be, for example, caused from a specific bacterium. I printed this information and I took it with me to my family doctor. We discussed about it and he agreed that this could be a cause (rarely, but still a cause). Thus, I made new investigations (as an aside, neither that bacterium was the cause, but after some weeks, the pains were by themselves gone, thank God).

S5 (Germany): I cannot recall a specific issue now, but sometimes I discuss with them [the doctors], for example if I read on the internet about new medical treatments, in this case I might ask: are they reasonable? [...] Until now, all the physicians were willing to discuss such information with me. For example, I had a meniscus issue, I found on the internet that such issues can be treated sometimes endoscopic, and other times a classical surgery must be undergone. I discussed this with my orthopaedist, and he has confirmed this information. However, he said that sometimes the information from the internet or magazines give people hope, and this cannot be fulfilled later with all patients.

In only one case recounted from the German interviewed seniors the physician rejected the information the patient brought from the internet. Moreover, this respondent even declared that he trust more the information he collects from the internet than the knowledge of some doctors:

S6 (Germany): Usually a doctor does not like this kind of things, but in my case I think it was usually positive [the discussion with the doctors about the information found on the internet]. Yet, I recall a situation, when my wife had a problem, and the doctor hesitated to diagnose it and to give her a treatment. I printed out some information from the internet (in English), gave it to the doctor, and said here you go, this I did. The doctor said “this is not useful, I don’t care”, but in fact he had no

knowledge of that. I even translated the information [from English to German], printed it and took it to the doctor, but the doctor still did not want to know that and refused to listen. Apparently, he did not want to be taught. [So in this case, when the doctor did not acknowledge your information obtained on the internet, did you still continue to research medical information on the internet?] Yes, of course, I have more trust in the internet than in the doctors.

This is not the case with the Romanian seniors. When we investigated how the relation between online information and face-to-face information is structured, all persons who were interviewed in Romania made a clear choice: the information that is coming from the medical staff (be it GPs, specialist doctor or nurses) should be taken as granted and is more credible as compared with the information available on the internet. In other words, when they have talked to doctors about health information, they always consider the physician's opinion – be it a family physician or a specialist – as the most trustful (and not the information found on the internet).

S7 (Romania): I talked to some and my doctor told me they were not good. He told me that I had to take only what he wanted, that is what he gave the prescription. In other words, I cannot get what I want. It's a very good reaction because we, the elders, take as granted sometimes some things and that's not right, he [i.e. the doctor] is right.

S1 (Romania): Yes, we talked and the doctor had a calm, gentle reaction. He encouraged me to follow the advice of physicians in defiance of the information found on the internet because they were trained for that to be a kind of God on Earth for us. Physicians exist for the good of man.

As we have seen in some quotes above, the interviews with the German seniors show that German doctors are not from beginning on rejecting the information, suggestions, or even treatments that the interviewees have found on the internet. On the contrary, they are willing to listen and to follow some suggestions, if this is the patient's wish (as in the case of S7 from Germany, who did some extra analyses following some internet researches). Without having an attitude of "Gods on Earth", they still explain to patients that not everything found on the internet is right for anyone and that some hopes do not come true in some cases, even though they are presented on the internet as plausible and achievable opportunities (as in the case of S5 from Germany).

Another feature of most of the German interviewees is that the information found on the internet seems to provide them a basis of knowledge, by virtue of which, when possible, some even save the visit to doctor, or when they go to the doctor, they can formulate targeted and documented questions:

S8 (Germany): Usually I use the internet for information first, before I attend a doctor, since I know my reliable online resources and it is easier for me to first research the issue regarding health status, medical information and such before I take the hassle to fix an appointment with a doctor. I am not that type of person, who goes willingly to the doctor (with my family doctor even when one has an appointment, must wait at least one hour in the waiting room...). And when I still have to go to a doctor, I usually know what to ask about the illness or about the prognosis, because I already have some knowledge previously read on the internet.

Furthermore, most of the German interviewed seniors appreciate that the health-related information on the internet is readable, understandable, useful and mostly reliable. However, it should be pointed out here that none of them reads medical information on blogs or forums (i.e., experiences of other patients, opinions of unspecialized people, etc.), but most of them visit specialized medical websites when seeking such information. Moreover none of

the German respondents recounted that he/she visited websites specialized in alternative, naturopathic or homeopathic medicine. They explained their trustfulness in the information from the internet by their experience (medical experience, but also general experience of life), by their ability to discern credible information from the rest of them, and by checking the impressum and the publisher of the websites. With other words, most of the respondents acknowledge that not all the information from the huge amount of information available on the internet is reliable, but most of them consider that they are able to appreciate and spot themselves the reliability:

S7 (Germany): Yes, I think this information [on the internet] is useful, as certain diagnoses should be possible with this, because you can find a huge amount of information, all kinds of advices, and among them sometimes something is correct. [And how do you know which of them are correct?] Well, if they appear to be logical and plausible, then yes, I consider them correct; but certainly not all are so.

S1 (Germany): The information is understandable, no problem for me, the problem is, they are very often contradictory, once they say this, other time they say the opposite. And I am speaking here about the doctors themselves. Nowadays everyone being a physician has some immediate results and publish them, that is usually not verified, and then I read the opposite the next time. Let's take for example butter and eggs, who contribute to the cholesterol supposedly, and now it is all regarded as nonsense, you can eat as much as you want, and this is always like that.

S5 (Germany): Most things [from the internet] I can understand, and mostly I am looking for an overview of the issue, I do not want to become a doctor, so I just want the basic information. [...] If you know how to deal with all the information, it is helpful, but if you then think about, that you could have the same symptoms or issues, they can become onerous, since you imagine all kinds of diseases. [And how do you evaluate the information?] I know that this may sound bad, but it is the experience of my life.

S2 (Germany): In order to regard something as reliable or trustful, I check the impressum and who is the publisher of this information, I always do this. Without an impressum I leave the website immediately, if someone does not give publisher's information, I consider a liar from the beginning.

S8 (Germany): The reliability highly depends on the website or the resource of information itself. In general, I trust the resources I use for medical information, since my resources are carefully selected. I consider a medical resource trustful, if the information given seems plausible to me based on my medical education (I worked long time ago for some years as an emergency medical assistant). If I learn of new medical resources, I evaluate them using the same criteria, experience and background.

As we can note, the German seniors are looking for health-related information on the internet to get informed about their problems and, some of them, to keep up to date with news, even if these news are often contradictory. Usually, these contradictions are discussed with doctors in face-to-face meetings, and prior knowledge gained from the internet provides them the basis for asking questions when they visit the doctor. The internet (the specialized websites) is for them a knowledge and information base. A hierarchy (superior vs. inferior) of the information provided by the internet and that provided by doctors is not done (except for a respondent, who said that he has more trust in the internet than in doctors) because the two are simply seen as different areas. However, none of the German respondents declared that he/she followed a treatment only based on the information from the internet. With other words, the internet is for them a base of medical knowledge, but not for taking action. When it comes to taking medication or following a specific treatment, this one should be prescribed or recommended by a physician.

While appreciating the usefulness of health-related information on the internet, the Romanian seniors assessed that the reliability of this type of information remained clearly inferior as compared with the information a physician can offer in face-to-face meetings:

S4 (Romania): I clearly do not rely on the internet and I clearly do not rely on the information ... that is, not only on the information given on the internet. The internet is small room in a house, which is sometimes forget, sometimes remains in a corner. Yes, it is useful, but it is not the only information available. You can still find doctors to discuss serious problems, do not run after “horseshoe horses dead” on I do not know what blog or site.

S6 (Romania): Yes, the information can be trusted, but not entirely. From my point of view, the information provided by the doctor is basic, is the most secure.

Meanwhile, there were some Romanian seniors who have admitted the fact that they sometimes follow health-related treatments found on the internet. In this case, as they have declared, they refer strictly to natural medicine and not to allopathic one – the latter being the field of doctors in whom they have full confidence:

S10 (Romania): I’ve been asking for strictly natural medicines that I found on the internet after talking to a pharmacist. To give you an example, this is the case for the liver’s medicine, such as “Bilidren”.

Another way of using the internet is to communicate with the doctor (family or specialist) via the internet (mail, Skype, other specialized programs etc.). When it comes to the Romanian seniors, only three of them have declared that they do not speak directly with their doctor only in exceptional or special situations. When such special situations appeared they used the phone to discuss with their doctor, but never ask him or her anything through the internet (mail, Skype, messenger).

S7 (Romania): No, I’m giving her a phone to schedule me. Well, we’re talking on the phone or I’m going straight to the cabinet.

S4 (Romania): I always speak with my doctor at the phone. I do not use Skype at all and I prefer to talk over the phone in general. I find it more personal.

S3 (Romania): I tried to communicate with an ophthalmologist by email and I really wrote him an email, but I did not get a reply of any kind, then or later, even though I insisted and tried to be as clear as possible on the issue I had. Therefore, I went there and I discussed with him.

Putting the medical advice at the “core” of health-related information and using mainly face-to-face communication with doctors, has lead in Romania to an extremely low degree of online feedback towards the medical system – whether it is positive or negative. Only one Romanian senior has declared that she has online rated some medical services, and this happened due to the fact that she was satisfied with them:

S3 (Romania): I once online rated the clinic where I had an eye (cataract) surgery. I was pleased and I give them a high mark.

S5 (Romania): No. I do not like “to get out of the house” and it does not seem right to denigrate doctors because they definitely are a kind of Gods on earth.

Regarding the German seniors, the situation concerning online communication is not much different from that in Romania. They also prefer to communicate face-to-face with the doctor, though the telephone communication is also very common. Our respondents declared that they not only make appointments via phone, but also sometimes discuss on the telephone

with the doctor, for example, when it comes to results from some investigations. Two of the German interviewees recounted though that they use the internet as communication medium with the doctors or the medical staff, by filling online forms to order new prescriptions or to make appointments to specialists.

S3 (Germany): Yes, I use the internet to communicate with the doctor, sometimes for small things like ordering a new prescription from my family physician.

S8 (Germany): If possible, I sometimes try to fix appointments online, but this does not always work (for example, our current family doctor does not have that service). But last year I needed an appointment to a cardiologist, I know a joint practice with good doctors, where I go for a long time when I need, so I accessed an online form on their website, and I completed to make an appointment. The next morning, a nurse called me and we fixed the appointment. Other than that, communicating online with a doctor is not very common in Germany until now and online services are rarely offered.

However, the online feedback towards the medical system is much more habitual and taken into consideration by the German interviewed seniors. More than half of them told us that they sometimes rate the doctors, the medical offices and clinics, as well as they consult the ratings and the online comments of other patients.

S6 (Germany): There is a common rating website for doctors, hospitals and medical services in Germany, jameda.de, which I sometimes use. I rated myself some physicians and medical offices, and before I go to a new doctor or clinic, I look what ratings he/it has and what are the other patients' experiences with them. Sometimes the comments are really useful.

S4 (Germany): I myself rated only once a dentist, because I had a very bad experience with him and I wanted that others should know what to expect if they go to his office. But I am pretty interested on the ratings of doctors, I look for example on Jameda, but also, in the last time, on Google. They have also ratings and reviews.

S1 (Germany): Until now, thank God, I didn't have some serious medical problems, but if I would ever need a specialist, I most certainly would look up the online ratings. If I would need a complicated medical surgery for example, I would not just enter the hospital here locally, but I would most likely look for ratings of hospitals, if for example this specific heart surgery would be better in this or that clinic, where they do 20 of these surgeries every day, I would most certainly go there and not here where they do this once a day, this I would look up on the internet.

Discussion and conclusions

Seniors' internet use has developed as a research theme in the last decades (Chen & Persson, 2002; Czaja & Lee, 2007; Doh, Schmidt, Herbolzheimer, Jokisch & Wahl, 2015), but few studies pointed out the intra-European differences of the internet use for this age-category (Ivan & Fernández-Ardèvol, 2017a; Ivan & Fernández-Ardèvol, 2017b).

When addressing the issue of health-related behaviour and older adults, as McLellan (1998) showed, patients are overloaded with the sheer amount of information available on the internet. In the same line, Sommerhalder, Abraham, Zufferey, Barth and Abel (2009) have assessed that the development of online health information available for the patients is controversial due to the fact that patients are replete with the sheer amount of available online information. As regards the motivation for searching for health-related information, the researches showed that seniors use media in order to reduce the uncertainty felt in important

domains of their lives (Freimuth, Stein & Kean, 1989), to understand the world around them (Dervin, Ellyson, Hawkes, Guagnano & White, 1984) and to cope with the stress and its effects (Wilson, 1999).

Our exploratory study did not intend to offer general explanations of the health-related internet use for Romanian and German older adults. Instead, we can point some similarities and differences between the two national samples included in the analysis, and, also, we tentatively indicate possible developments of the research.

Thus, the analysis of our data did not show any difference between the two samples as regards the influence of the socioeconomic status as a determining factor for using the internet to seek health information, as stated by Levy, Janke and Langa (2015). In fact, there was no indication that the socio-demographic variables, such as the high educational level and being “young old” (65-70 years) (Campbell, 2009); Macias & McMillan, 2008) influenced the use of internet by seniors both in Romania and in Germany. Giving the fact that this is only an exploratory study this assumption still need further confirmation at a more general level.

As regards our first research question, our findings show that both German and Romanian seniors use the internet as a starting point for general information related to health, but when it came to make informed decisions about health care, they adhere to physician-centred care model. In fact, the results confirm Wicks’ thesis (2004) that seniors tend to look primarily to interpersonal sources (GPs/ General Practitioners, family, pharmacists, friends) for answers related to their health and Caress’ assessment (1997) that seniors tend to assume that some aspects of their life (e.g. health) are controlled by powerful others (e.g. doctors). This was obvious in the case of the majority of Romanian and many of German seniors we interviewed. All the Romanian interviewees assessed that doctor’s advice was more reliable than the online health-related information. In the same vein, albeit the German interviewees showed more confidence than the Romanian ones in the reliability of the internet information and advices (those from specialized sites), they declared that they never followed any medication or treatment only based on these information and/or advices. Prescribing medicaments and recommending treatments is, both for German and Romanian seniors, exclusively the apapanage of doctors. Therefore, our results confirm Broomhaar, Visser and Kleijnen (1990) assumption that older patients are more likely to let their physicians to make decisions regarding their treatment.

Neither Romanian nor German seniors did complaint about the quantity of online health-related information, as suggested in the existing literature (McLellan, 1998; Sommerhalder, Abraham, Zufferey, Barth & Abel, 2009) and, in this respect, further research is needed in order to prove the differences at the national levels.

In the case of the second research question, we can record important differences between Romanian and German respondents. Thus, if a Romanian senior as a patient found some information on the internet about her or his illness, he or she was not eager to ask questions derived from the internet consumption to his or her physician. On the other hand, as the interviews showed, many German respondents discussed with their doctors in face-to-face meetings as concerns aspects of the information they found on the internet. In the German case, the prior knowledge gained from the internet was taken as a basis for asking questions when the seniors visited their doctor. In this way, in the case of German seniors, we can speak about a relation between health-related online information and the degree of information requests from a patient, and the extent of this relation could be the subject of further researches. This situation is exactly the opposite from the Romanian one, where the more a senior patient

learns about her or his illness, the less willing she or he is to ask questions to his or her physician. A possible explanation of this different way of approaching the doctors could also be the attitude itself of the (older) patients towards the doctors. Thus, the majority of the Romanian respondents stated, in a way or another, the superior status of the physicians, some of them even naming them “kind of Gods on Earth”. This professional different status and, consequently, hierarchic ratio – perceived as a gap between the specialists, having competence and a high degree of knowledge, and the simple, unspecialized patients, is transferred by the Romanian seniors also in the personal, human relationship with their physicians. That is, in their eyes, the doctors could not be bothered with questions regarding information gained from other sources, such as the internet, and all the more so, they could not be contradicted. On the other hand, when speaking about the doctors, family or specialists, the German respondents assigned them an equal status as discussion partners. In their view, the physicians have indeed the superior knowledge as medical experts, but as interlocutors they are seen as equal human beings, to whom one can address (even “profane”) questions and can speak about possibilities (of illnesses’ approaching, of treatments, etc.).

Our data showed as well some peculiarities of the health-related internet use for Romanian and German older adults. Thus, the German interviewed seniors were more interested to find a rather wide large spectrum of medical online information: illnesses, advices, treatments, doctors, hospitals and clinics, nutrition and a healthy lifestyle etc. Quite different from them, the Romanian seniors were interested mainly in the online information related to treatment of diseases, illnesses’ symptoms and references to drugs. Only few of them search also on other type of information, such as those related to medical staff and services. Furthermore, the German interviewed seniors proved to be more selective when it comes to the online medical sources. While the majority of Romanian respondents have usually rested upon Google search, the German ones have largely visited scientific or specialized medical websites and databases and were to a greater extent willing to verify the publisher of the online information. This can be also a confirmation of Tian and Robinson’s (2008) thesis that elder adults tend to be more cautious than younger ones about the trust in online information. Additionally, the German seniors proved to be more active as concerns the online feedback regarding physicians and medical services, rating them themselves and being receptive to the ratings and online recounted experiences of others. The fact that the German health system is more diversified (both public and private ownership, more levels of management etc.), it gives the patients the freedom to go anytime to any doctor, joint practice or clinic they choose, and, over all, is lacking in any kind of bribe between the patient and the doctor, as well as the greater level of internet’s use of seniors in this country, can be some factors that explain the differences between the two samples analysed. Due to the inherent limits of the present research, these assumptions we formulated regarding the differences between Romanian and German seniors have to be tested in future researches.

Moreover, Romanian seniors proved to have a lower desire to control their own health care by themselves and remain deeply dependent on the interpersonal medical communication with GPs/ general practitioners, specialist physicians, pharmacists, family, and/or friends. In this way, the results regarding Romanian older adults confirm the existing findings which stressed the fact that seniors tend to rely mainly on interpersonal sources for answers related to their health (Wicks, 2004), or even to let powerful others (e.g. physicians) to control important aspects of their life, such as their health (Caress, 1997). Although the German seniors did not display a totally opposite behaviour, their reliance of solely the medical staff for

health-related information is smaller. Thus, German seniors made more nuanced differences between the two types of information – doctors and the internet – which are, in their opinion, totally different sources for their health-related needs of knowledge. In this case, the data from the German sample confirm the thesis of Donaldson, Corrigan and Kohn (2000) according to which patients who ask questions elicit treatment options, express opinions, state their preferences regarding treatment during office visits with their physicians, have measurable better health outcomes than those who not communicate. At this point, we can also advance another assumption for the future research: the health behaviour of seniors will be strong conditioned by the level and degree of active search of health-related information. In this way, a direction for future research could be towards testing the theses of Choi (2011) and Fiksdal, Kumbamu, Jadhav, Cocos, Nelsen, Pathak and McCormick (2014) in both countries – i.e. Romania and Germany.

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