

**THE INFLUENCE OF USING THE INTERNET FOR
HEALTH-RELATED INFORMATION ON THE
PHYSICIAN-PATIENT RELATIONSHIP AND
COMMUNICATION: AN EXPLORATORY
QUALITATIVE ANALYSIS ON GERMAN OLDER
ADULTS OVER 65 YEARS**

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Abstract

This paper presents an exploratory qualitative analysis on health-related internet use by older adults aged over 65 years, a case study consisting of ten in-depth interviews of seniors in Germany. The research focuses on the influence of using the internet for health-related information on the communication between seniors and doctors and on the physician-patient relationship. According to the findings of the research, while in the quantity of communication between older persons and the doctors no significant influence could be assessed, in the quality and the content of the face-to-face/ real communication some changes, as consequences of online informing, could be delimited. Mostly these changes are determined by the fact that seniors are pre-informed before medical visits and thus have additional topics to discuss with doctors. Moreover, the pattern of the physician-patient relationship is affected by the internet

consumption. In a medical system, as the German one is, in which the model of the relationship between doctors and patients is predominantly informative and deliberative, and not paternalistic, patients have now, additionally, with the development and use of the internet, the opportunity to search for information and opinions not only medical, scientific, but also about doctors and clinics, as well as the possibility to provide feedback and ratings. These facts place patients now in a position of power in relation to doctors, given that the online ratings, scores and reviews can influence the subsequent inflow of patients of a physician, medical office or clinic.

Keywords: health-related internet use, physician-patient relationship, medical communication, health-related information, older adults, seniors, Germany

Introduction

Among the sources used by people to inform themselves and make decisions about problems and issues related to their health, the internet occupies a central place. Given that seniors use media and technology differently from young people (Smith, 2014; Tian and Robinson, 2008) and respond differently to the internet use compared to younger adults (McMillan and Macias, 2008), designing policies and solutions based on Information and Communication Technology (ICT) is a major concern in the European Union (European Commission, 2015). These solutions address the dual challenge that older people face when it comes to the internet: On the one hand, using the internet itself can be a challenge for older persons, as it requires at least a minimal technological learning process for which some seniors are no longer willing (Marinescu and Rodat, 2018). On the other hand, specific search skills and a process of selecting information from a multitude of sources are needed, skills that some older people may not have, many of them with neither the knowledge nor the patience and

flexibility of younger adults (Smith, 2014; Van Deursen and Helsper, 2015; Xie et al., 2014).

The present paper deals with the health-related internet use by seniors. The findings of an exploratory qualitative analysis involving a case study on seniors in Germany are presented. The main research question was to what extent the online communication and gaining information related to health from the internet influences the doctor-patient relationship and the real, face to face communication between the seniors and the physicians.

Analytical and theoretical framework

Today, people are more and more informed about health issues and are increasingly taking on a participatory role in healthcare. Both the active search for information, facilitated in particular by the internet, through which individuals try to support their decisions about their own health, and their involvement from a decision-making position in medical interaction, have become common practice.

In the field of healthcare, we have witnessed in recent years a mutation that involves moving away from the *paternalistic model*, in which the doctor decides and implements what he/she considers most appropriate for the patient, and the orienting towards other types of models in the physician-patient relationship, as for example the *informative model* (Emanuel and Emanuel, 1992: 2221), in which the doctor provides the patients with all relevant information, including risks, benefits and alternatives, and the latter select, knowingly, according to their own values, their own medical approach and interventions. Besides, an alternative model also used at present is the *interpretive model*, that requires the physician to find out what the patients' values and desires are, and to help them select the treatment or medical intervention that best corresponds to these values and desires (Patel and Aung, 2016). Therefore, this model involves the inclusion of human values in the medical interaction and in the decision-making process

related to health. Finally, in a fourth model, namely the *deliberative model*, the purpose of the doctor-patient interaction is to help the patient to establish and make the best health decision that can be made in a clinical situation (Emanuel and Emanuel, 1992). Although the informative model provides patients with all the data necessary to make informed decisions, this model still lacks care, interest, and the human aspect of the relationship. Incorporating compassion into the physician-patient relationship by using the deliberative model can lead to a closer relationship between specialist and patient and better outcomes in terms of the latter's health (Patel and Aung, 2016: 52).

Following this evolution in the relationship between doctors and patients, it can be said that in the last time people have increasingly begun to adopt a participative role in healthcare, by actively seeking information and rationale for the decisions they make about their health. The internet can make it easier for patients to find medical information and to seek health-related advice (Smith, 2014). This pattern can contribute to patient empowerment and a greater involvement in decision-making processes (Kelly et al., 2013; Xie et al., 2014) and may result in positive effects on patient-doctor relationship. That can ultimately improve people's health (Andreassen et al., 2006; Iverson et al., 2008).

Moreover, other special opportunities enabled by the internet are the ability to ask private health-related questions, to obtain medical information that otherwise the individual would not have had access to, to search international expert advice, to research medical conditions, with the advantage that no appointment is required and even no exposure of one's identity (Anderson et al., 2003; Demiris et al., 2013).

Unlike younger adults, older adults tend however to remain more anchored in the paternalistic model, both in terms of information and health decisions. Thus, the older persons seek information and answers to their questions rather by using interpersonal sources, with physicians as the main source (Wicks, 2004), and are more willing than younger adults to let doctors

make decisions about their medication or treatment (Breemhaar et al., 1990). Some of the older patients even assume that some aspects of their life (e.g., health) are controlled by powerful others (e.g., doctors) (Caress, 1997).

Thus, older adults have their own pace of adaptation to informative, interpretive and deliberative models, and therefore represent a specific population group in the practice and study of medical communication, in the context of current transformations (McMillan and Macias, 2008). Older people, who grew up in a culture where the doctor made all the critical decisions, now live in a “consumer-centred” world, where individuals are expected to be informed participants in their own healthcare.

The seniors use mainly the internet “to socialise”, i.e., to “speak” with friends and family (e.g., by sending emails) (Ivan, 2017), and to read, as the internet is an invaluable resource which can replace the library (McMillan and Macias, 2008). Among the benefits of online activities for elderly people are: an increased level of life satisfaction, a better mental functioning, activities of daily living and lower levels of depression (McConatha et al., 2003), the experience of being part of the online world (Shapira et al., 2007), empowering feelings (McMellon and Schiffman, 2002), the development of a positive effect on self-esteem (Gatto and Tak, 2008), the possibility to increase the amount of contacts with others (Mellor et al., 2008), and the opportunity to support social networks (Karavidas et al., 2005).

However, there is a set of factors that influence the use of the internet by seniors, among them being the socio-economic status (the higher the socio-economic status of the elderly, the more likely they are to search for health-related information on the internet), income (causal relationship same as previously), the educational level (the same as previously), health literacy (the higher the health literacy of the elderly, the more likely they are to seek online information regarding health), as well as the actual age category (“young elderly”, i.e., those between 65-70 years old are more likely to use the internet for medical

information than “old elderly”, i.e., people over 85 years) (Campbell, 2009; Levy et al., 2015; Macias and McMillan, 2008).

Yet, the trend to be more involved in personal medical decision becomes more and more common also among the older persons (Lambert & Loiseau, 2007). Moreover, an increase in the internet use for communication between patients and providers could be recorded in the healthcare (Fiksdal et al., 2014), as well as a link between the frequency of visits to the family physician or general practitioner and the seniors’ higher rates of access to online health information (Choi, 2011). However, as Campbell and Nolfi (2005) pointed out, older adults may be willing to use the internet as a source for general health information, but when it comes to make decisions about their health care, many of them seem to adhere to a physician-centred model of care (see also Marinescu and Rodat, 2018).

Research questions and method

The main objective of the research presented in this article was to analyse the impact of the health-related internet use by older adults on the physician-patient relationship and on the face-to-face communication between the seniors and the doctors. The exploratory descriptive-analytical qualitative study discussed here was conducted in 2017 on ten German seniors aged between 65 and 83 years, who have been using the internet to search for health-related information.

Because the aim was to obtain detailed, in-depth information on the topic mentioned, I opted for the use of a qualitative method of analysis, namely the in-depth semi-structured interviews (Gunter, 2000; Moscovici and Buschini, 2003), which had the form of face-to-face interactions and were undertaken following a guide of interview that included thirty questions on the topics of health-related internet uses. However, the interviews had the form of free, open discussions, that is, depending on the course of conversation, further explanations and questions than those in the interview guide were possible (Moscovici and

Buschini, 2003). As this investigation was an “exploratory” one, my 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.

Within the main research question referring to the potential influence of using the internet for health-related information on medical communication and on the physician-patient relationship, the subjacent research questions were:

RQ1: Are visits to doctors more or less frequent with the increase of online communication?

RQ2: To what extent there is a relationship between gaining online health-related information and the willingness to ask questions to the physicians and to discuss with them about information found on the internet? In this regard, there was verified 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.

RQ3: To what extent the older adults use the internet to communicate with the physicians?

RQ4: Are the seniors willing to provide online feedback regarding medical consultations and practitioners, and in general towards the health-care system?

The interviewees were selected to take part to the study by using “purposeful sampling” (Patton,1990), which emphasises sampling for information-rich cases. The snowball sample technique was used (Atkinson and Flint, 2001), the personal contacts being used as the basis of selection the respondents. The interviews took place between March-June 2017, and were made within the interviewees’ households during face-to-face interactions with the author of the paper. In general, an interview lasted between forty-five minutes and an hour.

The ten subjects, six men and four women, were over 65 years old and have been using the internet not only to obtain daily information and to “socialise” with their friends and relatives, but also to search for health-related information. Because seeking online health-related information was the central aspect of the objectives of this research, using the internet for this purpose was a precondition to be selected as an interviewee in the study. The interviewed persons were German citizens, residents in German cities Bielefeld and Lingen.

The in-depth semi-structured interviews were recorded, then transcribed, and, for the purpose of the present paper, translated into English. The transcribed interviews were analysed using the qualitative content analysis (Graneheim and Lundman, 2004; Miles et al., 2014) along the themes operationalized in the form of questions in the interview 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 et al., 2014). For using the data gained in this research there was obtained the informed consent of each person interviewed. The study was not financed from external sources and was made on a voluntary basis by the author of this paper. The aim of the study was not to be representative or to extract generalizations about an entire population or a part of it, but to gain in-depth, detailed data on the topic addressed.

Results of the study and discussion

The major purpose of this exploratory study was to investigate to what extent the online communication and gaining information related to health from the internet influences the physician-patient relationship and communication.

Firstly, there was regarded the extent to which the informing on the internet and online communication influences the real, face to face

communication between the seniors and the physicians. One of the aspects of interest analysed in this context was the extent to which gaining knowledge on the internet influences the frequency of actual visits to doctors. While some seniors said that online information did not influence in any way the frequency of doctor visits, others said that they feel some influence, that sometimes, due to fact that they are already informed, they no longer feel the need to go to the consultation.

R3¹: I do not see a connection between these two areas [informing on the internet and going to the doctor – a.n.²]. Reading from the internet is one thing, going to the doctor is another. Reading and informing online has the advantage that it is fast and easy, but in the past, I used to read too in magazines or books. Practically now it is the same, only much simpler and faster. But just as reading books did not influence my going to the doctor, likewise, reading on the internet does not.

R8: 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. By my family doctor even when one has an appointment, must wait sometimes even one hour in the waiting room... Therefore, if I can avoid visiting the doctor, I do it.

Another issue investigated was the extent to which there is a relationship between gaining online health-related information and the willingness to ask questions to the physicians. 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, was considered.

¹ During this paper, various quotes from the interviews will be given, written in *italics*. In order to keep the anonymity of the research subjects, they will be mentioned in the form R1 (for respondent 1), R2 (for respondent 2) ... R10 (for respondent 10).

² The abbreviation a.n. is for author's note/ explanation/ add-on.

Three of the research subjects declared that they never talk to the physicians about information or advice found on the internet. They consider that doctors know for themselves to appreciate certain symptoms, or what measures are better to be taken at a given time or for a specific situation, depending on the personal characteristics of each patient. According to them, the internet is full of general, mixed information, while the doctor appreciates and investigates each particular case. Moreover, these respondents consider that the internet and doctors are different, separate fields.

R6: Sometimes the information on the internet is helpful, but I never discussed with a doctor about it. I think a doctor has enough on his mind without it. I believe that it is best to quietly judge the patient's symptoms and decide, based on his medical knowledge, which diagnosis to make, and what medication or treatment is most appropriate.

R2: 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.

Seven of the ten interviewees proved however to be open to discuss with physicians about information found on the internet. They, as patients or simply people who go to a medical check, as well as the doctors themselves seem to not have a problem to mix these different fields in a discussion, namely the heterogeneous information on the internet and the professional expertise from the medical office or from the clinic. 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 respondents, 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.

R5: 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.

R3: I cannot recall a specific issue now, but sometimes I discuss with them [the doctors – a.n.], 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 gives people hope, and this cannot be fulfilled later with all patients.

A special case was that of one of the research subjects, who recounted a situation in which he wanted to discuss with a physician about an information found on the internet, but the physician rejected the discussion. Moreover, this respondent even declared that he trusts more the information he collects from the internet than the knowledge of some doctors.

R9: 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 – a.n.]. 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 – a.n.], 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? – question of the interviewer] Yes, of course, I have more trust in the internet than in the doctors.

Finally, within the main research question regarding the potential influence of using the internet for health-related information on medical communication, another issue considered was the extent to which the seniors use the internet to communicate with the doctors (e.g., by email, skype, WhatsApp, messenger, other applications, some specialized online programs etc.). The findings of the study show that this type of communication is not very common for the elderly, on the one hand because they are not very familiar with all these possibilities, and on the other hand – and more importantly – because this practice is not (yet) usual in Germany. Some respondents said that even when the practice would be more common, they would still prefer to communicate face to face with the physician.

R10: No, I do not have any knowledge about such online programs to communicate directly with your doctor. As for the smartphone applications, the communication types, I admit that I do not use them much, not even with family members or friends, because it is hard for me, due to arthritis. And I do not even know if there are doctors who agree to communicate like that with their patients. I did not hear. Sometimes I did communicate, indeed, by phone with the doctor, when he explained to me the results of some tests or the fact that I had to go to the medical office for a new consultation.

R1: Communicating online with a doctor is not really a practice in Germany until now and online services are rarely offered.

R7: I think that even if it could be communicated like this [through the internet – a.n.], I would prefer to go and communicate directly with the doctor, because one is when he tells you face to face, looking into your eyes, what it is about, and another to read like that, impersonal, some words. Especially since some diagnoses are tougher, and for them you also need the support of human closeness.

Therefore, discussing on the telephone with a doctor is a more common practice for seniors in Germany as communicating with physicians via the internet, especially when it comes to results from some investigations. Some of the 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.

R3: Yes, I use the internet to communicate with the doctor, sometimes for small things like ordering a new prescription from my family physician.

R8: 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.

Another usual practice of using the internet to communicate something is the online feedback towards the medical system. This form of online communication seems to be for seniors much more habitual than others. Seven respondents said that they sometimes rate the doctors, the dentists, the medical offices and clinics, as well as they consult the ratings and the online comments of other patients.

R6: 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.

R1: Until now, thank God, I did not 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 maybe once a day, this I would look up on the internet.

R4: 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 also have ratings and reviews.

Conclusions

As regards the influence of online communication and of gaining information related to health from the internet on the face to face communication, and on the relationship between the seniors and the physicians, the present qualitative study revealed, on the one hand, no significant changes in the quantity of communication, i.e., in the frequency of visiting the doctors and/or speaking with them or with the medical offices on the telephone, while, on the other hand, some changes could be ascertained as regards the quality and the content of the real communication as a consequence of online informing. Thus, as the interviews showed, many older people who search for information on the internet discuss with their doctors in face-to-face meetings as concerns aspects of the information they found online. More exactly, the prior knowledge gained from the internet is usually taken as a basis for asking questions when the seniors visit their physician. In this regard, one can speak about a relation between health-related online information and the degree of information requested from a physician. Therefore, at least in the case of the older research subjects of the present study, the assumption of Frederikson and Bull (1995) is confirmed, that is, 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.

As for the models of physician-patient relationship discussed at the beginning of this paper, the statements of the interviewed German older adults show that their communication and relationship with doctors represent by now a combination of the informative and deliberative model. Moreover, the pattern of relationship doctor – senior patient as seen by the interviewees of this study is that 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.). Thus, when speaking about the doctors, family ones or specialists, the German older respondents assigned them an equal status as discussion partners.

This attitude, which denotes a viewpoint of an equal position between doctor and patient, could also be observed in the frequent use by the older adults of the possibility to review a doctor or a medical office, to give them scores and ratings, sometimes low, when they are dissatisfied, and to explain, through online comments and reviews, these ratings. Therefore, the internet gives people who have visited doctors and clinics a position of power, because, depending on how satisfied they were with the consultation, they can give ratings, some of them detailed according to a lot of criteria, and can write comments for other patients. In this way, they can influence the future number of patients of the respective doctor, medical office or clinic. The seniors interviewed proved to be 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.

German health system consists of the world’s oldest national social health insurance scheme (Carrin and James, 2005), is very diversified (both public and private ownership, more levels of management etc.), and is, traditionally, one of the most restriction-free and consumer-oriented healthcare 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 fact that the patients have the freedom to go anytime to any doctor, joint practice or clinic they choose, makes the providing online scores and reviews to be considerably important for the evaluation of a doctor, medical office or clinic, because their appreciation and prestige can be influenced as such, and the inflow of patients visiting them may depend further on it.

Therefore, the internet provides the opportunity, inclusive for older persons, to rate the doctors and clinics, to share their experiences with physicians and clinics, and to consult the experiences of others. German seniors prove to have a high desire to control their health care, a part of this attitude being the frequent use of online feedback of others, along with the active search by themselves for health-related information on the specialized websites on the internet.

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