

## THE ROLE OF TECHNOLOGY IN COMMUNICATION OF OLDER ADULTS WITH PHYSICIANS

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ARTICLE INFO	ABSTRACT
<p><b>Article Type:</b> Traditional Compilation</p> <p><b>Keywords:</b> Older Adults, Patient-Physician Relationship, Technology, Internet and Education</p> <p><b>Corresponding Author(s)</b> Fedayi YAĞAR</p> <p><b>Adress:</b> Kahramanmaraş Sütcü Imam University, Faculty of Economics and Administrative Sciences, Department of Health Care Management</p> <p><b>E-mail:</b> fedayiyagar@ hotmail.com</p>	<p>Various studies are conducted on the use of technology and the internet affecting the relationship between the patient and the physician today. On the other hand, limited information is available about the role of technology (such as the Internet, social media and computer use) between physicians and elderly individuals. In this study, researches examining the role of technology in this relationship were identified and evaluated. In the research conducted on the PubMed database, it was seen that there were six research articles on the subject. Studies have found that older adults are willing to communicate with physicians. Likewise, there is evidence that technology plays a facilitating role. On the other hand, in the study, it was emphasized that education makes important contributions to the use of technology. As a result, with the effect of the epidemic, telemedicine applications have become a part of health systems. Considering that the elderly is the most affected group by this process, it can be said that the necessity of political practices related to this issue is inevitable.</p>

## INTRODUCTION

As people age and begin to perceive time as limited, they prioritize spending time with their relatives and learning new information. It could be noted that older adults structure their social lives according to these goals (Sims et al., 2017). The use of today's technology and the widespread use of the Internet can be an important opportunity for older individuals to make decisions about their health and increase their knowledge (Gell et al., 2015; Xie, 2009). At this point, it could be emphasized that criticisms such as individuals' health literacy levels may be insufficient, there may be doubts about the reliability and quality of the information, and the information obtained may increase patient anxiety (Silver, 2015). Although examples of elderly people using internet are given, the effect of internet usage on their communication with physicians has been emphasized in the present study. In addition, limited information is available about the role of technology (such as the Internet, social media and computer use) and education in the relationship between physicians and elderly individuals. The aim of the present study was to fill this gap in the literature.

## 1. USE OF TECHNOLOGY AND INTERNET BY THE OLDER ADULTS

We tend to view technology as stand-alone devices that help fulfil certain tasks. In order to be truly effective, monitoring, diagnosis and treatment technologies for elderly people need to be integrated into existing health and social services systems and in many cases to family systems (Schulz et al., 2015). In this integrated process, the necessary infrastructure should be created for the elderly to be included in the process and it should be noted that continuous support is needed to help them discover technologies and facilitate learning processes (Tsai et al., 2019). Otherwise, technophobia (fear or discomfort with modern technologies) may occur for the elderly. The research conducted by Nimrod (2018) on individuals aged 60 and over provides results that support this approach. In the study, it was emphasized that the vast majority of the participants used the internet less because of this fear and it can be a risk factor in individuals' lives. In their study, Campbell and Wabby (2003) found that such fears could be reduced through education and emphasized that those who started to use the Internet widely were more active in their health-related decisions.

In the study by Calhoun and Lee (2019), the data of 5.259 people aged 50 and over was examined and it was emphasized that the cognitive ability increased with the increase in computer use. On the other hand, it was stated that computer use decreased with aging. The point to be noted here is that older adults are willing to use technology but do not have sufficient information. For example, a qualitative study on older adults found that the elderly wanted to use e-health services but were concerned that technical problems might occur (Airola et al., 2020). Similarly, dementia patients stated that they tended to use non-stigmatizing flexible technologies in a qualitative research by Rosenberg et al. (2012).

It is known that elderly people want to use information and communication technologies (such as mobile phones, e-mail and smart device applications) to communicate and learn information (Sims et al., 2017). The active use of this technology by the elderly can have a significant impact on health outcomes. For example, a study conducted by Elliot et al. (2014) on 6443 people concluded that those who used information and communication technology were more effective in resisting depressive symptoms. In a study conducted by Chopik (2016) on 591 elderly people, individuals using technology in social sense stated that they had less chronic diseases, higher subjective well-being and less depression.

## 2. MATERIALS AND METHODS

### 2.1. Aim

The aim of this study is to make inferences on the interaction levels between older adults and physicians and to provide evidence on the possible effects of technology/internet factor on this relationship.

### 2.2. Eligibility Criteria and Study Selection

A literature search of PubMed database was performed between May 27, 2021 and June 4, 2021, and using the keywords "patient-physician interaction", "older adults", "technology", "internet" and "education" Likewise, research articles written in English and accessible were the main criteria of the study. As a result of these criteria, 6 research articles formed the scope of the study. The descriptive features of the articles are given in Table 1.

### 2.3. Limitations

Evaluation of only research articles, ignoring congress presentations, master's and doctoral theses, and research written outside the English language are the limitations of the study.

### 3. RESULTS

The research articles examined within the scope of the study are presented in Table 1. Qualitative techniques were used in approximately 66% of the studies. Likewise, it was determined that studies were conducted in the USA (66%), the Netherlands (17%) and Canada (17%).

**Table 1.** *Defining Characteristics of Articles Related to Technology and/or Internet*

Reference	Aim of Study	Target Population	Method	Key Results
Beukema et al. (2017)	To determine the online message preferences of elderly individuals in communication with the physician	30 older adults over 65 years of age (Netherlands)	Qualitative (in-depth individual)	It has been seen that it is feasible for physicians to communicate with patients and transmit results online. The key point was whether the results were positive or not. When the result was positive, no significant difference was found between the communication methods. In the case of negative, physicians were expected to take empathy actions.
Cresci and Novak (2012)	To reveal the role of the internet in health management	18 adults age 55 years old and over (USA)	Qualitative (focus group interviewing)	It has been determined that many urban elders access the internet and want to access the internet. In addition, the participants think that the internet can have an important role in managing their health and communicating well with physicians.
Lam et al. (2013)	Better understand attitudes and preferences regarding electronic communications	46 primary care physicians and 3,543 patients (USA)	Quantitative (Survey)	It has been observed that users are willing. It has been found to be particularly useful in communicating drug demand and health problems.
Silver (2015)	To identify problems related to internet use and barriers in communication with the physician	56 adults age 50 years old and over (Canada)	Qualitative (semi-structured interviews)	It has been determined that the Internet has a facilitating role in communication. The most common concern regarding Internet use has been the reliability of online information.
Singh et al. (2009)	To determine factors associated with older patients' enthusiasm to use email to communicate with their physicians	4059 patients over 65 years of age and 181 physician (USA)	Quantitative (Survey)	It was observed that approximately half of the participants were willing to communicate with the physician via e-mail. It has been found that enthusiasm decreases as age increases. Likewise, it has been found that men are more enthusiastic than women.
Xie (2009)	Evaluating the participation of older adults who use the Internet extensively in decision-making processes	20 older Internet users (USA)	Qualitative (in-depth individual and focus group interviewing)	The internet has not been found to have an improving role in the patient's trust in the physician. It has been emphasized that the internet can provide more health information to the user in a wide scope and it has been stated that it can have a perpetuating effect.

When we look at the key findings highlighted in the studies, it has been observed in many studies that older adults are willing to use the internet/technology in communication with the physician (Cresci & Novak, 2012; Lam et al., 2013; Singh et al., 2009). Likewise, it is believed that the internet/technology plays an important role in facilitating communication (Beukema et al., 2017; Silver, 2015; Xie, 2009). In addition, in the study conducted by Silver (2015), it was determined that the participants had concerns about reliability.

#### 4. DISCUSSION

In this study, it was aimed to evaluate the role of technology and/or internet in the communication of older adults with physicians. In the research conducted on the PubMed database, it was determined that there were six research articles on the subject. Qualitative techniques were used in most of the studies. Likewise, it was observed that most of the studies were conducted in the USA. Key findings from the studies are discussed under the following subheadings. On the other hand, some evidence that education can be effective in developing this approach is presented below.

##### ***The role of technology and/or internet in the relationship between physicians and older adults***

Facts and feelings are conveyed through an intimate dialogue that corresponds to a meaningful medical experience. In order to establish a good patient-physician relationship, the patient must tell the story, be open, ask open-ended questions, and insist on answers. Effective communication between the patient and the physician has the potential to increase patient safety, efficiency, patient satisfaction and staff satisfaction, reduce medical errors and reveal poor service processes (Langer, 2019). On the other hand, the ease of access to medical information and increased healthcare-related products and services has radically changed the balance of power between the physician and the patient. In the interaction between the physician and the patient, an approach has been adopted in which the patient has a say as much as the physician (Kilbride & Joffe, 2018).

Much will be gained by improved electronic communication, public access to health and medical information and reducing the difficulties for both patients and doctors (Kassirer, 2000). The Internet age can be an important opportunity to improve the relationship between the patient and the physician. Referring patients to certain websites, taking an active role in the information gathering process may enable them to communicate well with physicians (Gerber & Eiser, 2001). Could this apply to elderly patients? The studies indicate that the relationship of patients with the physician decreases as they age (Belcher et al., 2006; Liang et al., 2013; Stewart, 1984). On the other hand, there is little evidence that good results can be achieved with the use of technology in communication. For example, an interface has been created for messaging in order to strengthen the interaction between the patient and the physician, and it has been observed that older adults are eager to use this approach (such as communicating health problems and drug demands) (Lam et al., 2013). Likewise, in many studies, it has been concluded that the participants are willing to use the internet/technology in communication with physicians (Cresci & Novak, 2012; Singh et al., 2009).

Unlike other studies, the study by Beukema et al. (2017) emphasized the content of the message, which can be an important factor in communication. In the study, the importance of the empathy ability of the physician was emphasized, especially in the transmission of negative content. Apart from this, there are many empirical studies on the role of empathy in the physician-patient relationship (Boissy et al., 2016; Hojat et al., 2011).

##### ***The importance of education in the relationship between physicians-older adults and technology/internet***

Today's elders may be healthier than age groups in previous generations, but often have more than one chronic disease. Healthcare technology practices promise hope to allow older adults to manage their own health and ages at home (Czaja, 2015). It is very important to identify ways to help older adults use technology successfully over time, and to utilize the benefits of technology in our digital-based society (Cotten, 2017). With this approach, it can be said that individuals who can access information more easily with technology can improve their communication with service providers. Accordingly, trainings can be used to increase the technology usage level of the elderly. For example, a total of 5 hours of training was given to elderly individuals in The Keep on Talking Program and these patients were followed for 1 year. As a result of the evaluations made, it was found that the knowledge of the elderly about communication increased, there were positive changes in their attitudes towards the importance of communication and they took action to maintain their communication skills (Worrall et al., 1998).

The learning potential of the elderly can increase on matters such as problem solving, obtaining information and benefiting others with online training (online courses) (Xiong & Zuo, 2019). There is evidence in the literature that the

trainings provided especially with guides improve performance in terms of technology usage (Hickman et al., 2007), digital games developed for the elderly improve their knowledge and communication skills (Wang et al., 2020) and that social media has an important effect on informing patients (Shang & Zuo, 2020). For example, (Guzman & Diño, 2020) provided training to elderly people about telemedicine application and emphasized that their perceptions about internet and computer use improved positively. Similarly, it was suggested that the level of adaptation of the elderly could increase and their participation in the process might be more effective with education. On the other hand, this process can be improved with the trainings offered to healthcare professionals. It was observed that confidence and competence of the healthcare professionals increased, and better communication was established with the elderly after 5 weeks of training given to them by Kluge et al. (2007).

## 5. CONCLUSION

Along with this review study, the communication of elderly individuals with physicians was evaluated and inferences were made on the role of technology/internet in this communication. It has been determined that the participants are willing to use online channels in the communication process. It was found that there was evidence that education could have positive effects on this relationship. Education can be an important mediator variable to improve this relationship. On the other hand, it was found that limited studies were available in the literature and more research was needed.

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